

## **Report on the health of Liverpool during the year 1858 / by W. H. Duncan.**

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# REPORT

ON THE

## HEALTH OF LIVERPOOL,

DURING THE YEAR 1858.

BY

W. H. DUNCAN, M.D.,

Medical Officer of Health for the Borough.

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LIVERPOOL:

GEORGE MCCORQUODALE & CO., PRINTERS.

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1859.



## REPORT.

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THE year 1858 was one of high mortality throughout England generally ; and Liverpool, in common with the Metropolis and nearly all the principal towns in the kingdom, formed no exception to the rule. In so far as Liverpool is concerned, this unfavourable result seems to have been caused in part by the severity of the weather throughout the month of February and the first half of March, and again during the greater part of November, but chiefly by the prevalence of a Scarlatina epidemic—the most serious visitation of the kind since 1848—which proved fatal to 1174 children and 13 adults.

The deaths registered in the borough during the 52 weeks ending 1st January last, were 13,937, being 986 more than in the previous year, and 960 more than the average of the preceding *three* years corrected for increase of population. As compared with the mean of the five years 1851-55, and deducting the Scarlatina deaths from both periods, there appears a balance of about 400 in favour of the year 1858. It is to be remembered that Scarlatina is a disease comparatively little under the control of sanitary measures.



Of the total deaths, 9570 were in the Parish, and 4367 in the Out-Townships ; giving a death-rate for the former of 34.2, for the latter of 26.5, and for the Borough of 31.4 per 1000.

The deaths ascribed to diseases of the ZYMOTIC class are 4265, of which 3640 were children and 625 adults. The total, which is 777 in excess of the year preceding, has been only four times exceeded in the eleven previous years since the Sanatory Act came into operation. The diseases of this class which were more than usually fatal were *Scarlatina*, which caused 1187 deaths, the corrected average of the previous nine years being 470 ; *Measles* 524, average 312 ; *Small Pox* 270, average 144 ; *Hooping Cough* 496, average 454. The deaths from these diseases in the year immediately preceding were from *Scarlatina* 761, *Measles* 119, *Small Pox* 172, *Hooping Cough* 641. The diseases whose mortality was below the nine years' average were *Typhus*, 562 deaths, (including 18 from Infantile Fever) being 70 less than the average but 120 more than in the previous year ; and *Diarrhœa* 688, being 112 less than the average (excluding years of epidemic Cholera) and 177 less than in the year preceding. From the other diseases of this class the deaths were, *Croup* 127, against 115 in the previous year ; *Syphilis* 81 against 84 ; *Dysentery* 76 and 76 ; *Erysipelas* 60 and 54 ; *Cholera* 31 and 38 ; *Remittent Fever* 23 and 57 ; *Thrush* 23 and 18 ; *Quinsy* 9 and 11 ; *Influenza* 8 and 10 ; *Purpura* 8 and 10 ; *Scurvy* 8 and 5 ; *Mumps* 8 and 1 ; *Chicken Pox* 7 and 3 ; *Carbuncle* 5 and 1 ; *Ague* 2 and 7. *Diphtheria* was fatal to 60 children and 2 adults, more than one-half in the last quarter of the year. Nearly one-third of the deaths occurred in Everton, and more than one-fifth in Scotland Ward. In the previous year no death was registered from this disease.



The opinion that Diphtheria is allied to Scarlatina is in some degree corroborated by the fact of their contemporaneous increase and decline ; but in Diphtheria the deaths occurred at a somewhat earlier age, about one-half being infants under two years, while little more than one-fourth of those from Scarlatina were registered at the same early period.

It may be mentioned with regard to Scarlatina, that every eleventh death was that of a second or third individual in the same family.

There is no doubt that the principal Zymotic diseases obey certain laws, whose elucidation may be expected when the record of facts becomes large enough for the purpose. They require the presence of some peculiar, and in most cases unknown, condition of the atmosphere, in order to give them an epidemic character. These conditions, varying with each disease, seem to come into operation at different seasons of the year, but usually at nearly the same period in the case of the same Zymotic. The experience of the last eleven years, during which weekly returns of deaths within the borough have been received, embracing 6480 cases of Scarlatina and 3770 of Measles, may perhaps justify with regard to these two diseases, an indication of their epidemic periods. With regard to Scarlatina, the rule seems to be that the mortality begins to increase in August, attains its maximum at the end of October or early in November, and then gradually declines until February, when it reaches the level which it retains with comparatively little variation during the subsequent six months. Such was the course which it followed in Liverpool last year. Starting from a weekly mortality of 11 in August, it reached its *acmé*, 50, in the first week of November, and afterwards slowly subsided (in Feb. 1859) to about the point from which it



originally commenced. About 70 per cent. of the entire mortality took place in the six months constituting what may be called the epidemic period. That this disease is influenced only in a small degree by sanitary conditions, is confirmed by the fact that in the Parish of Liverpool with a higher general mortality, the deaths from Scarlatina were much lower in proportion than in the comparatively healthy out-townships. While the mortality from All Causes in the parish amounted to 1 in  $29\frac{1}{4}$  of the population, and that in the out-townships to not more than 1 in  $37\frac{2}{3}$ , the Scarlatina mortality in the latter was 1 in 314, and in the worse conditioned parish only 1 in 421. Typhus Fever, on the other hand, which is perhaps more than any other disease dependent upon local causes, had a much higher mortality in the parish than in the out-townships; the proportion being 1 in 692 in the former, and only 1 in 1040 in the latter.

Measles appears to have two distinct periods of rise and decline within the year; the major one commencing in March, reaching its maximum towards the end of June, and in about two months falling to its lowest level; the minor period commencing early in November, and attaining its highest point about Christmas or shortly after it. This was nearly the course it pursued during last year. Of the 523 children and 1 adult to whom it proved fatal, 353 died in the first six months of the year.

Small Pox was more fatal than in any of the seven years preceding. Of the 270 who died, (62 of whom were adults,) 86 were recorded as not vaccinated, 53 as vaccinated, and in the remaining 133 cases no information on this point was obtained. It may be doubted with regard to many of the 53 "vaccinated" cases, whether the operation had proved successful. That a large number of children are deprived of the protective influence of



this measure is evident from the fact that, while nearly 15,000 children were born in Liverpool last year, the certificates of successful vaccination, required by a recent Act of Parliament, amounted to less than 9000.

