

**A report on the sanitary condition of the town of Margate, from the year 1837 to 1862 : being a statistical account of the numbers dying and the cause of death of the inhabitants, visitors, and inmates of the Infirmary / by Edward Mottley.**

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### **Publication/Creation**

London : Simpkin, Marshall, [1863]

### **Persistent URL**

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*Dr. Keble*  
*from Dr. Rowley.*

# A REPORT

ON

## THE SANITARY CONDITION

OF THE

*Dr 204*

## TOWN OF MARGATE,

FROM THE YEAR 1837 TO 1862:

BEING A

### Statistical Account

OF THE

NUMBERS DYING AND THE CAUSE OF DEATH

OF

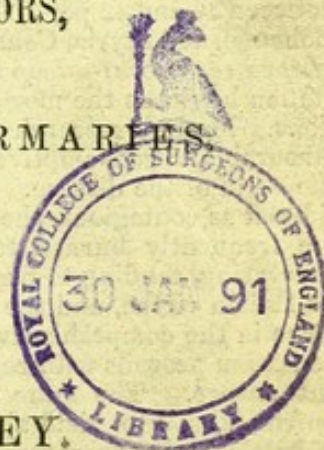
THE INHABITANTS, VISITORS,

AND

INMATES OF THE INFIRMARIES.

BY

EDWARD MOTTLEY.



SECOND EDITION.

BY ORDER OF THE COUNCIL OF THE BOROUGH OF MARGATE.

LONDON:

SIMPKIN, MARSHALL & CO., STATIONERS' HALL COURT.

MARGATE:—T. H. KEBLE.



## EXPLANATION OF DIAGRAM.

The diagram forming the frontispiece clearly shews the decline of the health of Europe from North to South and from West to East, and this decline is far from being unimportant. All the Northern Islands and littoral regions under the influence of the Gulf Stream and that of the great tidal wave of the Atlantic, when its power is not neutralized by local causes, are highly favourable to patients liable to pulmonary affections. The annual death rate of these regions varies from 15 to 17 per 1000 of the resident population. With these rates of mortality, the causes of death are mostly sporadic, rarely endemic; but occasionally in the less secluded districts contagious and epidemic diseases when introduced find new centres of propagation amongst the inhabitants, and cause a high exceptional mortality. The salutary influence of the tidal waters of the Atlantic are considered to extend about 300 English miles inland. Dr. A. Müller, in his vital Statistics of Wiesbaden (written with true German minuteness and honesty) describes that beautiful Spa as possessing "a Sea Climate." Wiesbaden, one of the healthiest of German Brunnens, has on an average of 17 years, an annual mortality of 25 per 1000 of the resident inhabitants; the situation is considered as favourable to consumptive patients. The number of residents dying there of consumption as compared with Margate residents is, Wiesbaden 24, Margate 16, to an equal number living. If we compare Margate with a city where the mortality rises to 31 per 1000, as Munich, situated nearly in the centre of Europe; we obtain the following results—from the two extremes of life,

Ages at death	0 to 1	70 to 100	
Margate	50	50	100
Munich	85	15	100

and the disproportion is in many instances exceeded. Where the mortality varies between 32 and 42 per 1000 residents, as in many instances in Italy, Hungary, Bohemia, and Styria, Consumption, Angina, Rheumatism, Ague, Typhus, Pallagra, (*Lepra squamosa*) sweep away large numbers of the residents. In some of the Italian hospitals the mortality frequently amounts to 50 per cent of the receptions. Modern research has discovered that the south of Europe is highly unfavourable to consumptive patients, the rapid change of temperature developing the germ of the disease. In many parts of Italy consumption is popularly considered as contagious, the clothes and bedding of a person dying of consumption are frequently burned to prevent communication. The climate of Italy is enervating, tending to premature development and early decay. Cleanliness is no Italian virtue, and the indolent native is subjected to diseases that have no place in the comprehensive tables of Dr. Farr. Unquestionably the law of compensation prevails with regard to man in relation to climate as is found throughout nature. The same vitality that enables the Englishman to compel his unfruitful soil to yield abundant harvests, enables him to conquer on the field of battle, and to overcome disease; and every measure that tends to improve the public health of a country, not only increases its wealth but also its strength and security.

The numbers given by the diagram are chiefly derived from recent local writers, amongst whom may be mentioned Dr. Karl Tormay, whose publications relating to the sister cities of Pesth-Buda, are perfect models of scientific statistical enquiry.

The reader will kindly pardon any mark of haste in the composition, or discrepancy in the tables, should such exist, in consequence of the great distance of the writer from London, he being engaged in travelling at the time of printing the pamphlet and correcting the press.



*Diagram of the Health of various places of Popular Resort on the Continent Europe & Variations of the Health of Margate, 13 years 1850-1862.*

10 Theoretical Normal Death Rate

11

12

13

14

15 { Fero Islands. Insular Scottish

Division. Glendale Haltwhistle

16 { Margate Residents

50 Years average

17 { Norway. Dr Farr's

Standard of Public Health

18

19

20

21 { Average Annual Mortality  
of Margate, Residents, Strangers.

22 England, Scotland

23 Sweden, Denmark

24 France

25 Wiesbaden Residents 17 years average

26

27 Piedmont

28 Tuscany. Aix-la-Chapelle

29

30

31 Insbruck

32 Cremona. Munich

33 Pisa

34

35 { Average Annual Mortality of  
the Principal Italian Cities

36

37

38 Milan.

39 Venice. Prague. Sicily.

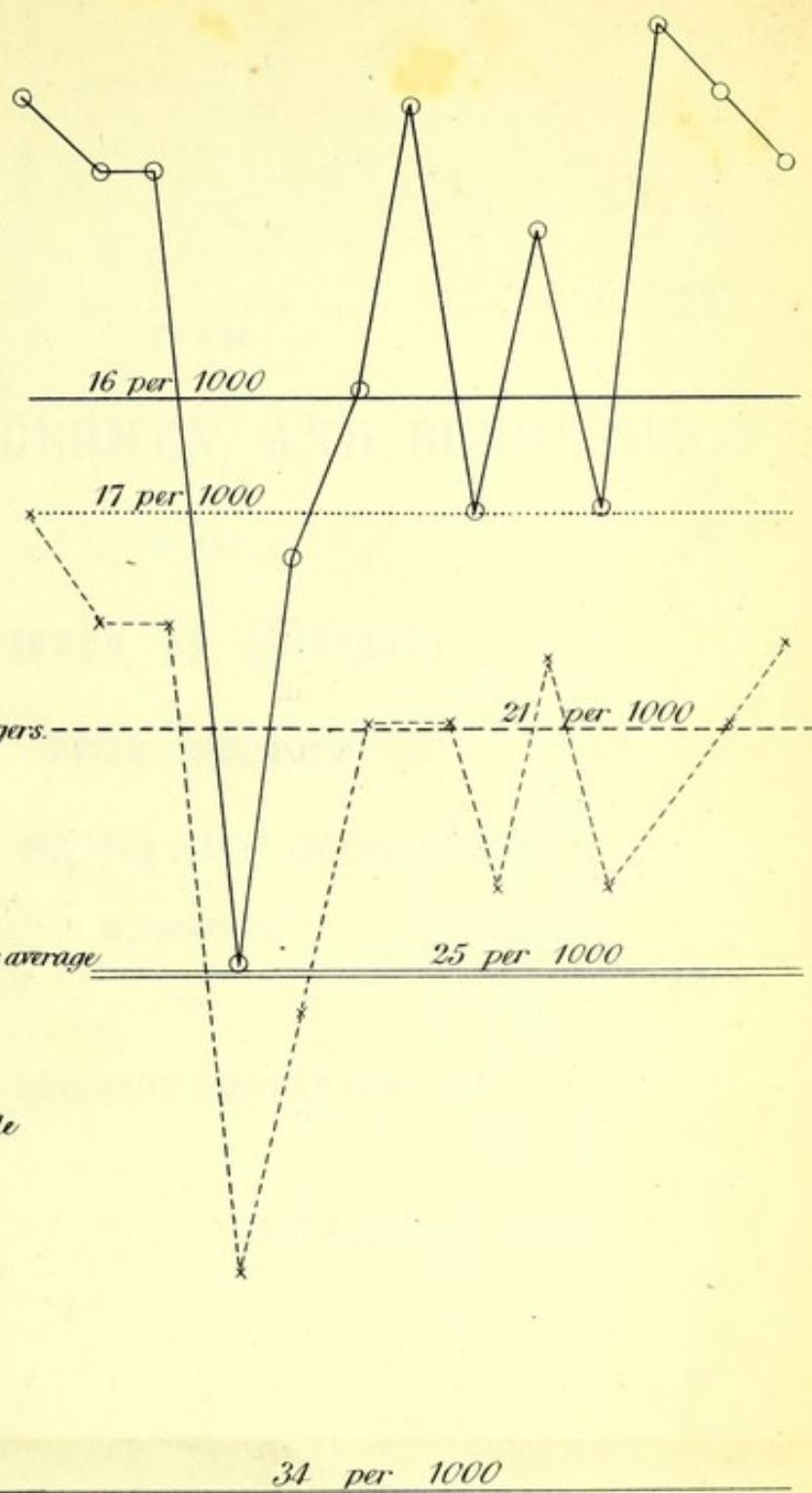
40 { Naples. St Petersburg.

Pesth. Buda.

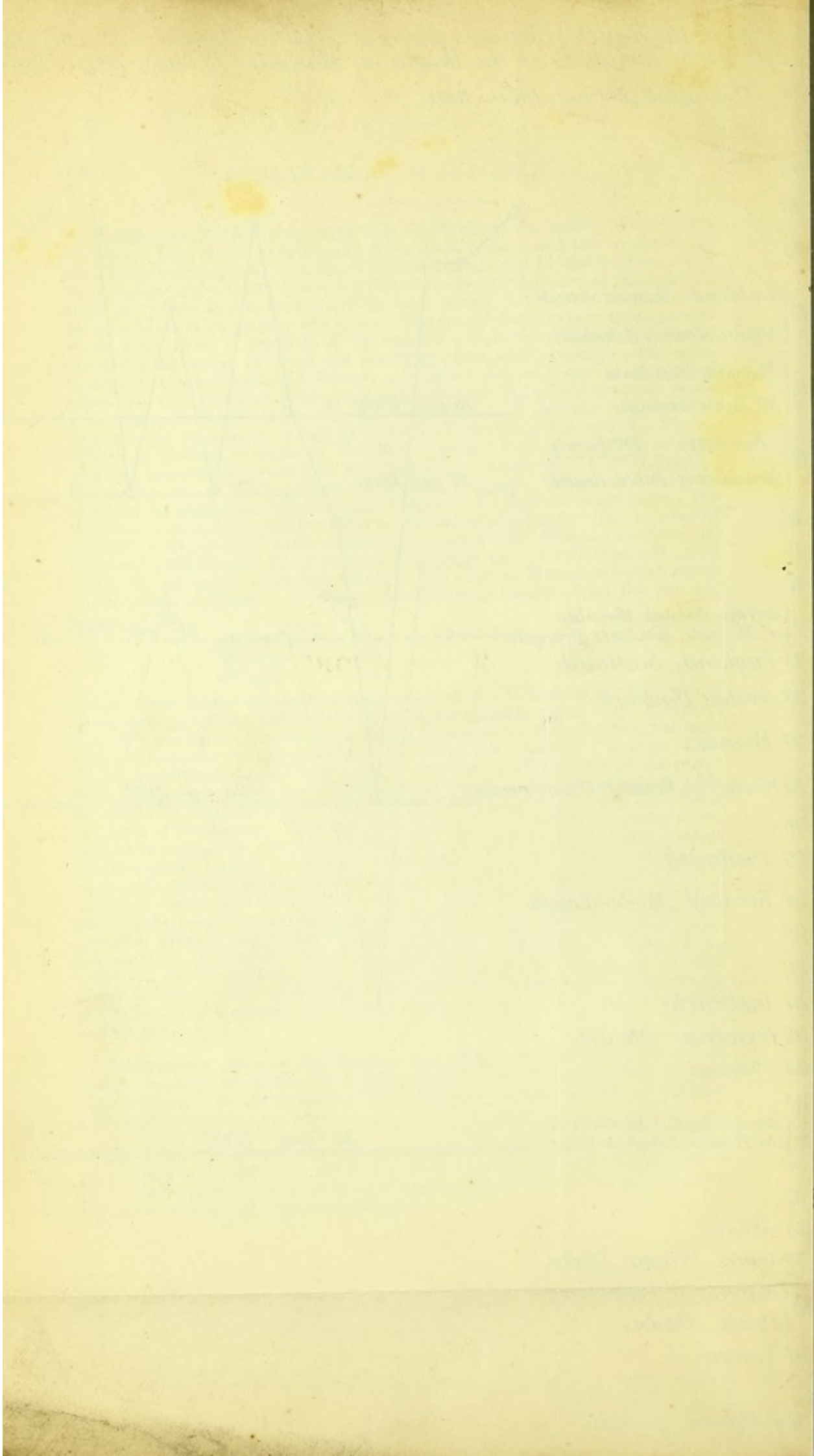
41 Vienna.

