

[Report 1890] / Medical Officer of Health, West Sussex Combined Sanitary District.

Contributors

West Sussex Combined Sanitary District.

Publication/Creation

1890

Persistent URL

<https://wellcomecollection.org/works/azmqcjpj>

License and attribution

You have permission to make copies of this work under a Creative Commons, Attribution license.

This licence permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited. See the Legal Code for further information.

Image source should be attributed as specified in the full catalogue record. If no source is given the image should be attributed to Wellcome Collection.



Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
<https://wellcomecollection.org>

SEVENTEENTH
ANNUAL REPORT

ON THE

Condition of the Combined
Sanitary District,

OF

WEST SUSSEX,

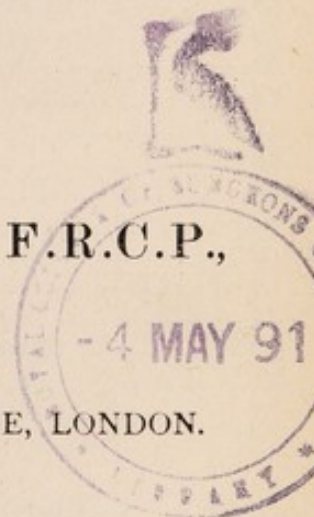
FOR THE YEAR 1890.

BY

CHARLES KELLY, M.D., F.R.C.P.,

MEDICAL OFFICER OF HEALTH,

PROFESSOR OF HYGIENE IN KING'S COLLEGE, LONDON.



Littlehampton :

“SUSSEX STANDARD” PRINTING & PUBLISHING COMPANY, HIGH STREET.

1891.

SEVENTEENTH

ANNUAL REPORT

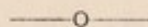
Condition of the Combined

Sanitary District

Digitized by the Internet Archive
in 2018 with funding from
Wellcome Library

<https://archive.org/details/b30264352>

INDEX.