DISEASES OF THE LUNGS (with Consumption) caused 4053 deaths, being about the corrected average of former years. The two weeks of highest mortality were in November (127 deaths) and in March (114); the latter being the week which followed that of the lowest temperature of the year, when the mean was  $35\frac{3}{4}$  degrees. The minimum mortality (40) occurred in August, in the week subsequent to that of the *highest* mean temperature (68 degrees). Of the 4053 deaths, 1618 were from Consumption, of which 539 occurred in the out-townships. It is worthy of remark, that while the deaths in the out-townships from Diseases of the Lungs *excluding Consumption*, were nearly as 1 to 3 compared with those in the parish, the deaths from Consumption were as high as 1 to 2. The *death-rate*, however, in both cases was lower in the out-townships than in the parish, although the districts approach each other much more closely in the mortality from Consumption than from other diseases of the Lungs. In the parish the deaths from the latter class were one in 153 of the inhabitants, and in the out-townships 1 in 264; from Consumption they were 1 in 259, and 1 in 305 respectively. But not less than nine of the twelve parochial wards had a lower Consumption death-rate than the out-township aggregate; the three exceptions being, Exchange, St. Anne's, and Lime Street. The mortality varied from 1 in 540 inhabitants in Castle Street Ward to as high as 1 in 256 in Lime Street. In the following list the sixteen Municipal Wards are arranged in the order of their mortality from Consumption, in an ascending scale:—



	ONE IN		ONE IN
Castle Street.....	540	Abercromby .....	336
North Toxteth.....	507	Everton and Kirkdale...	314
St. Paul's.....	466	Scotland .....	309
Rodney Street .....	428	West Derby .....	308
Pitt Street .....	423	South Toxteth .....	304
St. Peter's .....	369	Exchange .....	300
Great George .....	357	St. Anne's .....	278
Vauxhall .....	357	Lime Street .....	256

From a subsequent Table it will appear that the order of their *general* mortality differs materially from the above.

From one of the early Reports of the Registrar-General it appears that on an average of the three years 1838-40, 1 in 170 of the inhabitants of Liverpool died yearly from Consumption. Since that period the mortality has been greatly reduced, the yearly average of the last three years—1856-58—having been not more than 1 in 284.

GOUT was fatal to 5 males, being about the usual number yearly recorded in Liverpool. With one exception all were above 60 years of age.

The mortality in each QUARTER of the year was, in the

	All Causes.	Diseased Lungs.	Consumption.
March Quarter .....	3699	827	429
June „ .....	3241	514	470
September „ .....	3355	302	380
December „ .....	3642	794	339

It will be seen that while the deaths from Lung diseases without Consumption in the two colder quarters were about double the number in the warmer seasons, those from Consumption in the warmer six months actually exceeded those in the remainder of the year.

The deaths from VIOLENCE were 521, against 489 in the previous year, (378 males, 143 females; 242 children, 279 adults.) Inquests were also held in 72 cases of



SUDDEN Death from natural disease, the number in the previous year having been 99. Of the 521 Violent Deaths, there were from

Fractures, Wounds, and Contusions...	172
Burns and Scalds .....	93
Drowning .....	63
Hanging, (accidental) .....	1
Suffocation .....	86
Poison .....	10
Murder .....	17
Manslaughter .....	10
Exposure to Cold .....	4
Neglect of Mother, &c.. .....	3
Excessive Drinking .....	30

*Suicides* 32, of which from

Hanging and Strangling .....	16
Drowning .....	3
Shooting .....	1
Cut-throat .....	7
Jumping from Window .....	2
Poison .....	3

Of the 86 who were suffocated 79 were infants said to have been overlain by the mothers, 4 of whom were recorded to have been intoxicated at the time.

Of the 63 cases of accidental drowning 28 occurred in the Docks, 24 in the River, 7 in the Canal, 4 in Pits.

The extreme ages of those who committed suicide were 16 and 61. Of the 23 males 15 procured their living by manual labour ; 8 were of a higher class, 3 of whom followed no occupation. Of the 9 females 8 were married and 1 unknown. Their ages ranged from 21 to 61.

INTEMPERANCE (including *Delirium Tremens* 17) was assigned as the direct cause of death in 54 cases ; 39 males, 15 females. Of the latter 12 were married, and 3 widows ; their ages varying from 23 to 70. Of the males 28 were labourers or mechanics, 2 sailors, and 9 in a superior station. In addition to the above, 6 males and 2



married females, who met with fatal accidents, were intoxicated when the accidents occurred.

The number of deaths and the RATE OF MORTALITY in each district of the borough, are shown in the following Table, where Vauxhall Ward occupies its usual place at the head of the list.

WARDS, &c.	DEATHS.	In 10,000 Inhabitants.
Vauxhall .....	913	... 365
Exchange.....	567	... 350
St. Anne's.....	818	... 334
St. Paul's.....	459	... 306
Scotland .....	2441	... 303
Great George .....	577	... 299
Lime Street.....	484	... 281
Pitt Street .....	300	... 272
Castle Street .....	220	... 271
St. Peter's .....	229	... 238
Abercromby .....	484	... 215
Rodney Street.....	436	... 189
Workhouse and Fever Hospital...	1242	... —
Hospitals .....	400	... —
<hr/>		
<i>Parish of Liverpool</i> .....	9570	... 342
<hr/>		
Everton and Kirkdale .....	1463	... 271
Everton . .....	1154	... 288
Kirkdale . .....	309	... 220
West Derby.....	870	... 261
South Toxteth... ..	1022	... 258
North Toxteth.....	775	... 221
Workhouse and Fever Hospital...	222	... —
Kirkdale Gaol.....	8	... —
Industrial School .....	7	... —
<hr/>		
<i>Out-Townships</i> .....	4367	... 265
<hr/>		
BOROUGH OF LIVERPOOL.	13937	... 314
<hr/>		

Had the entire borough mortality been in the ratio



of the mortality of the most unhealthy Ward (Vauxhall), the deaths would have been upwards of 16,000 ; or had it been as low as that of the most healthy Ward (Rodney Street), they would have been little more than 8000. But it is satisfactory to know that Vauxhall Ward, high as the mortality still is, has undergone a marked improvement of late years. Previously to the operation of the Sanatory Act, its mortality ranged from 40 to upwards of 50 in 1000 ; while during the last seven years, with the exception of the Cholera year, 1854, it has never exceeded 39, and has several times been as low as 35 in 1000. The mortality of the other Wards has likewise been reduced, that of Great George and Pitt Street in the most marked degree.

Of those who died within the year 7175 were MALES, and 6762 FEMALES ; giving a death-rate for the former of 33.4, and for the latter of 29.4 per 1000.

The AGES at death were—

Below One year.....	3427
One to Two years .....	1829
Two to Five years.....	2088
Five to Fifteen years .....	973
Fifteen to Twenty years .....	299
Twenty to Forty years.....	1921
Forty to Sixty years.....	1929
Sixty to Eighty years .....	1247
Above Eighty years ..	212
Unknown .....	12

Of those who died at the age of eighty and upwards, 151 were females and 61 males, the former being to the latter as 5 to 2. Three widows were recorded as being 100 and one widow 103 years old at the time of death. Two of the four were widows of agricultural labourers. No male centenarian appears in the register.