42

43 Lemberg.









TO THE  
MAYOR, ALDERMEN, AND BURGESSES

OF THE  
*Borough of Margate,*  
THIS REPORT  
OF ITS SANITARY CONDITION,

IS DEDICATED

BY

THEIR OBEDIENT HUMBLE SERVANT,

EDWARD MOTTLEY.



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## INTRODUCTION.

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THE Town of Margate, the subject of this statistical investigation, forms with the rural portion of the Parish of St. John's, Thanet, the sub-district Margate, in the Annual Reports of the Registrar-General of England. The Isle of Thanet, of which it forms a part, was mentioned as remarkable for its salubrity by a Roman Naturalist in the third century. The Monkish Historians were eloquent in praise of its excellence, and at a later period, the Rev. J. Lewis, a learned historian, writing in 1723, says in his History of Thanet, "The inhabitants of *Tenet* are generally healthy and long lived, especially on the north-east shore of the Island next the sea, where the shore is clean, no marshes near, and the water good, only in some places a little brackish." In the year 1790, after long deliberation and inquiry the site for the Margate Sea Bathing Infirmary was fixed where it now stands, in preference to any other part of the sea coast; in the year 1849, a statistical enquiry founded on the registration list of the Sub-District, proved, that the inhabitants, under very altered circumstances and greatly increased in number still retained the advantages possessed by their predecessors at the commencement of the previous century, confirming the historical reputation of the town for health and the longevity of its inhabitants. In the year 1850, the town was placed under the jurisdiction of the Board of Health, and the local government of the town greatly improved.

Notwithstanding the unimpaired excellence of the situation of Margate, and the stationary character of its inhabitants, the Annual Report of the Registrar-General proved a constant increase of the mortality of the Sub-District; the 23rd shewing an annual average death-rate of 22.5 per 1000 of the population. This placed the health of the town in the most unfavourable position in the list of the 27 principal watering-places, and a mortality greater than that of the averages of all England.

The attention of John Berry Flint, Esq. Mayor of the Borough having been directed to this statement so injurious to its reputation as a health resort, he immediately, with the promptitude of an efficient guardian of the public interest, convened a meeting of all the Medical Gentlemen practising at Margate, who, with other Gentlemen connected with the Council, formed themselves into a Committee for statistical purposes, resolved to institute a searching investigation into the public health of the Sub-District, and to inquire (with a view to publication) into the special causes giving rise to the apparently abnormal increase of its mortality.

To effect this object, application was made to Somerset House for permission to make such extracts from the registration list as might be deemed requisite. The Registrar-General, always favourable to local inquiries of this nature, allowed the registration list to be copied. The Committee obtained the services of Mr. T. U. Reeve, an experienced accountant connected with the town officially, and well acquainted with the Parochial records, to collect the necessary information. Mr. Reeve made the extracts with great care, and the writer having drawn up the Vital Statistics of Margate in 1849, the certified copy was transmitted to him to arrange and prepare for publication. This examination may therefore be considered as a continuation of the former one of 1849. Together they embrace a period of 25 years 6 months. Nearly a human generation has therefore passed under direct statistical supervision; the facts recorded, during this time, being sufficient in number to arrive at certain important trustworthy conclusions as regards the health of the Sub-District.



Margate ;—a subject of general interest not only to the resident inhabitants, but also to the large and increasing numbers of strangers by whom it is visited either for pleasure or to participate in the advantages it is presumed to offer in consequence of its healthy situation.

The usual mode of ascertaining the health of a population is by dividing the number living by the number dying annually ; this method when applied to a large group of human beings and carried over a series of years is practically sufficient to arrive at the truth, and is the method employed to determine the public health in the 631 Districts into which England and Wales are statistically divided by the Registrar-General.

But the annual death-rate of a population thus determined, by no means invariably or faithfully indicates the actual sanitary condition of the locality where the deaths are registered. There are exceptional cases, where local examination must be resorted to in order to its rectification. The examples are numerous ; amongst the principal may be mentioned unhealthy occupation, as at Manchester ; the ingress of large numbers of pauper emigrants and settlers, at Liverpool ; the presence of numerous foreign troops, at Frankfort-on-the-Maine ; the establishment of hospitals and the residence of invalid visitors collected from all parts of the kingdom, as at Margate. In these and all similar cases, the publication of the death-rate, without the classification of the population, even with the distinction of age, sex, and causes, would only mislead the inquirer. Therefore, Mr. Finlayson emphatically remarks, "The conclusion in fact to which one is compelled, is, that CLASSIFICATION alone is useful in the monetary and sanitary affairs of life."

#### THE ANNUAL REPORTS OF THE REGISTRAR-GENERAL

upon which this examination is essentially founded, are allowed by every Continental statistical authority to be the most perfect ever published, and a desire is generally expressed that the classification for diseases employed by Dr. Farr, chief of the statistical department, should be generally adopted throughout Europe. These reports are destined to have an important influence upon society, and their practical value will not be limited to the country in which they first appear. They contain from time to time accounts of the health of the principal English watering-places, and occasionally allude to those most popular on the continent of Europe. Indirectly they point out those localities where a happy combination of the great elements of health are to be found united and therefore most desirable, either as a place of temporary resort or permanent residence. Speaking of Margate and Ramsgate, the Registrar-General says, on the occasion of an epidemic prevailing, "The mortality of these towns has been high, but it must be remembered that they are constantly exchanging their population with the metropolis." Therefore, the separation of these foreign elements is absolutely required to fix the actual sanitary condition of the locality ; a circumstance of primary importance to such a place of public resort as Margate, where it is the special duty of the governing body to be well informed of every circumstance affecting the local health.

Publicity has been well named the soul of justice—it is equally the soul of confidence. The great monetary establishments of Europe do not depend upon their long-established reputation, or the personal character of the directors, but on the publication of their assets and liabilities. The invalid should be careful of his little capital of health, and only invest it in the best securities ; choosing his place of residence, not on theory or conjecture, however learned and ingenious, but upon numerical proof, the result of examination. The appended tables treat this subject exhaustively as relating to Margate. But should the reader want time or inclination to examine them, a brief *résumé* will give the material result.

The most important series of numbers in this work shews the mortality of infants. To every 100 children born of Margate residents 10 die annually.



For a population of any town of 10,000 inhabitants the rate is eminently favourable, and at once determines its normal condition.

The second series shews the mortality from child-bearing; when it is considered how valuable the life of the mother is to the happiness and welfare of her family, her safety becomes an object of great social interest.

From metria or puerpural fever only 1 death is recorded to 3416 births during 13 years; from the accident of child-birth, only 1 death to 2000 births during the last 9 years. In this respect Margate is superior to Glendale and Rothbury in Northumberland; two districts, called from the extreme low rate of mortality, the "Glory of England."

As this mortality is probably the lowest ever recorded in Europe it is of general interest; it being a desideratum to ascertain the possible minimum of mortality attendant upon this important process. Security from the "accidents of child-birth" depends very much on promptitude of attention and professional skill; metria or puerpural fever arises chiefly from impurity. Crowd the 3400 mothers, of whom 1 is lost from metria in a healthy region, into the foetid wards of a hospital in an unhealthy city, and 160 will perish, or 160 to 1, notwithstanding the unwearied care of humane and eminent physicians who have the whole resources of the Pharmacœpeia at their command. A column of pure air poured through the wards of such hospitals would have stopped the mortality as water extinguishes fire; they could not command it, and the patient died.

The advantage of residing in a region where the mortality is low is, that diseases of every kind are cured with greater ease—some rare and probably imaginary cases excepted. Every class of disease virtually obeys the same law, mental or bodily. In a region where a wound cures easily, an attack of insanity may be postponed or averted. In these regions the appetite is increased, the digestion improved, the blood enriched, and the brain, the great motive power, strengthened.

The Table, page 7, shewing the monthly mortality of the Margate residents for 13 years, gives an annual mortality of less than 16 per 1000, including two epidemic years. In 1853, the mortality rose to 25 per 1000, the heaviest recorded. In 1854, the cholera year, notwithstanding the prevalence of imported disease, the resident mortality was perfectly normal, only 18 per 1000. In 1853-4, the general health in the spring months was excellent. In 1853, in the first four months, at the rate of 16 per 1000. In 1854, for the first seven months, from January to July, at the rate of 14 per 1000. The epidemic was equally fatal in the rural parts of the parish as in the town itself. The Tables shewing the course of the contagious and epidemic disease, and comparing the same with the mortality of England, are ample; and the Tables comparing the number dying and causes of death of the residents, visitors, and the inmates of the infirmaries at Margate, will place this important branch of the inquiry fully before the reader. The extreme fluctuations in these classes of diseases, and their outbreak in the healthiest regions, and at a period apparently extremely propitious, are curious facts deserving further examination.

The Tables relating to pulmonary affections require serious attention. Contrary to popular opinion, the open situation of Margate seems to be particularly favourable to persons liable to this distressing and fatal group of diseases. It is not, indeed, quite equal to Argyleshire and the Insular Districts of Scotland; but when easiness of access, skilful professional assistance, cheerful situation, and good house accommodation are combined together, its absolute advantages are greater. Professor Pettinkoffer in his Lectures speaks of the advantages of large rooms in a sanitary point of view, even for children. A boy weighing 60 lbs. requires as much sleeping room as an adult of 120 lbs. the change of substance being greater. There are two prisons at Bruschal, both containing the same classes of criminals, both fed and treated in the same manner, with the exception that the one prison is on the cellular or silent system, and the other the prisoners live in common apartments. In



the cellular prison, notwithstanding the severity of its discipline rendering one year of imprisonment equal to three of ordinary confinement, its average annual mortality is greatly less than the ordinary prison, in consequence of the better ventilation of the single cells.