<p>STEYNING DISTRICT 1-14</p> <p style="padding-left: 20px;">Births and birth-rate 1</p> <p style="padding-left: 20px;">General mortality..... 2</p> <p style="padding-left: 20px;">Infant mortality 3</p> <p style="padding-left: 20px;">Zymotic mortality 4</p> <p style="padding-left: 20px;">Influenza 4</p> <p style="padding-left: 20px;">Lancing 5-10</p> <p style="padding-left: 20px;">Sussex Chemical Works 11-13</p> <p style="padding-left: 20px;">Inquests..... 14</p> <p>HORSHAM DISTRICT 15-20</p> <p style="padding-left: 20px;">Births and birth-rate 15</p> <p style="padding-left: 20px;">General mortality 16</p> <p style="padding-left: 20px;">Infant mortality 17</p> <p style="padding-left: 20px;">Zymotic mortality 18</p> <p style="padding-left: 20px;">Influenza 18</p> <p style="padding-left: 20px;">Inquests..... 19</p> <p>PETWORTH DISTRICT 21-27</p> <p style="padding-left: 20px;">Births and birth-rate 21</p> <p style="padding-left: 20px;">General mortality..... 22</p> <p style="padding-left: 20px;">Distribution of population 23</p> <p style="padding-left: 20px;">Infant mortality 24</p> <p style="padding-left: 20px;">Zymotic mortality..... 24</p> <p style="padding-left: 20px;">Influenza 24</p> <p style="padding-left: 20px;">Water supply and drainage..... 25</p> <p style="padding-left: 20px;">Inquests 26</p> <p style="padding-left: 20px;">Rainfall 27</p> <p>THAKEHAM DISTRICT 28-33</p> <p style="padding-left: 20px;">Births and birth-rate 28</p> <p style="padding-left: 20px;">General mortality..... 29</p> <p style="padding-left: 20px;">Infant mortality 30</p> <p style="padding-left: 20px;">Zymotic mortality 31</p> <p style="padding-left: 20px;">Influenza 31</p> <p style="padding-left: 20px;">Water supply and drainage..... 31</p> <p style="padding-left: 20px;">Notification 32</p> <p style="padding-left: 20px;">Inquests..... 33</p> <p>EAST PRESTON DISTRICT..... 34-44</p> <p style="padding-left: 20px;">Births and birth-rate..... 34</p> <p style="padding-left: 20px;">General mortality..... 35</p> <p style="padding-left: 20px;">Infant mortality 36</p> <p style="padding-left: 20px;">Zymotic mortality 37</p> <p style="padding-left: 20px;">Diphtheria..... 37</p> <p style="padding-left: 20px;">Enteric fever 37</p> <p style="padding-left: 20px;">Influenza 39</p> <p style="padding-left: 20px;">Broadwater 39</p> <p style="padding-left: 20px;">Wick 41</p> <p style="padding-left: 20px;">West Tarring 42</p> <p style="padding-left: 20px;">Alteration of area..... 42</p> <p style="padding-left: 20px;">Proceedings before the Magistrates 43</p> <p style="padding-left: 20px;">Inquests..... 44</p>	<p>MIDHURST DISTRICT..... 45-56</p> <p style="padding-left: 20px;">Births and birth-rate 45</p> <p style="padding-left: 20px;">General mortality..... 46</p> <p style="padding-left: 20px;">Infant mortality 47</p> <p style="padding-left: 20px;">Zymotic mortality..... 48</p> <p style="padding-left: 20px;">Scarlatina 48-51</p> <p style="padding-left: 20px;">Enteric fever..... 51</p> <p style="padding-left: 20px;">Influenza 51</p> <p style="padding-left: 20px;">Notification 52</p> <p style="padding-left: 20px;">Midhurst water supply..... 53</p> <p style="padding-left: 20px;">Drainage and sewage 53</p> <p style="padding-left: 20px;">Proceedings before the Magistrates 54</p> <p style="padding-left: 20px;">Inquests..... 56</p> <p>WESTBOURNE DISTRICT 58-62</p> <p style="padding-left: 20px;">Births and birth-rate 58</p> <p style="padding-left: 20px;">General mortality..... 59</p> <p style="padding-left: 20px;">Infant mortality 60</p> <p style="padding-left: 20px;">Zymotic mortality 61</p> <p style="padding-left: 20px;">Influenza 61</p> <p style="padding-left: 20px;">Inquests..... 62</p> <p>BOROUGH OF WORTHING... 63</p> <p>WORTHING DISTRICT 64-73</p> <p style="padding-left: 20px;">Births and birth-rate 64</p> <p style="padding-left: 20px;">General mortality..... 65</p> <p style="padding-left: 20px;">Zymotic mortality..... 66</p> <p style="padding-left: 20px;">Scarlatina 67</p> <p style="padding-left: 20px;">Diphtheria 67</p> <p style="padding-left: 20px;">Enteric fever..... 68</p> <p style="padding-left: 20px;">Influenza 68</p> <p style="padding-left: 20px;">Infant mortality 69</p> <p style="padding-left: 20px;">Fruit growing 69</p> <p style="padding-left: 20px;">Seaweed 70</p> <p style="padding-left: 20px;">Water supply..... 71</p> <p style="padding-left: 20px;">Drainage and sewage 71</p> <p style="padding-left: 20px;">Notification 71</p> <p style="padding-left: 20px;">Inquests..... 72</p> <p style="padding-left: 20px;">Rainfall 73</p> <p>LITTLEHAMPTON DISTRICT 74-80</p> <p style="padding-left: 20px;">Births and birth-rate 74</p> <p style="padding-left: 20px;">General mortality..... 75</p> <p style="padding-left: 20px;">Infant mortality 76</p> <p style="padding-left: 20px;">Zymotic mortality 76</p> <p style="padding-left: 20px;">Influenza 77</p> <p style="padding-left: 20px;">Notification 77</p> <p style="padding-left: 20px;">Water supply 77</p> <p style="padding-left: 20px;">Government inquiry..... 78</p> <p style="padding-left: 20px;">Analysis of water..... 79</p> <p style="padding-left: 20px;">Inquests..... 80</p>
--	--

INDEX—(continued).