Annexed to this Report are Tables (I. and II.) showing the deaths of each sex, at different ages, in the various districts of the borough, from 95 diseases, &c. arranged nosologically. Table III. gives the Means of Mr. Hartnup's Meteorological observations for each month of 1858.

The BIRTHS registered in the borough during the year were 14,895, being 535 fewer than in 1857, and giving a birth-rate of 1 in 29.78 of the population ; a lower ratio than in any previous year excepting 1853, when it was 1 in 30. The excess of births over deaths was not more than 958, so that about 10,000 immigrants from other places must have located themselves in Liverpool during the year.

In the out-townships 6046 children were born, giving an excess of 1679 over the deaths ; while in the parish the births, 8849, fell short of the deaths by 721. The birth-rate in the out-townships was 1 in 27.19 ; in the parish 1 in 31.60—a smaller proportion than in any previous year since the Registration Act came into full operation.

The births in the Parish of Liverpool have undergone, within the last few years, a remarkable decrease, the reason of which is not apparent. Comparing the average of the last five years, 1854-58, with that of a similar period ten years earlier, 1844-48, it appears that the number of children born yearly in the five years ending 31st December last was 1009 less, notwithstanding the increase of population, than in the five years 1844-48. The yearly average was 10,199 in the earlier, and 9190 in the later period ; the proportion to population being 425 per 10,000 annually in the former, and only 336 per 10,000 in the latter five years.



In the course of last year, two Reports were published under the sanction of Government Boards, containing statements calculated—unintentionally, no doubt—to throw discredit upon Liverpool and the efforts made for its sanitary improvement. The first of these is by Dr. Greenhow of London, in a Blue Book of the General Board of Health, entitled “Papers relating to the Sanitary State of the People of England.” It might be sufficient, with regard to this, to state (as already ably pointed out by Mr. M’Gowen, in his paper on “Sanitary Legislation,”) that two fallacies run throughout the report, which entirely vitiate all his conclusions affecting Liverpool. In the first place, Dr. Greenhow takes the mortality of a *portion* of the borough, and that the most unhealthy portion, and represents it as the mortality of “Liverpool;” entirely omitting from his calculations the more healthy districts, containing even at that time about one-third of the borough population. Secondly, having taken the most unhealthy portion of the borough, he next selects a most unhealthy period, within which he confines his calculations of mortality,—a period of six years (1849-54), the first and last of which were signalized by visitations of Epidemic Cholera, increasing the mortality of Liverpool in those two years alone by upwards of 7000 deaths. The results obtained by this process are then contrasted with those afforded by the most healthy rural district of England—Glendale—a remote region of Northumberland, bordering upon Scotland, having the winds of the German Ocean sweeping over it on one side, and, on the other, the invigorating breezes of the Cheviot Hills. The unfairness of such a comparison is self-evident. On the one hand, Liverpool—built up in great measure before sanitary requirements were dreamt of, suffering from all the evils inseparable



from a crowded population of 74,000 to the square mile, with a greater amount of pauperism, and a larger proportion of the inhabitants at those early ages which invariably yield the highest rate of mortality. On the other hand, Glendale—such as has been described, and with its population thinly scattered over its surface in the ratio of one individual to every ten acres of ground! Dr. Greenhow's report may be dismissed from further consideration, after stating that the mortality from all causes in Liverpool last year—high as it was—was 2000 less, and that from zymotic diseases nearly 1300 less, than would have been the case had his data been correct. It is only just to Dr. Greenhow to state, that there is no intention to impute to him any wilful misstatement of the case, his error having arisen from want of local knowledge; but it illustrates the danger of any individual, however talented, sitting in judgment—at a distance—upon facts with which he is imperfectly acquainted.

The other statement which remains to be noticed, is contained in the third Quarterly Report of the Registrar-General for 1858, in which the amount of sanitary improvement effected in Liverpool is unfavourably contrasted with the result of sanitary measures in Ely. It is admitted that "much good has been done" in Liverpool, and that "thousands of lives have been saved;" but it is asked, "Why should not the mortality be as low as that of Ely?" Ely is situated on an eminence, and consists of one principal street with several smaller branching off on either side; having (in 1851) 6176 inhabitants, most of whom are engaged in agricultural pursuits. Any one acquainted with Liverpool, and hearing this description of Ely, will be at no loss to see abundant reasons why it should be impossible that any means within the compass of human ingenuity, aided by the most lavish expenditure,



can ever succeed in placing the two towns on the same level in respect of mortality. What has been said on this point, respecting the comparison with Glendale, applies—though in a less degree—to the comparison with Ely. The mortality of rural districts and of country towns must always, unless some very exceptional circumstances exist, be lower than that of a town like Liverpool with more than sixty times the population of Ely and compressed within a smaller proportional space. The Registrar-General of Scotland, in a Report just published, states that the division of the kingdom into “the three great sections of Principal towns, Smaller towns, and Rural districts, at once demonstrates that almost just in proportion to the crowding together of human beings is the mortality higher.” The two periods selected for comparison in the Report of the Registrar-General of England, are the seven years 1843-49, and the like period 1851-57. After showing that the mortality of Ely was reduced in the latter period to the extent of 7 in 1000 of the population, as compared with the former, the authorities are deservedly eulogised in the most glowing terms, and its example is held up as one which Liverpool would do well to imitate. “Mr. Newlands,” it is said “can do for Liverpool what Mr. Burns has done for Ely.” But while doing no more than justice to Ely, less than justice is done to Liverpool; for in the very same period in which the saving of seven per 1000 was effected in Ely, the saving of life in Liverpool amounted to *nine* in 1000 of the population. In other words 5600 lives, or 800 yearly, were saved in Liverpool more than would have been saved had the improvement of Liverpool been *only* in the ratio of that of Ely, so highly and justly commended.

Here also it is right to state, on the highest authority, that the object of the distinguished writer of the Report



in question was, not to say anything in disparagement of Liverpool, but rather to stimulate to still greater improvement. But, in discussing these matters, it should never be forgotten that Liverpool was the first town in the kingdom to set the example of sanitary improvement, taking precedence even of the Government measure in this respect ; and that on this account, as well as in regard to the peculiar difficulties to be overcome, and the large sacrifices which have been made for the purpose, it is justly entitled to a generous consideration.

W. H. DUNCAN, M.D.,

MEDICAL OFFICER OF HEALTH.