That the inhabitants of Margate enjoy such an unexceptionable state of health as not to exceed a mortality of 16 per 1000, notwithstanding introduced disease, and dwellings crowded with visitors during the hottest, if not actually the most unhealthiest months of the year, must be due to the presence of the great conservative powers of nature acting on the human frame with singular efficacy and success.

An atmosphere of extreme purity; a dry absorbent sub-soil; water, issuing at great depths from a natural filter bed, and from the action of the tides never stagnant, had not failed,\* and could not fail, to impress a marked character on the necrology of its inhabitants.

The time is probably not far distant, when the Public Health of a community will excite the same attention and be regarded with the same interest as its public receipts and expenditure; every source of preventible disease inquired into, and if possible, remedied, with the view of limiting the untimely waste of life within the narrowest possible limit. "Health," says an eminent writer, "is the greatest good, but for the poor man it is his only good;" every thing that tends to diminish mortality and shorten the period of disease, must be considered not only as humane, but true public economy.

EDWARD MOTTLEY.

*Würzburg, Bavaria,  
August 26th, 1863.*

\* Water of great softness and purity is now supplied to the town by a water company.



# SANITARY STATISTICS OF MARGATE.

## CHAPTER I.

### THE SANITARY HISTORY OF MARGATE FOR A QUARTER OF A CENTURY.

SINCE the introduction of the law for the Registration of Births, Deaths, and Marriages in England, from the 1st of July, 1837, to the last day of December, 1862, the total number of children born and registered in Margate, was - - - - - 6991 and the total number of deaths during the same period - - - - - 5360

If, for the sake of easy reference, we take the two decades, 1841-50, and 1851-60, from the 13th and 23rd Annual Reports of the Registrar General, we shall find the

		Births.		Deaths.
1841-50	- -	2736	- -	1991
1851-60	- -	2659	- -	2250

recorded; and these figures represent to a fraction, the relative proportions between the births and the deaths of the two halves of the first 25 years and 6 months of the whole period of registration, or

		Births.		Deaths.
1841-50	- -	27·3	- -	19·9
1851-60	- -	26·5	- -	22·5

to a stationary population of 10,000 persons; shewing a slight decrease in the births and an important increase in the deaths of 23 persons annually during the last 10 years.

Although the numbers here given are of the most elementary character, and we are only on the threshold of the inquiry, a statistical anomaly is at once apparent, viz., a low, almost constant birth-rate, with a heavy and increasing death-rate, a condition never co-existent with a stationary population, without the presence of some disturbing element that has no relation to the sanitary condition of the locality where the deaths are registered.

To render this anomaly more evident before proceeding to a classification of the mortality, we will examine first the mortality of children dying before attaining the first year of life (Infant Mortality).

During 20 years of Registration, 1841-60, 5382 children were born and registered at Margate, and 643 died in infancy, or 11·9 to 1000 born. The decades taken separately, give the following proportions:—

		Born.		Died annually.
1841-50	- -	2763	- -	12·1
1851-60	- -	2659	- -	11·7

Shewing a low and nearly equal death-rate of the mixed population of Margate, resident and visitors, the last decennial having slightly the advantage. Table No. 1 compares the infant death rate of 8 of the principal English watering places, with that of Margate, for the 6 years ending 1860:—

No. of District.	Under 1.	No. of District.	Under 1.
78 Eastbourn -	- 10·5	72 Dover -	- 15·8
99 Isle of Wight -	- 10·5	85 Brighton -	- 16·2
90 Worthing -	- 11·5	525 Scarborough -	- 17·2
76 Hastings -	- 12·7	228 Yarmouth -	- 21·6
Sub District Margate	- -	- -	11·9

In addition to the recognized test of the mortality of infants, Dr. A. Mühry, Medical Counsel for the kingdom of Hanover, one of the latest authorities on the subject of Medical Geography, proposes to take the mor-



tality of Childbirth as a means of ascertaining the sanitary condition of a region. The condition of the mother rendering her highly susceptible of miasmatic influence at that important period of her existence. Dr. Farr writing on this subject in the Twenty-first Annual Report, says:—"The mortality of women in child-bearing has happily grown almost constantly less in a series of years—1848-57—and to 10,000 children born alive in each year, the proportion of mothers who had died, had declined from 61 to 41. In 1858 this improvement was checked, the proportion rose again to 48. The increase was chiefly from Metria, or Puerperal Fever. The cause is no doubt to be found in the same conditions that rendered the year unhealthy to the general population."

The proportion of deaths from Metria to the accidents of Childbirth for 12 years, 1847-58, was Metria, 122; Childbirth, 254; in England. The proportion of deaths during the 13 years, 1850-62, in Margate, from these causes, was Metria, 1; Childbirth, 7.

Applying Dr. Mühlry's test to the health of the town, we find that in 13 years, 3416 children were born alive at Margate, that 8 mothers died in childbirth:—

Margate.	1850	1851	1852	1853	1854	1855	1856	1857	1858	1859	1860	1861	1862	Total.
Residents. Metria . .	1	-	-	-	-	-	-	-	-	-	-	-	-	1
„ Childbirth	-	-	1	3	-	-	-	-	-	1	-	-	-	5
Visitors. Metria . .	-	-	-	-	-	-	-	-	-	-	-	-	-	-
„ Childbirth	-	-	-	-	-	-	-	1	1	-	-	-	-	2
Total Deaths														8

Mortality in the 7 districts where the general death-rate is the lowest, from Metria, Childbearing, 6 years, 1856-1861.\*

#### GENERAL MORTALITY.

District.†	Mortality per 1000.	Metria.							
		1856	1857	1858	1859	1860	1861	1862	Total.
Eastbourn . . .	17	-	-	-	1	1	-	-	2
Knighton . . .	16	1	-	-	-	1	-	-	2
Glendale . . .	15	2	-	-	-	2	1	-	5
Rothbury . . .	15	-	-	-	1	-	-	-	1
Haltwhistle . . .	16	-	-	-	-	-	-	-	-
East Hampton . . .	16	-	-	2	-	-	-	-	2
Steyning . . .	16	1	1	-	-	2	-	-	4
Residents. Margate . . .	16	-	-	-	-	-	-	-	-

District.	Childbirth.							
	1856	1857	1858	1859	1860	1861	1862	Total.
Eastbourn . . .	1	-	2	1	2	1	-	7
Knighton . . .	2	-	1	-	2	3	-	8
Glendale . . .	1	1	1	2	1	1	-	7
Rothbury . . .	1	-	-	-	-	-	-	1
Haltwhistle . . .	1	-	1	-	1	1	-	4
East Hampton . . .	-	-	-	1	-	-	-	1
Steyning . . .	3	2	-	4	3	1	-	13
Residents. Margate . . .	-	-	-	1	-	-	-	1

\* In the year 1856, the Tables, "Deaths from several Causes," were first published.

† Districts selected from the Report for 1861, where the annual mortality is the lowest recorded.



Margate with one death from Metria to 3416 Births.

" one death from Childbirth to 569 Residents.

Deaths from Childbearing, 13 years, England, 51 to 10,000 Births, (22nd Annual Report of Registrar General.)

Deaths from Childbearing, 13 years, Margate, 17 to 10,000 Births.

Resident Population. A notable disproportion. But if the mortality at Margate be compared with that at the Maternity Hospitals at Paris and Vienna, the disproportions are perfectly astounding, and not to be accounted for, either by the physiological condition of the mothers, or the want of skill of the attendants.

At Margate, 1 death to 569 Births, 13 years average.

At Paris, 1 death to 13 Births, many years average.\*

At Vienna, 1 death to 22 Births, 30 years average.†

At Margate, 1 death to 3416 Births from Metria, 13 years.

At Vienna, 212 deaths to 4153 Births from Metria, 15 months.

Great as is the loss of life at Vienna from one particular disease, the mortality is greater at Paris than at Vienna, where there are frequent intervals between the outbreaks, while the mortality at Paris is the average of many years. The population of Paris is one of the healthiest, Vienna one of the unhealthiest in Europe; a circumstance not without importance in statistically estimating the relative loss of life in the two public establishments.

The absolute fact of one death from Metria, between 1850 and 1862, to 3416 births, and one death from the accident of childbirth to 2000 births of the resident population between 1855 and 1862, are not easily paralleled in the history of Registration, is one of the most pleasing truths brought to light by this crucial examination, and highly flattering to the skill and promptitude of the Medical Staff of the Town.

The application of two very susceptible tests to the health of the town being satisfactory, and in no way corresponding with an annual death rate of 22.5 per 1000, recourse must be had to classification of the registration, to ascertain its actual sanitary condition.

#### BIRTHS AND DEATHS IN MARGATE, 1850-1862—INHABITANTS AND VISITORS.

Year.	Births.	Deaths.	Men.	Women.	Visitors.	Hospitals.‡			Total.		
						R. S. B. Infirmary.	Metro-politan.	Ch. Belle Vue.	Visitors.	Residents.	Inquest.
1850	277	178	87	91	27	5	6	3	41	137	7
1851	282	191	94	97	28	5	8	4	45	146	5
1852	260	199	106	93	29	9	9	5	52	147	5
1853	257	312	160	152	41	7	9	5	62	250	5
1854	259	264	112	152	60	7	8	6	81	183	5
1855	258	217	103	114	26	15	12	4	57	160	4
1856	264	212	113	99	43	11	13	7	74	138	7
1857	265	245	127	118	37	6	12	13	68	177	3
1858	257	206	107	99	33	11	2	4	50	156	—
1859	257	244	121	123	34	25	7	7	73	171	3
1860	260	162	78	84	22	4	6	3	35	127	4
1861	240	214	104	110	43	18	14	1	76	138	7
1862	980	209	94	115	31	16	10	8	65	144	8
	3416	2853	1406	1447	454	139	116	70	779	2074	63

\* Medical Times and Gazette.

† Prof. Späth says this mortality must not be considered as the most unfavourable.—*Medizinische Jahrbücher, Vienna, 1864.*

‡ These establishments are exclusively for the reception of patients sent from London and elsewhere.



## CHAPTER II.

MARGATE, with a stationary population, receives annually an increasing number of visitors, and has become to a certain extent a Sanitarium. The Royal Sea Bathing Infirmary, now the Royal National Hospital, was founded in the year 1792, and originally open to receive patients from May to October. Since the year 1859, it has been kept open during the whole year. Within the last 20 years two other infirmaries have been established, one for children, the other for aged persons, mostly from the Metropolis. The cottages in the vicinity of the town receive patients from the Wanstead Orphan Asylum, and other invalid children. General visitors and patients of a higher class evidently increase, with the increased facilities for travelling—something may be attributed to the advanced state of medical science, which, depending far more than formerly upon the powers of nature in the cure of diseases, a place of residence is more frequently advised where her reparative forces meet with the least obstruction. The mortality arising from these sources not only explains the increased death rate, but also gives rise to the following important questions.

1. To what extent does the presence of numerous invalid visitors, living with the most intimate relations with the householder, affect the health of the resident inhabitant?

2. And whether the health of the visitor is in any way affected by the great increase of numbers, and what information a statistical investigation of their registration will afford as to their health in relation to their residence in the town?

3. What has been the sanitary condition of the Hospital and the Infirmaries during the last 18 years, and whether any, and what particular disease prevails amongst their susceptible inmates, attributable to their place of residence?