WEST WORTHING DISTRICT ...81-83	ARUNDEL DISTRICT .....84-96
Alteration of area..... 81	Births and birth-rate 84
Births and birth-rate 82	General mortality..... 85
General mortality..... 82	Infant mortality 86
Infant mortality 83	Zymotic mortality..... 86
Zymotic mortality..... 83	Outbreak of Enteric fever .....86-95
Inquests..... 83	Influenza 95
	Notification 95
	Inquests..... 96

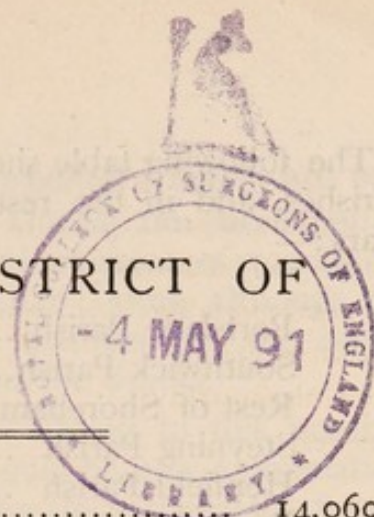
GENERAL REPORT — 97-129.

Population and area..... 97	Infectious disease 108
Births and birth-rate..... 97	Sale of food and drugs..... 109
General mortality..... 99	Rainfall 111
Effect of age and sex on the death-rate..... 104	Bright sunshine 112
Infant mortality 105	Temperature of Worthing 113
Zymotic mortality 106	Temperature of soil 114
Influenza 107	Legislation in 1890 114
TABLE I.—Showing the Births in 1881-90..... 117	
TABLE II.—Showing the Deaths and Death-rate from Zymotic Diseases in 1890 118	
TABLE III.—Showing the Deaths and Death-rate from Zymotic Diseases in each of the ten years 1881-90..... 119	
TABLE IV.—Showing the Zymotic Deaths in each month in the year 1890 ... 120	
TABLE V.—Showing the Deaths in each month in the ten years 1881-90 121	
TABLE VI.—Showing the Deaths and Death-rate from all causes and from various causes in the ten years 1881-90..... 122	
TABLE VII.—Showing the Distribution of the Population as to age and sex in West Sussex and in other districts in 1881 123	
TABLE VIII.—Showing the Effect of the Distribution of Age and Sex on the Death-rate..... 124	
TABLE IX.—Showing the Death-rate at twelve different groups of ages in the six years 1881-86 125	
TABLE A.—Table of Deaths during the year 1890, in the combined Sanitary District of West Sussex, classified according to Diseases, Ages, and Localities 126-127	
TABLE B.—Table of Population, Births, and of New Cases of Infectious Sickness, coming to the knowledge of the Medical Officer of Health during the year 1890, in the combined Sanitary District of West Sussex, classified according to Diseases, Ages, and Localities 128-129	

STATISTICAL TABLES—I.-LXXXVIII.

Steyning i.-viii.	Westbourne xlix.-lvi.
Horsham ix.-xvi.	Worthing lvii.-lxiv.
Petworth xvii.-xxiv.	Littlehampton lxxv.-lxxxii.
Thakeham xxv.-xxxii.	West Worthing lxxxiii.-lxxx.
East Preston xxxiii.-xl.	Arundel..... lxxxix.-lxxxviii.
Midhurst xli.-xlvi.	

RURAL SANITARY DISTRICT OF STEYNING.



POPULATION IN 1871	14,060
" " 1881	16,325
AREA IN ACRES	45,969
NUMBER OF HOUSES IN 1871	2,659
" " 1881	3,080

BIRTHS AND BIRTH-RATE.

During the year 1890, the births of 484 children were registered ; of these 250 were male, and 234 were female.

Estimating the population in the middle of the year at 18,810, the birth-rate was equal to 25·7 per 1,000 persons living.

The births and birth-rate in the district during the past ten years have been as follows :—

Year.	Births.	Birth-rate.	Year.	Births.	Birth-rate.
1881 ...	544 ...	33·3	1886 ...	513 ...	28·0
1882 ...	582 ...	34·8	1887 ...	470 ...	25·5
1883 ...	528 ...	31·0	1888 ...	507 ...	27·2
1884 ...	519 ...	29·0	1889 ...	500 ...	26·7
1885 ...	524 ...	28·8	1890 ...	484 ...	25·7

The mean number of births is 517, and the mean birth-rate is 29·0.