*Public Offices, March, 1859.*

## APPENDIX.



TABLE I.—DEATHS IN THE BOROUGH OF LIVERPOOL IN 1858,

AND AT 15

CAUSES OF DEATH.	All Ages.	SEX.	
		Males.	Females.
ALL CAUSES .....	13937	7175	6762
SPECIFIED CAUSES .....	13852	7124	6728
I. Zymotic Diseases.....	4265	2164	2101
II. Diseases of Variable Seat .....	310	122	188
III. Tubercular Diseases .....	2070	1083	987
IV. Diseases of Nervous System.....	1283	711	572
V.     "     of Organs of Circulation .....	376	201	175
VI.     "     of Respiratory Organs .....	2445	1215	1230
VII.    "     of Digestive Organs .....	634	313	321
VIII.   "     of Kidneys, &c. ....	115	73	42
IX.     "     of Uterus, &c. ....	110	...	110
X.     "     of Organs of Locomotion .....	90	49	41
XI.     "     of Integumentary System .....	39	22	17
XII. Malformations .....	32	17	15
XIII. Premature Birth .....	359	184	175
XIV. Atrophy .....	754	404	350
XV. Age .....	363	132	231
XVI. Sudden (cause unascertained) .....	63	40	23
XVII. Violence, Privation, and Intemperance .....	544	394	150
1.—Small Pox.....	270	140	130
Chicken Pox.....	7	4	3
Measles .....	524	287	237
Scarlatina .....	1187	599	588
Diphtheria .....	62	27	35
Quinsy .....	9	2	7
Thrush .....	23	8	15
Croup.....	127	67	60
Hooping Cough .....	496	233	263
Diarrhoea .....	688	362	326
Dysentery .....	76	47	29
Cholera .....	31	15	16
Influenza .....	8	3	5
Purpura and Scurvy .....	16	10	6
Ague .....	2	1	1
Remittent Fever .....	23	11	12
Typhus (and Infantile Fever) .....	562	266	296
Erysipelas.....	60	21	39
Carbuncle .....	5	4	1
Mumps .....	8	7	1
Syphilis (8 <i>Stricture</i> ) .....	81	50	31
2.—Gout .....	5	5	...
Dropsy .....	146	65	81
Cancer .....	112	31	81
Noma.....	14	8	6
Mortification.....	21	9	12
Tumour.....	12	4	8
3.—Scrofula.....	54	37	17
Tabes Mesenterica .....	131	73	58
Phthisis.....	1618	809	809
Hydrocephalus..	267	164	103
4.—Cephalitis .....	139	79	60
Apoplexy .....	138	61	77
Paralysis .....	160	92	68
Insanity..	1	1	...
Delirium Tremens .....	17	14	3
Chorea .....	1	...	1
Epilepsy .....	41	21	20



OF MALES AND FEMALES, FROM 95 DIFFERENT DISEASES &C.,  
PERIODS OF LIFE.

AGES.															
Under 1 Year.	1	2	5	10	15	20	30	40	50	60	70	80	90	100 & Up- wards.	?
3427	1829	2088	753	220	299	894	1027	1053	876	736	511	183	25	4	12
3404	1818	2080	751	218	298	891	1017	1040	870	733	508	183	25	4	12
959	893	1197	436	88	65	160	147	138	83	55	34	9	1	...	...
9	12	28	14	2	9	11	26	53	71	39	28	8	...	...	...
162	174	169	87	60	120	393	384	313	134	56	14	2	2	...	...
543	86	129	58	12	21	30	65	80	92	83	68	14	2	...	...
3	...	3	12	13	16	44	67	76	65	50	25	1	...	...	1
641	338	321	58	9	24	63	122	183	253	260	134	35	4	...	...
187	105	22	13	11	7	31	57	82	60	38	18	3	...	...	...
1	2	6	5	1	1	21	11	18	22	16	9	2	...	...	...
...	...	...	...	...	4	43	43	11	7	1	1	...	...	...	...
3	...	7	10	7	5	12	15	7	9	11	4	...	...	...	...
11	6	4	1	1	1	3	4	4	1	2	...	1	...	...	...
30	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...
359	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
364	185	129	24	2	4	4	4	8	20	9	1	...	...	...	...
...	...	...	...	...	...	...	...	1	3	80	156	103	16	4	...
16	...	2	...	2	...	7	9	8	6	8	3	...	...	...	2
116	17	62	33	10	20	69	63	58	44	25	13	5	...	...	9
70	28	54	32	12	11	35	19	8	1	...	...	...	...	...	...
2	3	2	...	...	...	...	...	...	...	...	...	...	...	...	...
83	206	198	31	2	3	1	...	...	...	...	...	...	...	...	...
84	229	559	245	44	13	6	5	2	...	...	...	...	...	...	...
13	17	22	6	...	2	1	1	...	...	...	...	...	...	...	...
2	1	3	...	...	...	1	1	1	...	...	...	...	...	...	...
23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23	41	53	10	...	...	...	...	...	...	...	...	...	...	...	...
158	163	148	26	...	...	1	...	...	...	...	...	...	...	...	...
375	159	55	10	3	2	4	8	10	14	25	17	6	...	...	...
9	7	9	1	...	1	15	7	8	10	7	2	...	...	...	...
9	5	1	1	1	...	2	1	4	2	1	4	...	...	...	...
2	2	1	...	...	1	...	1	1	...	...	...	...	...	...	...
1	...	...	1	2	1	5	3	1	1	...	1	...	...	...	...
...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...
3	5	11	2	1	...	...	...	1	...	...	...	...	...	...	...
17	21	75	70	22	26	79	87	93	44	19	8	1	...	...	...
20	3	2	1	1	1	6	9	3	8	2	1	2	1	...	...
...	...	...	...	...	...	...	...	2	2	1	...	...	...	...	...
5	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...
60	2	1	...	...	4	3	5	4	1	...	1	...	...	...	...
...	...	...	...	...	...	...	...	1	1	...	3	...	...	...	...
4	6	19	11	2	5	8	11	22	25	15	15	3	...	...	...
...	...	2	1	...	3	1	12	25	40	20	6	2	...	...	...
1	5	5	1	...	1	1	...	...	...	...	...	...	...	...	...
4	1	2	1	...	...	1	...	2	1	3	3	3	...	...	...
...	...	...	...	...	...	...	3	3	4	1	1	...	...	...	...
9	12	6	6	...	3	4	6	5	2	1	...	...	...	...	...
40	44	29	9	6	1	1	...	...	1	...	...	...	...	...	...
28	37	61	46	53	115	388	378	308	131	55	14	2	2	...	...
85	81	73	26	1	1	...	...	...	...	...	...	...	...	...	...
27	16	35	31	4	4	3	9	4	2	3	...	1	...	...	...
...	...	...	...	...	3	6	8	21	35	31	27	7	...	...	...
...	2	...	1	...	3	6	14	32	31	31	33	6	1	...	...
...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...
...	...	...	...	...	...	1	6	7	2	1	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1	...	1	3	2	3	7	10	8	3	1	2	...	...	...	...