These three questions are capable of receiving an answer satisfactory to the extent that the natural laws affecting public health are known to modern inquiry. To attain this essential information, the numbers dying, and the causes of death, of the Resident inhabitants,—the Visitors,—and the Populations of the Hospital and the Infirmaries, must be examined separately.

The mortality of 16 per 1000 for a long series of years is sufficient to place the town in a very enviable situation as regards the public health. Continental writers are inclined to consider every town or city as possessing a peculiar and well defined constitution. And indeed groups of human beings, living together in considerable numbers within a limited space, acquire certain distinct moral, physical, and even pathological characters; and it appears as difficult to change their collective identity as that of the single persons of which they are composed. Between the years 1838-1844 and 1856-1862, a very eventful space of time, including three epidemic years, has passed by and left the town, as regards its health, exactly in the same normal position, and it may be fairly predicted that unless some great organic change occurs in the region, or in the constitution of man, the public health of the inhabitants will remain unchanged, the first half of the 19th century will faithfully represent the latter half; and the remarks of the Rev. J. Lewis, made in 1723, will be as applicable to the inhabitants of the North Eastern shore of the Isle of Thanet, in the year 1923, as they were in 1823.

## THE HEALTH OF THE RESIDENT INHABITANTS.

The LOCAL HEALTH, or the health of the dwellers on the soil, as defined by the registration of their disease and deaths, is the only means known to ascertain the health value of a region. When a notable average number of the residents die of any one disease, or any particular class of diseases (not caused by occupation) or otherwise, capable of explanation, it must be taken as an absolute proof that some injurious principle pervades the air—the water—or



the soil—favourable to the production, or spread of that disease, or diseases. When the registration shews that the inhabitants are comparatively free from any well defined disease, that particular region would seem best suited as a place of residence for invalids whose constitutional diathesis renders them liable to disease without regard to its special character. But infinitely more important to sanitary inquiry is the proportion which the general death-rate bears to the inhabitants living. When the mortality on the average is low, the region is invariably healthy, for although an exceptional heavy death-rate may be found in a healthy region, an average low death-rate is never found in an unhealthy one.

To consider regions as healthy or diseased, without reference to special climate, greatly simplifies the question—and it will be difficult indeed, if not impossible, to shew any district where the death-rate is low, and at the same time afflicted with any special form of disease.

The 3416 cases of death occurring during the 13 years of registration, 1850-62, having been classified by competent official persons, 779 of the total number are due to visitors or patients in the Infirmary, or—

Residents.	Visitors.	Mixed Population.
73	27	100

or more than 25 per cent. of the mortality. There is probably not another district in Great Britain where the deaths of strangers amount to more than one-fourth of the numbers registered. To ascertain what effect this amount of sickness has upon the health of the residents, the annual mortality of the town must be given at different periods of registration.

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Comparison of the mortality of the inhabitants of Margate during the first 7 entire years of registration, 1838-1844, with the 7 last years of registration, 1856-1862, both periods being normal years, and representatives of the health of the town for the present century.

Dr. A. Mühy considers a mortality as low as 17 per 1000 is to found only in England. He appears to have directed his attention chiefly to Middle Europe; in the North of Europe the line of health may be traced from Norway, Sweden and Denmark, Iceland and the Feroe Islands, and the shores of the Baltic, from thence to the North of Scotland, and many favoured localities in England, particularly in the North. The health of Europe gradually declines from North to South, from East to West. Vienna, Pesth, Buda, and Limberg have a very high death-rate; Venice, Naples, Pisa, being also most unhealthy. Practically the health of Europe ranges between 16 and 45 per 1000. It will be seen, by a glance at the accompanying diagram, that 15 to 45, per 1000 are the extremes. Climates, and regions eminently dissimilar, have a similar sanitary condition. For example, St. Petersburg and Naples have each an average mortality of 40 per 1000—when the death-rate is not disturbed by violent epidemics—and yet nothing can be more opposite than their climate or the race and habits of their Population.

Mr. J. Simon, Medical Officer of the Board of Health, citing the Feroe Islands as an example of health, says—"In the Feroe Islands, with a population of about 8000, it appears the period of death by old age is from the 80th to the 90th year; for, according to Dr. Panum, many more deaths happen within that decennium of age than within any other decennium after the completion of the first year of life." Virchow's Archives, i. 498.

The following Table will shew the comparison between the Feroe Islands and Margate. The numbers are taken from a later account of these Islands, by Drs. Panum and Regenberg, Canstat's Year Book, edited by Drs. Virchow, Scherer, and Eisenman.



Feroe Islands, 7 Years.			Margate, 7 Years.		
Sydsströmö	-	185		137	
Nordsströmö	-	126		176	
Oestströmö	-	159		153	
Norderöer	-	169		171	
Vagoer	-	133		126	
Sandoer	-	163		142	
Suderoer	-	155		145	
Annual Mortality of the } group of Islands			156	150	{ without the Inmates of the Union.

Table comparing the rate of mortality of the first 7 years of Registration, 1838-1844, with the last 7 years of Registration, 1856-62:—

1838.	1849.	1856.	1862.
1838 - - -	176	1856 - - -	137
1839 - - -	163	1857 - - -	176
1840 - - -	127	1858 - - -	153
1841 - - -	158	1859 - - -	171
1842 - - -	182	1860 - - -	126
1843 - - -	140	1861 - - -	142
1844 - - -	136	1862 - - -	144
1082		Population nearly equal	
		1051	

The mortality of the last 7 years shewing a slight decrease. Considered quarterly, the Mortality of 20 normal years averages:—

January, February, March	-	-	25.6	
April, May, June	-	-	21.2	
July, August, September	-	-	26.9	
October, November, December	-	-	26.3	100.

Considered monthly, the Mortality of 20 normal years averages:—

January - 13	April - 11	July - 11	October - 15
February 13	May - 12	August - 14	November 11
March - 12	June - 8	September 15	December 13

Monthly mortality of the 13 years, 1850-62, including two epidemic years:—

January - 14	April - 11	July - 10	October - 16
February 13	May - 13	August - 16	November 12
March - 13	June - 9	September 18	December 14

Comparison of the Quarterly Mortality of Twelve States, with the Quarterly Mortality of Margate for 20 years. The Quarters being arranged in their natural order.

Winter Months, December, January, February; Spring—March, April, May; Summer—June, July, August; Autumn—September, October November.

	Winter.	Spring.	Summer.	Autumn.
Sardinia	- 27.4	24.4	23.6	24.3
Bavaria	- 27.7	28.7	21.3	22.3
Netherlands	- 27.6	25.5	23.4	23.5
Belgium	- 28.7	28.1	22.0	21.2
Saxony	- 26.6	26.3	23.1	24.0
Holstein	- 27.3	28.5	21.8	22.4
Denmark	- 26.5	28.8	23.5	21.2
Norway	- 27.0	28.8	21.9	22.3
Sweden	- 26.1	22.8	20.2	24.9
Iceland	- 20.2	19.4	25.8	29.0
Massachusetts	- 22.5	22.7	25.8	29.0
Chile	- 24.9	26.9	26.9	21.3
Margate	- 26.5	23.2	22.4	29.9



## CORRECTED POPULATION OF THE MORTALITY OF MARGATE FOR THE SEVEN YEARS, 1856-1862.

*Population on the Census Day, April 8th, 1861.*

Residents.		Strangers.	
Assumed Population . .	10,019	Patient's Sea-bath. Infirmary	133
Margate Inmates of the Isle of Thanet Union . .	148	Metropolitan Institute . .	105
		Chateau Belle Vue . .	75
		Visitors * . . . .	60
			<hr/>
	10,167		373
	373		<hr/>
	<hr/>		
	9,794		
	<hr/>		

*Corrected Mortality.*

Mortality of the Mixed Popu- lation . . . .	1492	Resident Mortality . .	1051
Mortality of Strangers . .	441	Deaths of Inmates of the Isle of Thanet Union † . .	105
Mortality of Residents . .	1051		<hr/>
			1156
			<hr/>

Resident Living.

68,488.

Deaths.

1156.

Or 168 to a population of 10,000 persons—16 per 1000.

And this mortality of 16 per 1000—as the absolute mortality of the resident inhabitants of Margate for the last 25 years—is actually for the entire period of the present century, including the epidemic years.

Apparent excess of births over

deaths . . . .	563	} 13 years, 1850-1862.
Actual . . . .	1329	

Mortality of the Resident Inhabitants of Margate during each of the thirteen years, from 1850-1862.

	1850	1851	1852	1853	1854	1855	1856	1857	1858	1859	1860	1861	1862	Total.
January . .	14	6	7	18	18	14	14	14	16	21	8	8	21	179
February . .	11	13	9	12	13	17	6	16	21	13	12	13	12	168
March . .	9	12	9	14	14	19	12	7	16	12	12	8	19	163
April . .	14	12	16	11	12	17	10	12	10	14	12	3	5	148
May . .	15	9	12	25	12	9	5	14	10	14	12	21	13	171
June . .	9	5	5	16	11	7	14	7	12	12	7	2	8	115
July . .	9	13	8	10	6	8	10	17	7	8	9	12	19	136
August . .	9	16	12	29	25	7	15	22	19	22	15	12	6	209
September . .	19	17	16	31	42	12	27	18	11	14	8	16	8	239
October . .	7	21	19	35	11	22	12	18	10	13	15	13	12	208
November . .	8	13	12	25	14	13	6	17	9	13	10	10	11	161
December . .	13	9	22	24	5	15	7	15	15	15	7	20	10	177
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	137	146	147	250	183	160	138	177	156	171	127	138	144	2074

\* The Enumerator says, "Number very small, under 100."

† The average age of deaths of these Margate inmates of the Union is 42 years 5 months.



Mortality in Margate of Aged Persons, 1850-1862, 75 years and upwards.

*Resident Inhabitants.*

	1850 M. F.	1851 M. F.	1852 M. F.	1853 M. F.	1854 M. F.	1855 M. F.	1856 M. F.	1857 M. F.	1858 M. F.	1859 M. F.	1860 M. F.	1861 M. F.	1862 M. F.
75	1 4	4 3	1 5	3 7	3 9	3 10	4 6	9 5	6 2	2 8	5 4	3 10	2 4
80	3 4	3 3	4 4	3 2	3 6	5 7	3 2	4 1	4 4	2 3	3 4	4 4	1 3
85	- 4	- 3	2 1	1 4	1 1	1 4	- 1	3 1	2 -	2 5	- 1	2 4	3 3
90	1 1	1 1	- -	- 1	1 2	1 1	- -	- 1	- 2	1 3	- -	1 2	2 -
95	1 -	1 -	- -	- 1	- -	- 2	- -	- -	1 -	- -	- 1	1 1	- -
	7 13	9 10	7 10	7 15	9 18	10 24	7 9	16 8	13 8	7 19	8 10	11 21	8 10

The numbers dying at the extreme of life are in Margate nearly equal; the oldest person dying during the thirteen years attained the age of 99 years and 2 months. One man committed suicide at the great age of 91, one at 85, and two women aged 85 and 82. About 300 of the population of 130,000 died of "old age."

## CHAPTER III.

INFANT LIFE IN MARGATE.—MORTALITY OF INFANTS.

THE ANNEXED TABLE WILL SHEW THE NUMBER OF CHILDREN DYING IN  
MARGATE BEFORE ATTAINING THE FIRST YEAR OF LIFE.