There has been a steady decline in the birth-rate since 1882, and this decline is general throughout the country, for the birth-rate of England and Wales during 1890 was lower than in any previous year since the commencement of registration in 1838, being as low as 29·7 per 1,000, and it was 2·9 below the mean rate in the ten preceding years.

The births in each quarter seem to be equally distributed when the mean of the last ten years is taken :—

	1881-87	1888	1889.	1890.	Total.	Per cent.
1st Quarter.....	901	120	110	119	1,250	24·2
2nd " 	987	140	126	113	1,366	26·4
3rd " 	897	123	132	129	1,281	24·8
4th " 	895	124	132	123	1,274	24·6
Total	3,680	507	500	484	5,171	100·0

The following table shows the birth-rate in the more important parishes, and in the rest of the district for a period of twelve years :—

	1879-88. Mean.	1889.	1890.
Portslade Parish	38·3	33·9	28·5
Southwick Parish.....	32·0	27·9	28·3
Rest of Shoreham S.D. ...	25·4	23·7	23·8
Steyning Parish	28·8	21·3	25·6
Henfield Parish	27·4	21·9	16·6
Rest of Steyning S.D.....	28·7	27·9	29·8
Total	30·3	26·7	25·7

GENERAL MORTALITY.

There were 268 deaths registered in this district during the year 1890, but to this number must be added the deaths of 14 persons in New Shoreham Workhouse, which is outside the district. These 14 deaths have been distributed amongst the several parishes whence each inmate came, viz. :—Portslade, 1; Southwick, 2; Lancing, 1; Old Shoreham, 1; Sompting, 1; Steyning, 5; Poynings, 1; Henfield, 2; in all, 14. From this number of 282 deaths, there should be deducted one death from outside the district, leaving the corrected figures at 281.

Estimating the population in the middle of the year at 18,810 the death-rate was equal to 14·9 per 1,000 persons living. Grouping the previous fifteen years into periods of five years each, the general death-rate will be seen to have slowly declined :—

Period.....	1875-79.	1880-84.	1885-89.
Death-rate ...	15·2	14·6	13·6

The population, as in many country districts, contains more males than females, and this distribution tends to slightly increase the death-rate when a comparison is made with the other districts. The mortality may, therefore, be considered to be low, as in country places throughout England and Wales the mean rate for the past five years has been 17·2 per 1,000 of population.

The variations in the death-rate during the past ten years have been as follows :—

Year.	Deaths.	Death-rate.	Year.	Deaths.	Death-rate.
1881 ...	197 ...	12·0	1886 ...	291 ...	15·9
1882 ...	251 ...	15·0	1887 ...	252 ...	13·6
1883 ...	279 ...	16·4	1888 ...	242 ...	13·0
1884 ...	263 ...	14·7	1889 ...	213 ...	11·4
1885 ...	260 ...	14·3	1890 ...	281 ...	14·9

Thus there have been during the above period 2,529 deaths and a mean mortality of 14·1 per 1,000. During the same period there were 5,171 births, so that the natural increase of population by excess of births over deaths was 2,642; thus, although the birth-rate was much lower than in urban districts, yet the births here were more than twice as numerous as the deaths.

The population was 16,325 in 1881; adding to this number the excess of births over deaths, there should be now a population of 18,967. I have estimated the number for the past year at 18,810, as being more correct, for except at Aldrington there has been no rapid increase since the last census.

In each parish the deaths were as follows:—Preston, 1; Patcham, 13; West Blatchington, 2; Hangleton, 1; Portslade, 53; Aldrington, 41; Southwick, 43; Kingston, 3; Lancing, 18; Old Shoreham, 5; Sompting, 10; Coombes, 1; Botolphs, 1; Bramber, 4; Steyning, 33; Upper Beeding, 8; Edburton, 2; Poynings, 2; Woodmancote, 3; Henfield, 25; Ashurst, 7; Shermanbury, 5; in all, 281.