TABLE I.—DEATHS IN THE BOROUGH OF LIVERPOOL IN 1858,  
AND AT 15

CAUSES OF DEATH.	All Ages.	SEX.	
		Males.	Females.
Tetanus.....	2	2	...
Convulsions .....	686	384	302
Brain Disease, &c. ..	98	57	41
5.—Pericarditis .....	19	12	7
Aneurism .....	17	13	4
Heart Disease, &c. ....	340	176	164
6.—Laryngitis .....	34	22	12
Bronchitis.....	1504	711	793
Pleurisy.....	16	9	7
Pneumonia .....	697	390	307
Asthma .....	99	37	62
Lung Disease, &c. ....	95	46	49
7.—Teething .....	202	105	97
Gastritis .....	37	14	23
Enteritis .....	81	46	35
Peritonitis.....	55	15	40
Ascites .....	16	6	10
Hernia, Ileus, &c. ....	40	17	23
Stricture of Esophagus.....	1	1	...
Fistula .....	4	4	...
Stomach Disease, &c. ....	47	22	25
Pancreas Disease.....	1	...	1
Jaundice ..	20	8	12
Liver Disease (and Hepatitis) .....	129	75	54
Spleen Disease.....	1	...	1
8.—Nephritis .....	7	6	1
Ischuria.....	1	...	1
Nephria (Bright's Disease) .....	49	28	21
Diabetes .....	7	2	5
Stone.....	1	1	...
Cystitis .....	3	3	...
Kidney Disease, &c.....	47	33	14
9.—Ovarian Dropsy .....	7	...	7
Childbirth (20 <i>Puerperal Fever</i> ) .....	83	...	83
Uterus Disease, &c.....	20	...	20
10.—Arthritis .....	1	1	..
Rheumatism (11 <i>Rheumatic Fever</i> ).....	29	12	17
Joint Disease, &c. ....	60	36	24
11.—Phlegmon.....	4	3	1
Ulcer, &c.....	26	13	13
Skin Disease, &c .....	9	6	3
12-16.—See XII.-XVI.			
17.—Intemperance .....	37	25	12
Want of Breast-milk .....	16	10	6
Neglect .....	5	2	3
Cold .....	4	1	3
Poison .....	10	9	1
Burns and Scalds.....	93	45	48
Hanging and Strangling.....	17	10	7
Suffocation .....	86	52	34
Drowning .....	66	59	7
Fractures, Wounds, &c. ....	192	167	25
Other Violence.....	18	14	4
Causes not Specified .....	85	51	34
MALES .....	7175	...	...
FEMALES .....	6762	...	...



OF MALES AND FEMALES, FROM 95 DIFFERENT DISEASES &c.,  
PERIODS OF LIFE.—*Continued.*

AGES.															
Under 1 Year.	1	2	5	10	15	20	30	40	50	60	70	80	90	100 & Up- wards.	?
1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...
504	63	83	18	5	2	1	5	1	3	...	1	...	...	...	...
10	5	10	5	1	5	6	12	6	16	16	5	...	1	...	...
...	...	1	3	3	...	2	4	1	3	1	1	...	...	...	...
...	...	...	...	...	...	4	8	4	1	...	...	...	...	...	...
3	...	2	9	10	16	38	55	71	61	49	24	1	...	...	1
13	8	5	2	...	2	...	1	2	1	...	...	...	...	...	...
351	190	163	27	3	7	29	77	136	180	197	112	28	4	...	...
1	...	...	...	...	...	3	3	2	4	2	1	...	...	...	...
261	138	147	27	6	10	21	24	20	22	16	5	...	...	...	...
...	...	...	...	...	1	1	5	13	31	30	12	6	...	...	...
15	2	6	2	...	4	9	12	10	15	15	4	1	...	...	...
108	91	3	...	...	...	...	...	...	...	...	...	...	...	...	...
9	3	8	3	...	...	3	3	4	1	...	3	...	...	...	...
37	7	6	2	1	1	4	8	5	5	3	1	1	...	...	...
4	1	...	3	4	3	10	11	13	5	1	...	...	...	...	...
1	1	...	1	3	...	...	2	2	3	3	...	...	...	...	...
7	...	...	...	2	1	2	1	5	12	5	3	2	...	...	...
...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...
...	...	...	...	...	...	...	...	1	1	...	2	...	...	...	...
5	...	3	3	...	1	1	5	12	7	8	2	...	...	...	...
...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...
14	...	...	...	...	...	1	...	1	...	3	1	...	...	...	...
2	2	2	1	1	1	9	27	38	25	15	6	...	...	...	...
...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
1	1	2	...	...	...	...	...	...	1	1	1	...	...	...	...
...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...
...	...	1	2	...	1	11	5	11	12	5	...	1	...	...	...
...	1	...	...	...	...	...	...	...	3	3	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...
...	...	...	...	...	...	...	...	2	...	...	1	...	...	...	...
...	...	3	3	1	...	10	6	4	6	7	6	1	...	...	...
...	...	...	...	...	...	2	2	1	1	1	...	...	...	...	...
...	...	...	...	...	2	40	35	6	...	...	...	...	...	...	...
...	...	...	...	...	2	1	6	4	6	...	1	...	...	...	...
...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
...	...	1	2	1	2	3	6	1	4	7	2	...	...	...	...
3	...	6	7	6	3	9	9	6	5	4	2	...	...	...	...
...	...	...	...	...	...	1	...	2	...	...	...	1	...	...	...
6	4	4	1	1	1	1	4	2	1	1	...	...	...	...	...
5	2	...	...	...	...	1	...	...	...	1	...	...	...	...	...
...	...	...	...	...	...	7	12	7	6	3	2	...	...	...	...
14	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...
2	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...
...	...	...	...	...	1	1	2	3	2	1	...	...	...	...	...
7	9	44	16	1	2	3	1	3	1	1	5	...	...	...	...
...	...	...	...	...	2	2	3	2	6	2	...	...	...	...	...
79	...	...	...	...	1	2	2	1	...	...	...	1	...	...	...
...	2	1	4	3	4	14	14	8	7	3	...	1	...	...	5
...	2	16	13	6	10	37	27	34	20	15	6	3	...	...	3
11	1	...	...	...	...	3	2	...	...	...	...	...	...	...	1
23	11	8	2	2	1	3	10	13	6	3	3	...	...	...	...
1904	951	1067	378	101	145	454	504	584	440	349	217	63	7	...	11
1523	878	1020	375	119	154	440	523	469	436	388	294	120	18	4	1