	1850	1851	1852	1853	1854	1855	1856	1857	1858	1859	1860	1861	1862
Residents . . . .	27	33	28	22	28	27	26	39	29	29	13	23	23
Visitors . . . .	0	1	3	5	7	2	7	4	4	3	2	8	4
	27	34	31	27	35	29	33	43	33	32	15	31	27

The mortality of infants in Margate during the 13 years 1850-62, is essentially similar to that of the first period of Registration, 1837-49, highly favourable, 347 deaths to 3470, or 10.1 per cent of the residents. 50 deaths of Visitors' children, under 1; 397 of the mixed population. 115 to 1000 children born and registered. The epidemics prevailing in 1853-1854, passed over infant life without leaving a trace of their existence on its death-rate.

In this respect the infant death-rate resembles that of the Hospitals; both Infant and Hospital inmates, during those periods, have been entirely free from epidemic attacks. Had these epidemics been regional, neither care nor isolation would have prevented their appearance amongst these frail beings, who stand so near to the gates of death. Both these instances coincide with the opinions of Dr. Mühry and Professor Pettinkofer, who agree that several contagious epidemical diseases, Cholera, Scarlatina, &c. are not generated where the soil is clean, dry, and absorbent, but introduced. During the whole period of Registration, the Margate infants have not been attacked fatally by epidemics of the respiratory organs.

Margate Infant Life. Mortality from Diseases of the Organs of Respiration.

[illegible]



The mortality of Infants is one of the most trustworthy tests of the local health of the place where the births occur. When applied to different classes of society, it is an equally unerring test of the amount of civilization and domestic morals of the separate classes, and comparative freedom from crime.

Class registration is hardly possible in England, but Mr. W. F. Fox has published in the Statistical Journal, June 1857, an important paper on the vital statistics of the Quakers. The numbers at Mr. Fox's command were not numerous, but his results are received and cited by the Continental Statistical Writers as striking examples of a normal infant death-rate.

	Mortality of the Society of Friends.	General Mortality of England.
Under 1.	13	20

Shewing an important advantage in favour of the Society of Friends.

Equally interesting in a social point of view, is the favourable death-rate of the children of the European Jews, in this respect the Jews have slightly the advantage of the Quakers. The great temperance of the Jewish parents, and their excessive fondness of their children, producing a very remarkable effect in protecting infant existence from the multitude of dangers that surround it. This subject has been treated in a paper in an early number of the Statistical Journal, by Colonel Sykes, being a translation from a report of the late Professor Hoffmann of the Prussian Statistical Bureau. (Hoffmann was a very able, but very prejudiced writer.—E. M.)

	Mortality of Jewish Infants. General Population.	Frankfort on the Maine. Jewish Population.
Under 1.	24	12

And the same relative proportions prevail over 1,800,000 of Jews, of which the writer has the certified statistics. (The important influence of temperance in saving and prolonging life, is far greater than that of any sanitary arrangement.)

TABLE OF THREE GROUPS OF DISTRICTS SELECTED FROM THE 27 PRINCIPAL ENGLISH WATERING PLACES. INFANT MORTALITY.

GROUP NO. I. WHERE THE MORTALITY IS UNDER 12·100

Aberystwith	9·2	Isle of Wight	10·5	Eastbourne	11·5
Kendal	9·7	Ashton	11·0	Worthing	11·5
Barnstaple	9·6	Anglesea	11·0	Margate	11·0 Mixed Population.

GROUP NO. 2. WHERE THE MORTALITY IS OVER 12 AND UNDER 14·100.

Thanet	12·3	Upton	12·9	Capel-le-Frith	13·9
Hastings	12·7	Bakewell	12·5	Whitby	13·7
Weymouth	12·8	Tunbridge	13·6		
Newton Abbot	12·0	Warwick	13·8		

GROUP NO. 3. WHERE THE MORTALITY IS THE HIGHEST.

Bangor	14·5	Cheltenham	15·1	Mutford	18·8
Bath	14·8	Dover	15·8	Scarborough	17·2
Clifton	15·5	Brighton	16·5	Yarmouth	21·6

The next Tables A, B, C, D, will compare the mortality of Margate infants with that of 4 Groups of Districts. Groups A, B, C, are the Groups composed by Dr Greenhow, of healthy contiguous rural districts, where the death-rate was very low, and employed by him to form a "Standard" of normal health for England. Group D. is composed of 4 healthy Districts, where the mortality is amongst the very lowest known to scientific inquirers.

The reader will perceive how little the health of Margate suffers, by comparison with these selected normal regions.

\* Dr. De Neufville.



INFANT MORTALITY IN THE THREE GROUPS OF DISTRICTS SELECTED BY  
DR. GREENHOW, AS STANDARDS OF NORMAL HEALTH, 6 YEARS 1856—1861.

Margate	1856	1857	1858	1859	1860	1861		
Births	264	265	257	257	260	240	Residents	
Deaths	26	39	29	29	13	23	—	101

A INFANT MORTALITY. SOUTHERN GROUP.

Hambledon . . .	97	Battle . . .	123
Dorking . . .	111	Petworth . . .	117
Reigate . . .	97	Medhurst . . .	96
Godstone . . .	100		

B SOUTH-WESTERN GROUP.

Okehampton . . .	90	Holsworthy . . .	82
Crediton . . .	85	Stratton . . .	104
South Molton . . .	102	Camelford . . .	114
Torrington . . .	94	Launceston . . .	91
Bideford . . .	98		

C NORTHERN GROUP.

Haltwhistle . . .	104	Rothbury . . .	68
Bellingham . . .	81	Brampton . . .	101
Glendale . . .	81	Longtown . . .	121

D

Knighton . . .	136	Kendal . . .	97
Bootle . . .	87	Builth . . .	104

Southern Group	104	Total 99—average of Four Groups of Districts. 101—Margate.
South Western Group	96	
Northern Group	93	
4th Group	106	

INFANT MORTALITY IN MARGATE, 1850—1862.

MIXED POPULATION.

Year . . . .	1850	1851	1852	1853	1854	1855	1856	1857	1858	1859	1860	1861	1862	Total.
January . . .	4	-	2	2	4	-	2	3	4	4	2	1	3	
February . . .	4	3	2	1	3	2	3	5	5	2	3	1	3	
March . . . .	2	3	2	-	3	5	3	2	2	2	1	1	1	
April . . . . .	1	5	1	1	-	4	1	3	3	4	-	1	6	
May . . . . .	4	-	1	1	2	1	1	3	2	-	-	3	3	
June . . . . .	2	1	-	3	-	1	2	1	1	3	1	2	1	
July . . . . .	1	-	3	2	1	1	4	4	3	1	1	4	2	
August . . . .	2	5	7	6	8	5	9	9	8	8	1	5	1	
September . . .	4	10	4	4	9	4	7	3	1	3	-	8	2	
October . . . .	2	5	4	4	1	4	1	4	3	3	4	3	1	
November . . .	1	-	4	3	3	1	-	4	-	-	1	-	3	
December . . .	-	2	1	-	1	1	-	2	1	2	1	2	1	
Visitors . . . .	27	34	31	27	35	29	33	43	33	32	15	31	27	= 397
Inhabitants . .	-	1	3	5	7	2	7	4	4	3	2	8	4	50
	27	33	28	22	28	27	26	39	29	29	13	23	23	= 347



## CHAPTER IV.

## MORTALITY OF THE INHABITANTS IN MARGATE FROM ZYMOTIC DISEASES.

IN Margate during the 13 years, 1850-62, 225 men and 181 women died of Zymotic Diseases, or 406 persons to 130,000 inhabitants passing over a period of 13 years, or 312 to 100,000 persons living; 31 annually to the resident population of 10,000 persons.

The following table will shew the annual Mortality of this class of diseases in England and Wales, and compare the same with that of Margate.

To 10,000 Persons	1850	1851	1852	1853	1854	1855	1856	1857	1858	1859	1860	1861	1862		
ENGLAND & WALES	44	53	53	47	61	46	41	47	57	54	38	44	-	586	48
MARGATE	16	25	39	81	60	21	16	38	26	26	11	14	33	406	31

Notwithstanding the favourable position the inhabitants take as regards these formidable diseases, the fluctuation between single years is extreme, the difference between 1853 and 1860 being 8 to 1. Speaking of Zymotic Diseases, Dr. Stark, in the Fourth Report of the Registrar General for Scotland, says—"It may happen that from various circumstances, not at present understood, that the mortality from Zymotic Diseases remains low for several years, when all at once, without any apparent change of weather or other circumstances so far as we are able to trace, Epidemical Diseases become prevalent and spread over the whole country."

These extremes occurring in a healthy population, it becomes a matter of interest to inquire where similar instances of great irregularity are to be found. Commencing the inquiry with the year 1856, the Registrar-General having that year for the first time published the Table "Death from various causes in each district," and by this means placing the 631 Districts of England and Wales under direct Medical statistical supervision, and affording the required materials for comparison; it will be found that the greatest fluctuations occur in those districts where the mortality is the lowest.

The accompanying Tables, with columns *a*, *b*, *c*, will shew the death-rate from Zymotic Diseases in three groups of districts selected to form a standard of public health.—(On a Standard of Public Health for England, by C. H. Greenhow, M.D., Lecturer on Public Health at St. Thomas's Hospital, &c.—*Quarterly Journal of the Statistical Society*, June, 1859).

Mortality from Zymotic Diseases in Margate, 6 years, 1856-1861:—

1856 1857 1858 1859 1860 1861 } 131, or 218 to population of  
16 38 26 26 11 14 } 100,000 resident inhabitants.

Annual mortality in the three groups of Districts selected by Dr. Greenhow: 6 years, 1856-1861:—

TABLE I.—SOUTHERN GROUP.

			<i>a</i>	<i>b</i>	<i>c</i>				<i>a</i>	<i>b</i>	<i>c</i>
42	Hambleton	16	331	23	67	77	Battle	16	379	29	94
43	Dorking	17	265	25	45	88	Petworth	17	212	6	31
44	Reigate	16	320	22	91	93	Midhurst	17	333	31	76
45	Godstone	17	209	18	31						

SOUTH-WESTERN GROUP.

			<i>a</i>	<i>b</i>	<i>c</i>				<i>a</i>	<i>b</i>	<i>c</i>
291	Okehampton	16	300	19	115	298	Holsworthy	16	201	6	30
292	Crediton	17	251	26	84	299	Stratton	17	239	6	39
294	South Molton	18	190	29	42	300	Camelford	17	389	10	36
297	Bideford	17	442	33	172	301	Launceston	17	342	33	85



## NORTHERN GROUP.

		<i>a</i>	<i>b</i>	<i>c</i>			<i>a</i>	<i>b</i>	<i>c</i>		
484	Garstang	16	275	21	58	556	Brampton	17	222	8	42
556	Haltwhistle	16	190	9	21	507	Longtown	17	201	7	34
559	Bellingham	17	201	7	34	572	Bootle	16	170	6	22
562	Glendale	15	238	15	39	604	Knighton	16	191	13	28
569	Rothbury	15	160	8	19	599	Builth	16	236	4	46

The column *a* is the number dying to a population of 100,000. Columns *b* and *c* are the actual number of deaths.