A comparative statement of the deaths in each quarter during the past ten years shows that the deaths are most numerous in the first quarter of the year:—

	1881-87.	1888.	1889.	1890.	Total.	Per cent
1st Quarter	485	67	47	81	680	26·8
2nd „	404	64	51	63	582	23·0
3rd „	459	59	54	65	637	25·2
4th „	445	52	61	72	630	25·0
Total ...	1,793	242	213	281	2,529	100·0

INFANT MORTALITY.

The *infant mortality* is here given as measured by the number of deaths under one year of age to the total number of births in the year:—

	Births	Deaths under one year	Ratio to 1000 Births	Ratio 1889	Mean 1879-88
Portslade Parish.....	117	20	171	79	115
Southwick Parish	75	8	107	54	116
Rest of Shoreham Sub-District	139	16	115	59	97
Steyning Parish	44	3	68	162	94
Henfield Parish	32	—	—	24	78
Rest of Steyning Sub-District..	77	4	52	41	82
Total	484	51	105	66	100

The 51 *infantile* deaths included 2 from whooping-cough, 7 from diarrhoea, 1 from erysipelas, 2 from hydrocephalus, 1 from tuber-

culosis, 5 from convulsions, 6 from bronchitis, 1 from hernia, and 16 from debility or marasmus. Ten infants were born prematurely.

The rate of infant mortality in England and Wales in 1890 was 151 per 1,000, against 145, 136, and 144 in the three preceding years; the excess of mortality was almost entirely in the fourth quarter of the year.

ZYMOTIC MORTALITY.

The deaths from zymotic disorders were 29 in number, against 46, 17, 50, 46, 44, 36, 41, 27, 17 and 14 in the ten preceding years.

The rate of mortality from these disorders was 1·5 per 1,000 persons living, against a rate of 2·8, 1·0, 3·0, 2·7, 2·4, 1·9, 2·2, 1·4, 0·9, and 0·7 in the ten preceding years.

The 29 deaths included 3 from measles, 7 from whooping-cough, 3 from diphtheria, 5 from enteric fever, 9 from diarrhoea, 1 from erysipelas, and 1 from puerperal fever.

INFLUENZA.

The commencement of the year was marked by an outbreak of influenza. It began at Portslade about January 2nd, and in a week's time it had attacked great numbers of people. The disease then spread to the surrounding villages, and it prevailed with great severity at Steyning, Beeding and Woodmancote. In six parishes the elementary schools were closed, partly because of the non-attendance of the children, and partly because the teachers were ill and unable to attend to their duties. I estimate that one-seventh of the population was attacked in the first quarter of the year. In one club with 404 members, 123 were in receipt of sick pay during January and February; in the corresponding months in 1889, 50 members received sick pay out of a total of 396. Adults were more affected than children, but all classes were attacked.

About the middle of February the disorder began to decline, and by the end of March it was nearly over. It still continued to appear throughout April in some outlying places, and then the epidemic died out.

Only one person died in January, no one died in February or March, but five adults died in April, when the outbreak had nearly subsided. One male died, aged 54 years; five females died, aged respectively 41, 63, 64, 83 and 84 years.

One death was registered in November of an infant 19 months old, from influenza and convulsions. There was no evidence of any disease prevalent among domestic animals at the time of the epidemic.

LANCING.