TABLE II.—DEATHS FROM 95 CLASSIFIED DISEASES &c.  
DURING THE

CAUSES OF DEATH.	BOROUGH.		Scotland.	Vauxhall.	St. Paul's.	Exchange.
	Parish.	Out-Townships				
ALL CAUSES .. .. .	9570	4367	2441	913	459	567
SPECIFIED CAUSES.....	9510	4342	2428	909	457	565
I. Zymotic Diseases.....	2852	1413	780	265	152	177
II. Diseases of Variable Seat .....	190	120	45	14	6	11
III. Tubercular Diseases .....	1381	689	372	80	45	74
IV. Diseases of Nervous System .....	860	423	250	65	43	42
V. „ of Organs of Circulation.....	244	132	58	13	14	6
VI. „ of Respiratory Organs.....	1823	622	476	262	104	139
VII. „ of Digestive Organs.....	432	202	93	39	19	30
VIII. „ of Kidneys, &c.....	95	20	5	2	3	2
IX. „ of Uterus, &c. ....	65	45	16	4	3	1
X. „ of Organs of Locomotion .. ..	57	33	6	3	2	2
XI. „ of Integumentary System .....	30	9	4	2	2	4
XII. Malformations .....	22	10	5	1	1	3
XIII. Premature Birth .....	232	127	53	16	8	6
XIV. Atrophy .....	518	236	118	96	29	39
XV. Age .....	234	129	42	12	11	4
XVI. Sudden (cause unascertained) .....	51	12	14	6	2	3
XVII. Violence, Privation, and Intemperance .....	424	120	91	29	13	22
1.—Small Pox.....	204	66	54	15	11	9
Chicken Pox.....	2	5	...	...	1	...
Measles .....	352	172	58	30	24	35
Scarlatina .....	664	523	215	76	51	27
Diphtheria .....	32	30	12	3	...	1
Quinsy .....	7	2	2	1	...	3
Thrush .....	13	10	...	1	...	...
Croup.....	85	42	28	7	1	8
Hooping Cough .....	357	139	115	33	14	29
Diarrhea .....	517	171	158	59	28	41
Dysentery .....	56	20	15	5	...	1
Cholera .....	18	13	7	1	2	1
Influenza .....	6	2	1	1	1	...
Purpura and Scurvy .....	11	5	...	...	...	1
Ague .....	...	2	...	...	...	...
Remittent Fever .....	11	12	...	1	1	1
Typhus (and Infantile Fever) .....	404	158	98	30	11	17
Erysipelas... ..	36	24	5	...	2	2
Carbuncle .....	4	1	...	...	...	...
Mumps .. ..	7	1	...	...	5	...
Syphilis (8 Stricture) .....	66	15	12	2	...	1
2.—Gout .....	2	3	...	...	...	...
Dropsy .....	91	55	33	9	5	5
Cancer .....	71	41	9	3	1	6
Noma.....	8	6	1	2	...	...
Mortification.....	12	9	2	...	...	...
Tumour.....	6	6	...	...	...	...
3.—Scrofula.....	32	22	10	...	...	2
Tabes Mesenterica .....	101	30	31	4	3	9
Phthisis.....	1079	539	260	70	33	54
Hydrocephalus.....	169	98	71	6	9	9
4.—Cephalitis .....	85	54	28	2	3	4
Apoplexy .....	82	56	18	6	2	3
Paralysis .....	115	45	13	3	4	4
Insanity.....	1	...	...	...	...	...
Delirium Tremens .....	10	7	2	...	...	...
Chorea .....	1	...	...	...	...	...
Epilepsy .....	26	15	3	1	2	1



IN EACH OF THE MUNICIPAL WARDS &C. OF LIVERPOOL,  
YEAR 1858.

PARISH WARDS.								Hospitals.	Workhouse & Fev. Hosp.		Kirkdale Gaol & Indust. School.	OUT-TOWNSHIP WARDS.				
St. Anne's	Lime St.	Castle St.	St. Peter's.	Pitt Street.	Gt. George	Rodney St.	Ab'cromby		Liverpool	West Derby		Everton & Kirkdale.	West Derby	N. Toxteth	S. Toxteth.	
818	484	220	229	300	577	436	484	400	1242	222	15	1463	870	775	1022	
803	479	219	228	298	575	435	483	395	1236	222	15	1460	868	770	1007	
280	151	51	59	85	195	135	130	39	353	56	1	469	278	258	351	
17	12	5	7	6	14	13	13	10	17	18	...	23	26	21	32	
128	84	20	36	34	78	66	82	66	216	53	12	234	132	94	164	
58	45	29	22	27	61	43	57	16	102	17	1	163	86	71	85	
15	12	2	8	7	9	18	14	41	27	6	...	48	23	31	24	
145	65	43	45	58	87	71	80	26	222	12	1	220	130	120	139	
42	40	14	12	19	17	21	27	19	40	8	...	81	47	37	29	
7	5	6	5	3	5	...	4	17	31	3	...	11	3	2	1	
5	5	5	2	4	6	6	6	...	2	1	...	19	14	6	5	
1	3	1	5	...	8	4	4	7	11	5	...	9	7	8	4	
2	3	...	...	1	2	1	2	4	3	...	...	2	3	2	2	
4	...	...	...	1	...	2	4	1	...	1	...	4	3	2	...	
22	8	3	7	9	26	15	15	...	44	1	...	45	32	23	26	
33	19	18	8	19	25	14	18	5	77	12	...	48	29	48	99	
20	7	4	4	6	18	11	11	1	83	27	...	38	30	22	12	
4	4	2	1	2	2	2	2	4	3	1	...	4	2	3	2	
20	16	16	7	17	22	13	14	139	5	1	...	42	23	22	32	
24	6	12	2	8	12	5	12	1	33	6	...	32	10	5	13	
...	...	...	...	...	1	...	...	...	...	...	...	4	...	...	1	
31	27	...	5	13	31	10	15	...	73	5	...	44	33	44	46	
61	26	9	28	19	55	56	38	1	2	6	...	147	123	107	140	
2	2	1	...	1	1	3	4	...	2	5	...	17	1	3	4	
1	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	
2	2	...	...	2	2	3	1	...	...	...	...	6	2	...	2	
7	4	2	1	...	10	5	9	...	3	...	...	14	4	4	20	
35	21	11	6	9	13	16	19	...	36	1	...	60	33	17	28	
76	23	6	4	17	30	15	15	3	42	5	...	55	29	33	49	
3	5	...	1	2	4	2	1	14	3	...	...	7	5	6	2	
...	2	...	1	...	3	...	1	...	...	...	...	5	1	2	5	
...	...	...	...	...	...	2	1	...	...	...	...	1	1	...	...	
...	...	...	1	...	1	1	...	4	3	1	...	1	...	2	1	
...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	
...	1	...	2	1	2	1	1	...	...	...	...	5	3	3	1	
32	16	9	7	8	25	10	12	5	124	24	1	54	29	21	29	
3	3	...	...	2	2	1	...	3	13	3	...	10	2	6	3	
...	1	...	1	...	...	1	...	1	...	...	...	1	...	...	...	
1	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	
2	12	1	...	3	2	4	1	7	19	...	...	3	2	3	7	
...	1	...	...	...	...	1	...	...	...	...	...	1	1	1	...	
9	2	4	5	2	5	2	3	3	4	12	...	8	13	5	17	
7	6	1	1	3	8	5	7	4	10	4	...	9	8	11	9	
1	1	...	...	...	...	2	...	...	1	1	...	...	2	1	2	
...	1	...	1	...	1	2	1	2	2	1	...	3	1	2	2	
...	1	...	...	1	...	1	1	4	...	...	...	2	1	1	2	
1	...	...	...	1	3	1	1	...	9	...	...	6	4	2	10	
21	6	3	5	1	6	5	4	...	3	...	...	15	5	5	5	
88	67	15	26	26	54	54	67	62	203	53	11	168	108	69	130	
18	11	2	5	6	15	6	10	...	1	...	1	45	15	18	19	
5	10	...	2	3	9	6	8	...	5	...	...	24	8	10	12	
5	3	2	3	1	9	8	8	5	9	6	...	24	12	5	9	
4	3	2	1	1	11	5	5	5	54	8	...	15	5	7	10	
...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	
...	2	1	1	...	...	1	2	...	1	...	...	3	4	...	...	
...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	
1	2	3	...	1	1	4	3	1	3	...	...	5	4	4	2	