If the *b* and *c* columns are consulted, it will be seen that these exceptional healthy districts have a very irregular annual Zymotic death-rate, the greatest extremes being—

Annual Mortality.				Annual Mortality.			
16	Reigate	22	91	17	Launceston	33	85
16	Battle	29	94	17	Brampton	8	42
16	Okehampton	19	115	16	Builth	4	46
17	Bideford	33	172				
17	Stratton	6	39	16	Margate	11	38

From this table it will be seen that the extreme healthy condition of these districts by no means exempts them from occasional visitations of epidemic diseases, and doubtless when the time of observation is extended beyond the short period at present available, viz., 6 years rate of observation, the list will be extended.

Average annual proportion of deaths produced by Zymotic Diseases during 6 years, 1856 to 1861, per 100,000 persons of all ages, both sexes:—

Northern Group.	Southern Group.	South-Western Group.	Margate.
276	277	332	218

Comparative Table of the loss of life from Zymotic Diseases in 27 of the principal English watering places and of Margate, 1856 to 1861. From the Registrar General's Report, 19 to 24.

	1856	1857	1858	1859	1860	1861	
Resident Inhabitants	16	38	26	26	11	14	= 131
Visitors	3	11	4	10	3	12	= 43
Mixed Population	19	49	30	36	14	26	= 174

290 to 100,000

Group No. 1.—Where the mortality is under 300 to 100,000. 6 years average:—

Kendal	219	Eastbourne	290	Cheltenham	266
Anglesea	249	Worthing	287	Margate	290*
Bakewell	251	Isle of Wight	280	Warwick	291
Hastings	268	Newton Abbot	293	Ashton	298

Group No. 2.—Where the mortality is under 400:—

Aberystwith	349	Capel-le-Frith	345	Weymouth	348
Whitby	371	Bath	318	Mutford	353
Scarborough	396	Barnstable	385	Bangor	317

Group No. 3.—Where the mortality is the highest:—

Clifton	426	Dover	424	Yarmouth	636
Tunbridge	433	Brighton	435		

\* Mixed population.



The Tables founded on the entire mortality of mixed populations, find the following districts in nearly the same relative position with regard to infant mortality and the mortality from Zymotic diseases:—

Isle of Wight	280	105	Eastbourne	290	115	Margate	290	110
Worthing	289	115	Kendal	219	97			

*Note.*—Metria, or Puerperal Fever, is included in the Zymotic class. Margate is the only town without one death from Metria in the years 1856-61. The greatest mortality from Metria is at Weymouth, Dover, Brighton, Yarmouth and the Isle of Wight.

Compared with Scotland the comparative mortality from Zymotic diseases in the three great divisions were:—

Insular Districts . . .	193				
Mainland Rural . . .	359	Margate . . .			218
Town Districts . . .	712				

Margate is therefore superior to the country districts of that kingdom, and only 25 to 100,000 in excess of that remote sanctuary of health, the insular Scottish districts.

		Births.	Deaths.	
Insular Districts, Scotland	.	275	154	
Margate	.	257	156	1858

The same proportion nearly prevails during the whole period of Scottish Registration.

Mortality from Fever and Typhus Fever for 12 years in Margate and in all England—

England	990
Margate	596

Margate.	Northern Group.	Southern Group.	South-Western Group.	
50	50	75	102	6 years Registration, 1849-1854



## MORTALITY FROM ZYMOTIC DISEASES. CAUSES OF DEATH.

INHABITANTS.	1850	1851	1852	1853	1854	1855	1856	1857	1858	1859	1860	1861	1862	
Small Pox . . .	-	-	-	-	2	8	-	-	-	1	-	-	-	11
Measles . . .	-	2	8	-	1	-	-	7	1	-	-	-	6	25
Scarlatina . . .	-	-	9	68	9	7	2	1	8	7	2	-	1	114
Diphtheria . . .	-	-	-	-	-	-	-	-	1	2	1	-	1	5
Croup . . .	4	-	1	-	-	-	-	-	4	4	1	-	-	14
Cynache malum . . .	-	-	-	-	-	-	-	1	1	-	-	-	2	4
Whoop Cough . . .	4	2	4	5	-	-	4	-	2	3	-	-	18	42
Typhus . . .	-	1	1	2	2	1	-	3	1	2	-	-	2	15
Erysipelas . . .	-	1	1	-	-	-	1	-	-	1	2	2	-	8
Metria . . .	1	-	-	-	-	-	-	-	-	-	-	-	-	1
Influenza . . .	1	1	4	-	1	-	-	1	1	-	-	1	-	10
Dysentery . . .	-	-	-	-	-	-	-	-	1	-	-	-	-	1
Diarrhœa . . .	2	11	7	2	33	2	8	19	4	3	-	7	-	98
Cholera . . .	-	-	-	-	8	-	-	-	-	-	-	-	-	8
Remittent Fever . . .	2	-	1	-	-	-	-	-	-	-	-	-	-	3
Fever . . .	2	7	3	4	4	3	1	6	2	3	5	3	3	46
	16	25	39	81	60	21	16	38	26	26	11	14	33	405
VISITORS.														
Small Pox . . .	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Measles . . .	-	-	-	-	-	-	-	1	-	-	-	-	-	1
Scarlatina . . .	-	-	2	5	-	-	-	-	1	4	1	1	-	14
Diphtheria . . .	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Croup . . .	1	-	-	-	-	-	-	-	-	-	-	1	-	2
Cynache malum . . .	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Whoop Cough . . .	1	2	-	2	-	-	-	-	1	2	1	2	1	12
Typhus . . .	-	-	1	-	-	-	1	1	-	-	-	-	-	3
Erysipelas . . .	-	-	-	-	1	-	-	-	-	-	-	-	-	1
Influenza . . .	-	-	-	1	-	-	1	1	1	-	-	-	-	4
Dysentery . . .	-	-	-	-	1	-	-	-	-	-	-	1	-	2
Diarrhœa . . .	-	3	3	2	24	-	1	3	-	3	1	5	1	46
Cholera . . .	-	-	-	-	13	-	-	-	-	-	-	-	-	13
Remittent Fever . . .	-	1	1	-	-	-	-	-	-	-	-	1	-	3
Fever . . .	-	2	1	-	-	-	-	2	-	-	-	1	1	7
	2	8	8	10	39	-	3	8	3	9	3	12	6	111
HOSPITALS.														
Measles . . .	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Scarlet Fever . . .	1	-	-	-	-	-	-	-	-	-	-	-	-	1
Diphtheria . . .	-	-	-	-	-	-	-	-	1	1	-	-	-	2
Cynache . . .	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Whoop Cough . . .	-	-	1	1	-	4	-	-	-	-	-	-	-	6
Diarrhœa . . .	-	-	-	-	1	-	-	-	-	-	-	-	-	1
Fever . . .	1	-	-	-	-	-	-	-	-	-	-	-	-	1
Erysipelas . . .	-	-	-	-	-	1	-	1	-	-	-	-	-	2
Typhus . . .	-	-	-	-	-	-	-	2	-	-	-	-	2	4
	2	-	1	1	1	5	-	3	1	1	-	-	2	17

## CHAPTER V.

## MORTALITY IN MARGATE FROM PULMONARY DISEASES.

## Resident Inhabitants.

a. *Phthisis or Consumption.*

During the 13 years 1850-62, Consumption was fatal to 126 men and 187 women, 313 persons; 24 annually to the resident population of 10,000; or, 141 to 100,000 persons living.



*b. Diseases of the Respiratory Organs. Class 3, Order 3, R. G.*

During the same period inflammatory affections of the Organs of Respiration were fatal to 115 men and 72 women, 186 of the resident population; 14 annually, or, 143 to 100,000 persons.

Consumption was, as is generally the case, more fatal to women. Inflammatory diseases of the Respiratory Organs to men. Considered as a single group these differences disappear.

	Men.	Women.
Consumption . . . . .	126	187
Diseases of the Respiratory Organs . . . . .	115	72
	<hr/> 241	<hr/> 259

An excess of 18 women to a population of 130,000. Were the Diagnosis Registration perfect, in all probability the proportion of the two sexes dying would be always equal.

The entire group of Pulmonary Diseases was fatal to 384 to 100,000 of the resident inhabitants.

## VISITORS.

During 13 years, 123 visitors and inmates of the Hospitals died of Consumption; and 32 visitors of affections of the Respiratory Organs:—155, or 652 persons of the mixed population. Number unknown.

If it is intended to ascertain the value of Margate as a place of residence during the winter and spring months, for persons disposed to pulmonary affections, the condition of the inhabitants must be considered separately, and distinct from that of the strangers. The mortality of the visitors, and of the special Infirmary and Hospital, depriving the mixed death-rate of any Medico-statistical value. The best, and also the severest test, for this purpose, is to institute a comparison between the mortality of the residents with that of the populations of those remote, rural, and thinly peopled districts, which are recognized as the most healthy, and where the death-rate from pulmonary affection is the lowest. The means for such an inquiry are ample and eminently trustworthy. 1st. Being derived from papers on the Sanitary condition of England, written by Dr. E. H. Greenhow, with an introduction by Mr. Simon, published by the Board of Health. 2dly. From an article on forming a standard for the public health of England, also by Dr. Greenhow, and published in the transactions of the Statistical Society, 1855. A considerable space of the article published by the Board of Health is dedicated to pulmonary affections. Selecting those tables that are best calculated to determine the health value of regions, and extracting the death-rate of twelve of the most favoured of these regions or districts, we have the comparative test required.

Average Annual Mortality in the twelve healthiest districts from Pulmonary affections. Seven years average, 1848-1855.

Glendale . . . . .	216	Houghton le Spring . . . . .	378	} to 100,000 persons.
Easington . . . . .	243	Garstang . . . . .	407	
Bootle . . . . .	254	Builth . . . . .	405	
Haltwhistle . . . . .	313	Richmond . . . . .	420	
Cranbrooke . . . . .	418	Leominster . . . . .	412	
Romney Marsh . . . . .	382	Hemel Hempstead . . . . .	422	

Margate Residents 383. Margate being the fifth on the list.

(Dr. Greenhow's Table, No. XIII. Table a.)



TABLE 6.—Average Annual Mortality from Diseases of the Respiratory Organs, including Consumption, during 6 years, 1856-1861, in the 12 Districts, in which the Pulmonary death-rate is the lowest:—

Glendale . . . . .	293	Houghton-le-Spring	347
Easington . . . . .	291	Garstang . . . . .	421
Bootle . . . . .	389	Builth . . . . .	453
Haltwhistle . . . . .	390	Richmond . . . . .	421
Cranbrooke . . . . .	413	Leominster . . . . .	398
Romney Marsh . . . . .	425	Hemel Hempstead	586

Average 12 healthy Districts . . 401 } 6 years, to 100,000  
 Average Margate . . . . . 402 } persons.

These very instructive Tables, taken from different sources and at different periods of time, shew that Margate takes a place with the 12 exceptional Districts selected to form a standard of Public Health in England. The following Table will shew the numbers dying annually in Margate, and compare the same with the mortality of England and Wales for 12 years, 1850-61; of Scotland, for 1855-56-57-58; and London, 6 years:—

Pulmonary Diseases.	1850	1851	1852	1853	1854	1855	1856	1857	1858	1859	1860	1861	1862
ENGLAND AND WALES . . . . .	50	53	52	61	52	62	52	59	59	55	59	58	-
SCOTLAND . . . . .	-	-	-	-	-	49	47	48	53	-	-	-	-
MARGATE . . . . .	32	36	22	54	43	40	38	45	34	50	45	31	30

Mortality, 4 years, Scotland . . . 492

„ London . . . 644

„ Margate . . . 392

Table of the Mortality in Margate, from diseases of the Lungs, for the 6 years, 1856-61—Resident and Mixed Populations:—

Consumption—Inhabitants . . . . .	255	deaths to 100,000 living Residents.
„ Inhabitants and Visitors . . . . .	291	Population unknown
Inhabitants, Visitors, and Special Hospital	351	Ditto ditto mixed.
Respiratory Organs—Inhabitants . . . . .	141	deaths to 100,000 living.
„ Inhabitants, Visitors, Hospital . . . . .	186	unknown Population.
Respiratory Organs—Inhabitants; . . . . .	396	deaths to 100,000 Persons living.
In one Group—Inhabitants, Mixed } Population . . . . . }	531	unknown Population.