The whole parish contains about 1,500 people, and the death-rate is very low. Dividing the last fifteen years into periods of five years each, the rate of mortality is as follows:—1875 to 1879, 11·5 per 1,000 of the population; 1880 to 1884, 11·0 per 1,000 of the population; and 1885 to 1889, 9·3 per 1,000 of the population. The death-rate for the zymotic disorders has been for the same periods at the rate of 1·13, 1·90 and 0·93 per 1,000 of the population. In the last three years 1887 to 1889, there were no deaths from any catching disorder. In Lower Lancing there are about 125 houses, and of these there are about 47 in close proximity to each other. The rest are more widely scattered, and most of them have large gardens and ample air space. The group of dwellings more closely aggregated covers a space of about 250 square yards. They are close to the sea, from which they are separated by a main road, a dirty ditch, and a bank of shingle. This ditch used to be an open stream running from Broadwater brooks in an easterly direction to the sea. In course of time the sea has made so much encroachment that each end of the stream has become blocked up with shingle, so that what was once a water-course is now a ditch. During spring tides the sea water percolates through the beach, and fills the ditch for a time, but very often the ditch is nearly empty, and contains pools of stagnant water. As far back as 1876 complaints were made, and an inquiry was held by Mr. Harrison, an Inspector of the Local Government Board in that year, but no action was taken. In December, 1876, I made a report on the water supply and drainage of Lower Lancing, but nothing was done. Since that time the shingle has advanced towards the main road, and the ditch has been to a great extent filled up. At low water the banks are very offensive, and especially when the weather is hot. The drain in the main street flows into it, and several houses drain into it. Wherever a drain opens into this ditch the outfall is surrounded by black sewage matter. The subsoil water flows from the north-west to the south-east, and from the chalk downs towards the sea. The subsoil is a good brick loam overlying the chalk. The wells are from 15ft to 20ft. in depth, and in many cases they are closely surrounded by cesspools. At the Horseshoes Inn and at Bank Cottage the water is sometimes brackish at high tides, and then the inmates have to go to their neighbours for assistance. At three cottages owned by Mr. Barber the water is so impure that no one can drink it; it is quite black when any water is pumped from the well. At the Post Office there is a well much used by people, but the water is very impure, and contains much free ammonia and 23·4 grains of chlorine per gallon. I have had samples of water from eight wells in this locality, and in each case there was evidence of sewage contamination; this was shewn

by the presence of organic matter and by the large quantity of chlorine present. I have had several cesspools opened, and many of them were from six to ten feet from a well. Several were cemented, but in course of time the cement has worn off, and the sewage has passed through into an adjacent well. The conditions adverse to health in this part of Lower Lancing are the impure water supply, the leaky cesspools, and the dirty ditch in front of the terrace. At No. 2 of the terrace there was a case of enteric fever in August, 1888, and recently there has been a death in the same house from the same cause. Five members of a family who stayed in this house as visitors contracted enteric fever. On examining the drains in this house, I found that the overflow pipe from two cesspools flowed in a barrel drain beneath the house. This drain was blocked up at the lower end by some bricks which had fallen in, so that the drain beneath the house was full of black sewage, which soaked away into the surrounding earth. At another house the closet was drained into an old well, the cover of which was partly open, so that foul air escaped. Most of the houses here are provided with hopper closets, but there is no efficient ventilation. At Salt Lake there are 31 houses, and in this portion of Lower Lancing the water is good at present. In each house the sink pipe delivers on to a trap placed outside, and each house has a closet outside, most of them being provided with a hopper pan and trap, and they are flushed by hand. Some new houses are being built, and a great many visitors come down here in the season. I would, therefore, earnestly call the attention of your Authority to the necessity of a good supply of water, to a better system of drainage, and to the cleansing of the ditch. I think that the only way to obtain good water is to bring it from a distance, and probably the simplest plan would be to ask the Shoreham Waterworks Company if they would undertake to supply the village. It might be possible to fill up the ditch, and in any case, in the course of a few years, the sea will cause the shingle to encroach more and more. When this takes place some means must be provided for dealing with the drains which now empty into the ditch.

Since my last report I have made further inquiries into the drainage of South Lancing with reference to the pollution of the ditch which runs from west to east between the main road and the sea.

Application was made in the first instance to the owners and occupiers of the five houses in the Terrace for permission to open and examine the drains of each house, and in each case permission to do so was readily granted.

At No. 1 there are two indoor closets which drain into a large cesspool in the yard to the north of the premises, and the overflow from this cesspool passes into the drainage of No. 2. There is

also an outdoor closet at No. 1, which drains into No. 2. There is in the backyard of No. 1 a drain for receiving sink water but its course has not yet been traced. I am informed that this drainage used to pass into a tub or barrel sunk into the ground; last May this system was altered, and the tub, which was in a very rotten condition, was removed.

At No. 2 in the backyard there are two cesspools, one for the closet and one for house water, sink, &c. The overflow from these pits flows in a drain under the house in a southerly direction to the ditch. No pollution of the ditch has, however, occurred for a long time, for this drain was found to be blocked up, and the contents were soaking into the surrounding soil.