TABLE II.—DEATHS FROM 95 CLASSIFIED DISEASES &c.  
DURING THE

CAUSES OF DEATH.	BOROUGH.					
	Parish.	Out-Townships	Scotland.	Vauxhall.	St. Paul's.	Exchange.
Tetanus.....	1	1	...	...	...	...
Convulsions .....	470	216	177	45	25	30
Brain Disease, &c. ....	69	29	9	8	7	...
5.—Pericarditis .....	12	7	4	1	1	1
Aneurism .....	14	3	1	1	...	1
Heart Disease, &c. ....	218	122	53	11	13	4
6.—Laryngitis.....	21	13	3	2	2	...
Bronchitis.....	1173	331	257	200	68	88
Pleurisy.....	13	3	1	1	...	1
Pneumonia .....	494	203	192	52	19	25
Asthma .....	54	45	12	4	7	6
Lung Disease, &c.....	68	27	11	3	8	19
7.—Teething .....	140	62	24	16	10	12
Gastritis .....	24	13	7	4	1	1
Enteritis .....	60	21	16	7	1	4
Peritonitis.....	39	16	16	3	1	3
Ascites .....	11	5	3	1	...	1
Hernia, Ileus, &c. ....	28	12	3	3	2	1
Stricture of Oesophagus..	1	...	...	...	...	...
Fistula .....	3	1	...	...	...	...
Stomach Disease &c. ....	35	12	5	1	2	3
Pancreas Disease .....	...	1	...	...	...	...
Jaundice .....	10	10	2	1	...	...
Liver Disease (and Hepatitis)	80	49	17	3	2	5
Spleen Disease.....	1	...	...	...	...	...
8.—Nephritis .....	4	3	...	...	...	...
Ischuria.....	1	...	...	...	...	...
Nephria (Bright's Disease)	45	4	...	...	1	1
Diabetes .....	5	2	2	...	...	...
Stone .....	1	...	...	...	...	...
Cystitis .....	3	...	...	...	1	...
Kidney Disease, &c.....	36	11	3	2	1	1
9.—Ovarian Dropsy .....	3	4	...	...	1	...
Childbirth (20 <i>Puerperal Fever</i> )	49	34	12	4	1	...
Uterus Disease, &c.....	13	7	4	...	1	1
16.—Arthritis .....	1	...	...	...	...	...
Rheumatism (11 <i>Rheumatic Fever</i> )	15	14	...	1	...	1
Joint Disease, &c.....	41	19	6	2	2	1
11.—Phlegmon.....	4	...	...	...	2	...
Ulcer, &c. ....	20	6	3	2	...	3
Skin Disease, &c.....	6	3	1	...	...	1
12-16.—See XII.-XVI.						
17.—Intemperance .....	30	7	4	3	1	3
Want of Breast Milk .....	8	8	2	...	...	...
Neglect .....	4	1	2	1	...	...
Cold .....	3	1	2	...	...	...
Poison .....	4	6	...	1	...	...
Burns and Scalds.....	73	20	19	8	1	1
Hanging and Strangling.....	13	4	1	2	3	1
Suffocation .....	61	25	18	4	2	8
Drowning .....	46	20	20	2	4	4
Fractures, Wounds, &c. ....	167	25	19	6	2	3
Other Violence.....	15	3	4	2	...	2
Causes not specified .....	60	25	13	4	2	2
MALES .....	5014	2161	1225	484	223	286
FEMALES .....	4556	2206	1216	429	236	281



IN EACH OF THE MUNICIPAL WARDS &C. OF LIVERPOOL,  
YEAR 1858.—Continued.

PARISH WARDS.								Hospitals.	Workhouse & F. Hospital.		Kirkdale Gaol & Indust. School.	OUT-TOWNSHIP WARDS.				
St. Anne's.	Lime St.	Castle St.	St. Peter's.	Pitt Street.	Gt. George	Rodney St.	Ab'cromby		Liverpool.	West Derby		Everton & Kirkdale.	West Derby	N. Toxteth	S. Toxteth.	
...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	
39	20	17	12	20	27	15	25	...	18	3	1	79	49	38	46	
4	5	4	3	1	3	4	5	4	12	...	...	13	4	7	5	
...	1	...	1	...	...	2	...	1	...	...	...	3	1	2	1	
3	...	...	...	...	...	...	...	6	2	2	...	1	...	...	...	
12	11	2	7	7	9	16	14	34	25	4	...	44	22	29	23	
3	1	1	1	...	...	3	3	2	...	...	...	6	2	2	3	
76	39	27	30	28	62	45	60	10	183	8	1	108	65	73	76	
...	...	...	2	1	1	2	1	1	2	...	...	1	1	1	...	
57	22	10	7	21	18	19	13	9	30	3	...	80	36	33	51	
2	...	3	3	6	5	1	3	...	2	...	...	11	20	8	6	
7	3	2	2	2	1	1	...	4	5	1	...	14	6	3	3	
15	12	4	4	6	10	5	6	...	16	1	...	33	12	8	8	
1	3	2	...	1	1	2	...	1	...	...	...	4	6	2	1	
6	6	1	2	4	1	1	7	1	3	...	...	10	6	2	3	
4	...	1	...	1	...	1	2	...	7	1	...	5	2	5	3	
...	...	2	1	...	...	...	...	...	3	...	...	1	2	2	...	
2	4	...	1	...	2	2	5	3	...	2	...	3	4	2	1	
...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	3	...	...	1	...	...	...	
7	7	...	1	2	...	3	1	3	...	1	...	7	...	2	2	
...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	
1	...	...	1	1	1	1	1	...	1	...	...	1	2	3	4	
6	8	4	2	4	1	6	5	11	6	3	...	15	13	11	7	
...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	
...	...	...	...	1	1	...	...	...	2	...	...	3	...	...	...	
...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	
3	3	1	...	1	2	...	1	7	25	1	...	2	...	1	...	
1	1	...	1	...	...	...	...	...	...	1	...	...	1	...	...	
...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	
1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	
2	1	4	3	1	2	...	3	10	3	1	...	6	2	1	1	
1	...	...	...	1	...	...	...	...	...	...	...	2	2	...	...	
4	4	3	2	3	5	4	5	...	2	...	...	15	11	4	4	
...	1	2	...	...	1	2	1	...	...	1	...	2	1	2	1	
...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	
1	2	...	2	...	4	1	2	...	1	2	...	3	2	6	1	
...	1	1	3	...	3	3	2	7	10	3	...	6	5	2	3	
...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	
1	3	...	...	1	...	1	2	2	2	...	...	2	3	1	...	
1	...	...	...	...	2	...	...	...	1	...	...	...	...	1	2	
1	3	3	...	2	3	4	2	...	1	...	...	3	1	1	2	
...	1	...	...	2	2	...	1	...	...	...	...	3	1	2	2	
...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	
...	2	...	...	...	...	...	...	1	...	...	...	3	1	2	...	
4	1	1	...	2	3	...	3	30	...	...	...	6	4	6	4	
2	...	1	...	...	1	1	1	...	...	...	...	1	2	...	1	
6	3	4	2	4	5	1	3	...	1	...	...	8	4	3	10	
...	...	5	3	3	3	...	...	2	...	1	...	8	...	5	6	
6	6	2	2	4	4	4	3	104	2	...	...	7	9	2	7	
1	...	...	...	...	1	2	...	2	1	...	...	2	1	...	...	
15	5	1	1	2	2	1	1	5	6	...	...	3	2	5	15	
424	250	111	120	160	296	200	228	321	686	114	8	711	415	402	511	
394	234	109	109	140	281	236	256	79	556	108	7	752	455	373	511	