If we compare the Mortality of Margate for Pulmonary Diseases, including Consumption—(minus the Special Infirmary)—we shall find a Mortality of 477 to 100,000, for the 6 years, 1856-1861. The 27 places of Public Resort being classified in three divisions.

Under 500 to 100,000 living:—

Upton . . . . .	426	Margate . . . . .	477	Warwick . . . . .	482
Isle of Wight . . . . .	428	Worthing . . . . .	453	Anglesea . . . . .	496
Scarborough . . . . .	429	Mutford . . . . .	466	Barnstaple . . . . .	460
Ashton . . . . .	433	Weymouth . . . . .	481	Whitby . . . . .	473
Thanet . . . . .	447	Newton Abbot . . . . .	499	Kendal . . . . .	468
Capel le Frith . . . . .	484	Bakewell . . . . .	467	Aberystwith . . . . .	456
		Eastbourne . . . . .	450	Anglesea . . . . .	496

Where the Mortality is under 600;—

Tunbridge . . . . .	544	Yarmouth . . . . .	571
Dover . . . . .	505	Cheltenham . . . . .	541
Hastings . . . . .	581	Bangor . . . . .	549
Brighton . . . . .	552	Bath . . . . .	550

Under 700:—

Clifden . . . . .	649.
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## AGES OF RESIDENT PERSONS DYING OF CONSUMPTION.

	1850	1851	1852	1853	1854	1855	1856	1857	1858	1859	1860	1861	1862	TOTAL.	
	M. F.	M. W.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.		
Under 1 year	-	-	1	-	-	-	1	-	2	-	1	1	-	-	12
Under 5 years	-	1	-	1	1	2	3	-	-	1	-	1	1	-	16
5	-	1	-	-	-	-	1	-	-	1	1	-	-	-	7
10	-	-	-	1	-	-	1	1	1	-	1	-	2	1	12
15	-	1	2	1	1	1	2	-	1	1	-	2	4	1	25
20	-	4	1	3	-	2	3	-	3	-	1	1	3	-	33
25	-	2	2	2	-	-	4	-	3	-	1	2	2	-	44
30	-	4	2	2	1	-	5	-	1	3	4	1	1	1	39
35	-	1	-	-	-	1	1	-	2	4	2	1	-	1	28
40	-	-	-	-	-	3	1	-	1	3	3	4	1	1	33
45	-	1	1	1	2	2	3	4	3	2	1	2	-	1	29
55	-	-	1	3	-	1	2	2	2	-	1	1	3	-	30
65	-	-	1	-	-	-	1	-	-	-	-	-	-	-	4
75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	6 13	10 15	5 6	18 20	6 19	10 15	11 11	12 15	7 12	15 18	11 13	13 11	4 16	312	

## CHAPTER VI.

## MORTALITY FROM DISEASES OF THE RESPIRATORY ORGANS—INFLAMMATORY AFFECTIONS.\*

MARGATE is very favourably situated with regard to this class of diseases—the third in fatality after Zymotic Diseases and Phthisis. It forms the third order of the third class of the Registrar General, and varies greatly in its effects in different localities.

An annual average mortality of 14 to 10,000 persons, in the stationary resident population, will bear a comparison with the most favoured districts of England—taking a position after the third in Dr. Greenhow's table.

Glendale	.	.	.	.	101	
Bootle	.	.	.	.	116	Margate . . . 141
Haltwhistle	.	.	.	.	120	

Mr. Stark, speaking of this class of diseases, says, in the Fourth Detailed Annual Report for Scotland:—"It might naturally have been expected that the greater shelter afforded to the inhabitants of towns, and their much less exposure to the inclemency of the weather, would cause a smaller proportion of the inhabitants of towns to be cut off by these diseases, than in the country, where, from persons being more engaged in out-door occupations, they are more exposed. It happens, however, quite otherwise, for the deaths of the inhabitants of the towns by these diseases are twice as high in proportion as in the rural districts."

Insular districts	.	.	.	.	129	
Mainland rural districts	.	.	.	.	194	Margate . . . 141
Town districts	.	.	.	.	405	

The remote insular districts of Scotland are eminently healthy, and their vital statistics in many instances resemble Margate, which in general takes a position between the insular and the rural mainland districts of Scotland. It is very curious to discover so close a resemblance between the mortality of a town, (that during the most unhealthy part of the year is so crowded with visitors and invalids), and remote and almost unknown regions—presumed to

\* This class comprises Laryngitis, Bronchitis, Pleurisy, Pneumonia, Asthma, and diseases of the Lungs.



be cold, bleak, and inhospitable—yet possessing a temperate climate, where consumption, though far from being unknown, is eminently light and mild, in comparison with the more celebrated countries of Italy and the South of France. Indeed, pulmonary diseases seem less fatal in Scotland than in England. This coincides with Dr. Greenhow's opinion, as expressed (with much caution) in the Papers published by the Board of Health, p. 50:—

“The most remarkable fact in the table is the very much smaller mortality of Glendale in Northumberland, and Bootle in Cumberland, than even the healthiest places in the South of England, a peculiarity which is not confined to these agricultural places, but also observed in Haltwhistle, Easington, and Houghton-le-Spring. These facts are too few to allow of any general inference; but they tend at least to prove, that the colder and more variable climate of that narrow part of the island, that intervenes between the Solway Frith and the North Sea, is not unfavourable to health, and that cold alone is less causative of pulmonary diseases than is commonly supposed.”

This was written and published some years before the opinion of Mr. Stark, before quoted. It is indeed singular that Romney Marsh should be cited as one of the least afflicted with pulmonary diseases—that Dr. Greenhow, in selecting districts as examples with low pulmonary death-rates, should avoid all the districts considered most favourable for consumptive patients. The Medical Council of St. Thomas's Hospital published a statement last autumn, containing the following passage:—“There are many patients convalescent, for whom temporary residence in special climates is desirable, according to the nature of the disease. In one sort of place or another, inland or seaside, dry or moist, relaxing or bracing, exposed or sheltered, for the latter class partial provision has already been made—in such establishments as the Margate Hospital for scrofulous patients, and the Bournemouth Hospital for diseases of the lungs.”

This very important statement seems to imply that Margate is advisable for scrofulous patients, but not to be recommended for pulmonary patients, or persons with diseased lungs. Now Margate, with a constant death-rate, calculated from the average of many years, is 384 per 100,000 persons; and Margate has an urban, commercial population, and an important number of its male inhabitants are engaged in maritime pursuits.\*

TABLE OF TOWNS WHERE THE INHABITANTS ARE ENGAGED IN MARITIME PURSUITS:—

Death-rate from Pulmonary Disease.			
Hull	552	West Derby	681
Plymouth	604	London	675
Portsea Island	618	East Stone House	750
Gravesend	600	Bristol	860
Newcastle-upon-Tyne	642	Liverpool	1000
Ipswich	653	England and Wales	552
Stoke Dammeral	614		

If we select two out of this list, Ipswich and Gravesend, and examine the death-rates for the last 6 years from inflammatory diseases of the respiratory organs, we have the following results, when compared with Margate:—

Ipswich	361
Gravesend	366
Margate	156 mixed population and hospital patients.

A contrast the more remarkable as the populations of Ipswich and Gravesend are, in point of social condition, quite equal to Margate, and without occupations injurious to health. The following table will shew the age at death,

\* The Margate boatmen are amongst the very foremost of those adventurous men who go out to vessels in distress, and who alas but too often lose their own lives in endeavouring to save those of others.



and the causes of death, of the 56 mariners whose names are registered during the 11 years, 1850-61, at Margate:—

Deaths at different Ages.			Causes of Deaths.	
Under 20	5		Zymotic . . . . .	4
" 25	8		Consumption . . . . .	9
" 35	8		Organs of Respiration . . . . .	6
" 45	6		Rheumatics . . . . .	1
" 55	5		Constitutional . . . . .	4
" 65	6		Apoplexy . . . . .	4
" 75	13		75 and upwards } . . . . .	18
" 80	3		Old age }	
" 85	1			
" 90	1			
—			—	
46			46	

This necrology would hardly indicate that maritime pursuits, though dangerous to life, were injurious to health. The causes of great distinction between death-rates must be sought in situation and local circumstances, much rather than climate. This very interesting subject, though far from being exhausted, must be brought to a close without multiplying instances, when sufficient has been shewn that Margate offers an example that, within two hours journey from London the invalid may leave a region where the mortality from pulmonary diseases is 690 to 100,000 living, to one where it is reduced to 384 for an average of many years, and where the annual mortality is 25 per 1000 to 16, for an average of 50 years.

It may appear singular that a watering place, so easy of access and familiar as "Margate," should in health so closely resemble almost unvisited and unknown regions, whose appellations and uncouth names seem to imply so great and essential differences of condition. There are indeed great differences of condition, but the points of difference are not so numerous and important as the points of resemblance. The inhabitants of these equally healthy regions all equally possess an atmosphere of great purity, and, "Man stands on a more intimate relation with atmospheric air than any other element. His first action on entering life, and his last on leaving it is to breathe." (Professor Pettinkopfer on Ventilation.) And beyond all controversy the very first element of health is pure air. The second is a dry clean soil. The third, water, free from animal and vegetable substances in a state of decay. In one important word, the end and aim of all sanitary improvements, and the only special quality possessed by a healthy region is—CLEANLINESS.

The following Table will shew the annual Mortality in Margate from Diseases of the Organs of Respiration. Compare the numbers dying in England and Scotland from the same class of Diseases:—

	1850	1851	1852	1853	1854	1855	1856	1857	1858	1859	1860	1861	1862
ENGLAND AND WALES . . . . .	24	27	26	30	28	34	28	30	33	30	27	30	-
SCOTLAND . . . . .	-	-	-	-	-	22	20	22	27	-	-	-	-
Margate . . . . .	13	11	13	17	16	16	13	17	15	18	19	6	9

Bronchitis and Pneumonia are the most fatal of the affections of the organs of Respiration. The annexed Table will shew the proportional Mortality.

## BRONCHITIS.

ENGLAND . . . . .	9	10	10	12	10	14	14	13	15	13	16	15	-
Margate . . . . .	4	3	3	5	8	6	4	5	8	8	3	5	5

## PNEUMONIA.

ENGLAND . . . . .	11	11	12	13	12	14	12	12	13	12	12	11	-
Margate . . . . .	4	3	3	3	1	3	-	4	6	2	7	-	2



## AGES OF PERSONS DYING OF INFLAMMATORY DISEASE OF THE LUNGS.

INHABITANTS.	1850	1851	1852	1853	1854	1855	1856	1857	1858	1859	1860	1861	1862	TOTAL.
	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	
Under 1 Year	2	-	1	-	1	1	1	2	1	2	1	2	1	33
Under 5 Years	1	1	2	1	2	3	1	2	2	2	3	4	2	44
5	1	-	-	-	3	1	-	1	-	1	-	-	-	8
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	1	1	-	-	1	-	-	3
20	-	-	-	-	1	-	1	-	-	-	-	-	-	2
25	1	-	-	-	1	1	-	2	-	-	1	-	-	5
30	-	-	-	-	1	-	1	1	-	1	-	-	-	4
35	-	-	-	-	-	-	-	1	-	-	-	-	-	1
40	-	-	1	1	1	-	1	4	3	1	2	1	-	18
45	2	1	-	2	1	2	1	1	-	1	3	1	1	20
55	2	-	1	1	2	1	3	2	2	3	1	2	-	29
65	-	1	3	-	1	1	-	1	-	-	-	1	1	11
75	-	1	-	-	1	-	-	1	-	-	-	1	1	5
85	-	-	1	-	-	-	-	-	-	-	-	-	-	1
90	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9	4	6	4	5	7	7	9	11	5	10	6	13	3

## CHAPTER VII.

## MORTALITY OF VISITORS, INMATES OF THE HOSPITAL AND THE INFIRMARIES, 1850-62.

The facts recorded of the 779 visitors dying at Margate during the period of 13 years, although necessarily very limited, is yet sufficient for the purpose of ascertaining their relation to the town in a sanitary point of view. The numbers are thus divided—Visitors, 454; Infirmary, 139; Metropolitan Institute, 116; Chateau Belle Vue, 70—779.

The only mode of ascertaining the condition of the health of the Visitors, so far as relates to their place of residence, is to find the proportion the deaths from Zymotic Diseases bear to the general mortality. 123 deaths are registered as belonging to this class, or one-sixth of the entire mortality. Zymotic Diseases generally produce one-fourth of the mortality of Great Britain. The following Table compares the Mortality of the Inhabitants and Visitors from this fearful class of Diseases.

Year	1850	1851	1852	1853	1854	1855	1856	1857	1858	1859	1860	1861	1862
Inhabitants	13	26	38	38	61	22	16	37	25	26	11	15	34
Visitors	3	6	8	11	41	5	3	8	4	12	3	11	8

This Table shews that, with the exception of the Cholera Year, 1854, the two Classes are independent of each other in a sanitary point of view. This is well exemplified by the year 1853 when an epidemic prevailed, and hardly left a trace of its presence on the Visitors.

## INFANT MORTALITY.

Year	1850	1851	1852	1853	1854	1855	1856	1857	1858	1859	1860	1861	1862
Residents	27	31	27	21	28	27	26	38	28	29	13	20	22
Visitors	-	1	3	5	7	2	7	4	4	3	2	8	4



These figures have also no numerical relation to each other. The epidemics of the years 1853 and 1854 passed alike harmless over the Infants of the Inhabitants and Visitors.

THE DISTRIBUTION OF ZYMOTIC DISEASES OVER THE FOUR CLASSES OF STRANGERS.

Year . . .	1850	1851	1852	1853	1854	1855	1856	1857	1858	1859	1860	1861	1862
Visitors . . .	2	6	7	9	39	-	3	8	3	10	3	11	6
Infirmary . . .	-	-	-	-	-	-	-	-	1	2	-	-	2
Metropolitan . . .	1	-	1	1	1	5	-	-	-	-	-	-	-
Belle Vue . . .	-	-	-	1	1	-	-	-	-	-	-	-	-
	3	6	8	11	41	5	3	8	4	12	3	11	8

Every thing relating to these Tables tends to prove the truth of the hypothesis that certain contagious Zymotic Diseases are not the growth of clean, absorbent, dry soils, but introduced. To treat this subject at any length is not the object of this publication, but the Table shewing the course of the Cholera in Margate is given as extracted from the Registration; it is singularly clear and instructive—the time of the attack—the conditions of the deceased, pointing out the source of Cholera in the town. Had the Epidemic been the produce of the region, the Registration would have had a very different aspect.

THE COURSE OF THE CHOLERA IN MARGATE IN 1854.

INHABITANTS.				VISITORS.			
	Men.	Age.	Women.	Men.	Age.	Women.	Age.
Aug. 25	.	.	.	Gentleman	23	.	.
27	.	.	.	Mariner in the Harbour	34	Baker's Wife	45
28	.	.	.	Son of a Professional	2	.	.
Sep. 1	.	.	.	.	.	Mechanic's Daughter	3
5	.	.	.	.	.	Hawker	24
6	.	.	.	.	.	Lady	22
6	.	.	.	.	.	Lady	72
7	.	.	.	.	.	Lady	48
9	.	.	.	.	.	Lady	62
14	.	.	.	.	.	Wife of Dealer	47
14	.	.	.	Mariner at Sea	34	.	.
15	Mariner	59	.	.	.	.	.
17	.	.	House Servant	.	.	.	.
17	.	.	House Servant	.	.	.	.
18	.	.	House Servant	.	.	.	.
18	.	.	Wife of Labourer	.	.	.	.
22	.	.	.	.	.	Lady	60
27	Labourer	72	.	.	.	.	.
28	Son of Mariner	10	.	.	.	.	.
Oct.	.	.	Wife of Blacksmith	.	.	.	.
	3		5	4		9	
Inhabitants . . .				8			
Visitors . . .				13			
Total . . .				21			



If we take the three first years, 1850, 1851, and 1852, with 17 deaths of 8 visitors from Zymotic diseases, to a general mortality of 138; compared the three years 1860, 1861 and 1862, 22 deaths from Zymotic diseases to 176 deaths from all causes, the result 12.1 to 12.5, a slight increase quite unimportant, and when the Infant mortality is contrasted, wholly disappears; 4 infants of visitors dying the first three years, and 14 the last; the ease and facility of travelling causes the mother with her infant to visit Margate at a much earlier period of its life than formerly.

The Mortality of the Hospital and Infirmaries from this class of Diseases requires particular attention. Had the Epidemic been regional no amount of isolation would have saved the susceptible inmates of these establishments from giving evidence more or less significant of its existence. The Epidemic of 1853 never appeared in the Infirmaries, although the Metropolitan Institute for Children contained patients disposed by age and constitution to receive infection. In the Cholera year 1854, the prevailing disease—Diarrhœa—left these establishments with only one single victim. These examples lead to another important question; the health of the large Boarding Schools. It is a well known fact that large educational establishments in Germany, France, and England, are frequently obliged to dismiss their pupils in consequence of contagious diseases making their appearance amongst the scholars, without the least censure attaching to the Principals. As no trace of death arising from these diseases is to be found during the entire period of Registration, and but two or three cases of death amongst the entire number of pupils, boys and girls, for 25 years, we must conclude that these educational establishments, like the Hospital and the Infirmaries, have been without any serious visitation, and that the Scholars have partaken of the benefit of the healthy position of the town. Had the case been otherwise, the fact must have been brought to light by this searching examination.

TABLE OF THE NUMBER OF VISITORS DYING IN MARGATE FROM  
PULMONARY DISEASES.

CONSUMPTION.

	1850	1851	1852	1853	1854	1855	1856	1857	1858	1859	1860	1861	1862	Total.
Visitors . . .	5	1	3	6	-	3	6	4	4	5	5	5	3	50
Infirmary . . .	-	-	-	2	-	-	3	2	2	2	-	1	-	12
Metropolitan . .	2	3	8	2	3	2	4	4	1	3	3	4	-	39
Belle Vue . . .	1	2	1	2	-	1	2	1	2	2	2	1	4	21
	8	6	12	12	3	6	15	11	9	12	10	11	7	123
Laryngitis . . .	-	-	-	-	1	-	-	-	-	-	-	-	-	1
Bronchitis . . .	-	-	-	1	-	1	1	1	3	3	1	3	-	14
Pleurisy . . . .	-	-	-	-	-	-	-	1	-	1	-	-	-	2
Pneumonia . . .	-	-	-	1	1	-	-	1	1	-	-	-	-	4
Asthma . . . . .	1	-	-	-	-	-	1	-	-	-	-	-	-	2
Lung Disease . .	-	2	-	1	2	-	1	1	-	-	1	-	1	9
	1	2		3	4	1	3	4	4	4	2	3	1	32



MORTALITY OF THE VISITORS AND OF THE INMATES OF THE INFIRMARIES,  
1850-63.

	1850	1851	1852	1853	1854	1855	1856	1857	1858	1859	1860	1861	1862	Total
January . . .	-	2	-	-	2	1	-	5	4	7	2	4	4	31
February . . .	2	2	-	-	5	1	4	1	2	1	1	4	4	27
March . . .	3	2	3	3	1	1	2	1	3	2	1	2	4	28
April . . .	3	2	-	-	2	3	5	2	3	1	1	5	-	27
May . . .	5	-	2	5	1	4	5	5	3	3	-	3	7	43
June . . .	4	3	7	14	3	4	7	7	6	9	4	8	8	84
July . . .	-	7	9	14	2	11	12	6	9	14	4	12	9	109
August . . .	5	10	17	8	17	9	15	14	5	10	7	16	9	142
September . . .	5	10	2	8	37	15	12	12	6	9	8	8	10	149
October . . .	7	2	2	7	9	5	4	7	5	10	2	9	6	75
November . . .	3	1	2	1	2	1	4	4	2	4	4	3	2	33
December . . .	4	4	1	2	-	2	4	4	2	3	1	2	2	31
	41	45	52	62	81	57	74	68	50	73	35	76	65	779

In conclusion, this Statistical Picture of the Town of Margate is in perfect harmony. The Annual Death-rate, the Mortality of Infants, the loss of life from Zymotic and Pulmonary Diseases, have a numerical relation to each other, and the existence of any one Table of Numbers pre-supposes the existence of the others equally favourable.

## APPENDIX.

The Medical Practitioners in Margate having kindly consented to fill up a simple formula, the following table is the result. A similar desire to advance the cause of science in other localities, would advance the knowledge of the natural laws affecting life, disease and death materially, and produce valuable results.

PATIENTS UNDER MEDICAL CARE, DURING THE WEEK ENDING APRIL 11, 1863,—CONTRIBUTED BY THE MEDICAL GENTLEMEN PRACTISING IN MARGATE.

	Under 1.		5		20		40		60		80		90		Total.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
Zymotic . . .	2	2	6	2	7	11	3	5	-	1	-	-	-	-	39
Phthisis . . .	-	-	-	1	1	2	3	3	2	-	-	-	-	-	12
	Age		not		given.		-		-		-		-		4
Organs of Respi- ration . . .	2	-	3	6	2	2	1	8	7	11	9	3	-	-	54
	Age		not		given.		-		-		-		-		11
Other Diseases . .	2	1	10	10	27	39	49	70	27	36	13	22	2	-	308
	Age		not		given.		-		-		-		-		28
															456
Condition . .	Slight		Severe		Dangerous		Moribund								
	148	183	42	48	12	17	3	3	-	-	-	-	-	-	456

It has long been a desideratum in statistical science to know the amount of Illness-Disease (*Morbilität*) prevailing amongst a certain number of persons at one time. The above table represents the amount and the number of persons under medical care, in a healthy population of 10,000. Patients in Hospital, and Infirmaryes not included.



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I have been a dentist in statistical science to know the amount of the (1) (b) (7) (D) prevailing amongst a certain number of persons. The above table represents the amount and the number of persons under medical care in a healthy population of 10,000. Patients in 10,000.