TABLE III.—RESULTS OF METEOROLOGICAL OBSERVATIONS  
DURING

YEAR 1858.	BAROMETER.		TEMPERATURE OF AIR.				MEAN TEMPERATURE	
Month, &c.	Mean at 32 degrees.	Range.	Highest.	Lowest.	Monthly Range.	Mean Daily Range.	Air.	Dew Point.
	Inches	Inches	°	°	°	°	°	°
January... ..	30.24	0.91	52.5	26.6	25.9	7.5	41.6	35.4
February .....	30.01	1.04	51.0	27.9	23.1	9.7	37.4	31.7
March .....	29.96	1.45	58.4	27.1	31.3	9.5	41.2	36.7
April .....	29.94	1.36	71.2	31.9	39.3	13.1	45.2	39.6
May .....	29.91	1.35	75.4	39.9	35.5	11.1	52.2	44.1
June .....	30.10	0.59	79.9	53.1	26.8	13.5	61.7	53.7
July .....	29.96	0.69	72.8	52.1	20.7	10.9	59.8	49.9
August .....	30.01	0.81	77.8	51.0	26.8	11.1	61.5	52.7
September .....	30.00	1.08	77.4	49.0	28.4	10.4	59.4	53.4
October.....	29.99	1.49	65.3	36.6	28.7	9.2	50.3	45.2
November.....	29.96	1.62	44.4	25.6	28.8	8.7	42.5	38.1
December.....	29.84	1.11	44.4	32.9	21.5	6.0	43.1	39.4
	Sea Level.							
First Quarter .....	29.91	...	58.4	26.6	26.8	8.9	40.1	34.6
Second Quarter .....	29.71	...	79.9	31.9	33.9	12.6	53.0	45.8
Third Quarter .....	29.64	...	77.8	49.0	25.3	10.8	60.2	52.0
Fourth Quarter .....	29.71	...	65.3	25.6	26.3	8.0	45.3	40.9
YEAR .....	29.99	...	79.9	25.6	28.1	10.1	49.6	43.3



TAKEN AT THE LIVERPOOL OBSERVATORY, BY MR. HARTNUP,  
1858.

HUMIDITY.			WIND.										Mean Amount of Cloud.	RAIN.	
Elastic Force of Vapour.	Vapour in Cubic Foot of Air.	Mean Humidity. (Saturation = 100.)	Mean Daily Horizontal Motion.	Days it blew from										Days it Fell.	Amount in Gauge 30 feet above Ground.
				N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Variable.			
Inch.	Grs.		Miles.												Inches
.209	2.4	80	405	2	...	1	6	6	5	6	5	...	6.6	10	1.0
.178	2.1	80	308	2	2	4	12	4	2	...	1	1	5.7	3	0.1
.217	2.5	84	342	5	2	2	1	4	2	4	7	4	6.9	11	1.5
.243	2.8	81	282	6	2	3	7	4	1	2	3	2	5.5	14	2.5
.289	3.3	74	325	4	1	2	2	4	4	6	5	3	8.0	15	1.7
.413	4.6	75	268	4	1	...	4	3	2	3	11	2	6.6	9	2.1
.359	4.0	69	303	6	2	1	1	4	3	3	10	1	6.4	13	2.0
.399	4.4	74	323	4	1	1	5	3	2	4	9	2	6.9	13	1.8
.408	4.6	81	297	...	2	2	7	4	6	3	6	...	7.5	14	3.2
.301	3.4	82	292	1	3	2	3	7	5	3	6	1	7.2	16	4.0
.230	2.7	85	224	5	3	3	8	5	1	1	2	2	7.3	6	1.6
.241	2.8	87	389	1	...	...	5	10	5	4	5	1	6.9	16	2.8
.201	2.3	81	352	9	4	7	19	14	9	10	13	5	6.4	24	2.6
.315	3.6	77	292	14	4	5	13	11	7	11	19	7	6.7	38	6.3
.389	4.3	75	308	10	5	4	13	11	11	10	25	3	6.9	40	7.0
.257	3.0	85	302	7	6	5	16	22	11	8	13	4	7.1	38	8.4
.290	3.3	80	314	40	19	21	61	58	38	39	70	19	6.8	140	24.3



## NOTES.

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*Page 16.*—The Expenditure of the Health Committee in the ten years 1848—1858, was (in round numbers) for Paving, Flagging &c., £630,000; Sewerage &c., £300,000; Removing Nuisances &c., and other purposes, £210,000. In addition, a very large sum has been expended in private drainage by the owners of property, under the compulsory powers of the Committee. The cost of an improved Water supply within the same period has amounted to more than a million and a half sterling.

*Table III.*—An average of the preceding twelve years gives the

Mean Reading of Barometer.....29.90 inches.

Mean Annual Temperature .....50°2

Yearly Rainfall .....26.5 inches.