At No. 3 there are two cesspools to the north, which receive the drainage from the closets, but there is no overflow from these into the ditch. In the backyard there is a large cesspit of dirty house water, and the overflow from this passes in a drain under the house to another cesspit in the front area, whence there is an overflow into the drain of No. 2. No. 2 drain being blocked, it will be seen that the drainage of Nos. 1 and 3 was blocked also.

At No. 4 there is a cesspool to the north of the premises which receives the drainage from two closets, but has no connection with the ditch. There is here a cesspit in the backyard for receiving dirty house water; the overflow from this passes in a drain under the house into another cesspit in the front area, but the overflow from this second cesspit cannot be traced. A drain has been found with connection from Nos. 4 and 5 leading into the ditch, but this drain is quite dry, and no drainage from these houses can be made to pass down it now.

At No. 5 there is a cesspool in the garden to the north of the house which receives the drainage from the house, but no overflow can be found.

The drains to these five houses are of various construction; some are made of socketed glazed pipes; some of tiles; in one case there is a barrel drain, and in another case there is a square brick drain. Thus there are two drains into the ditch from these five houses; one drain for Nos. 1, 2 and 3, and one drain for Nos. 4 and 5. No sewage has passed in these drains for a long time past, probably for years. All the rainfall, all the sewage and dirty water for these houses must for a long period have soaked away into the surrounding soil, except such as was retained in the cesspools which have been occasionally cleaned out.

In each of these houses water closets are in use, so that the cemented cesspits must soon have become full, and the overflow must have found its way into the soil.

The drainage for the closets at Wenman Home passes into a

cesspool at the back of the premises, whence no overflow has yet been traced. There is another cesspit in the area of the Home for receiving dirty house water, and the overflow from this runs into the ditch.

There is a main drain in the village street about 200 yards long, which was meant to carry surface or storm water; it commences at a point in the road opposite Blenheim Cottages, where there is a gully opening, and it ends in the ditch nearly opposite the Wenman Home. If this drain merely carried rain or storm water no nuisance would be caused, but several people use it for other purposes. From the cottages near the inlet several persons throw down their dirty house water, and the overflow drains from the Post Office, Bank Cottage, and the "Three Horse Shoes" pass into it.

WATER SUPPLY.

I have sent five samples of water from wells in this area to Mr. Moore, the public analyst for Brighton. He reports that all the waters are more or less impure, and in the case of No. 1 there is so much impurity as to be unfit for human consumption. This well was closed on October 16th. In the case of the other four wells the analyst does not consider there is sufficient pollution to cause injury to health if the waters were adequately filtered. The following table shows the results of the analysis:—

	No. 1.	No. 2.	No. 3.	No. 4.	No. 5.
Solids { grains per	127·6	89·6	70·4	67·2	48·8
Chlorine { gallon	32·4	26·2	16·8	18·4	10·2
Hardness	Excess.	Excess.	Abve. 30°	Abve. 30°	24°
Organic matter	14·6	9·0	11·7	9·6	9·7
Free Ammonia	0·81	0·06	0·09	0·05	0·094
Albumenoid Ammonia } parts per million.....	0·67	0·094	0·112	0·08	0·12
Colour	Green.	Grn-ylw.	Grn-ylw.	Green.	Grn-ylw.

All these waters are hard and brackish. This might be expected from the nature of the soil, which is an alluvial loam overlying the chalk and close to the sea. The amount of organic matter as measured by the ammonia present is much in excess of what should be met with in a good drinking water.

The above waters were taken from various wells, two being near the sea, one about 250 yards distant, and two at intermediate points. The numbers, therefore, do not correspond to the numbers of the houses in the terrace.

The above facts seem still further to point to the necessity for a supply of good and wholesome water for South Lancing, which, as I have before pointed out, is the main and first consideration. The pollution of the ditch should be prevented, and nothing should flow into it but storm water. The defects in each house must be put right by the owner or occupier, and in some cases the needful work has already been done. The accompanying plans show the position of the wells and drains.

The Committee appointed by the Lancing Vestry to obtain information as to the cost and best method of supplying water to the parish made the following Report, Nov. 27, 1890:—

The parish of Lancing enjoys great natural advantages from its position at the foot of the South Downs, and from the consequent certainty with which an abundant supply of pure water can be relied upon. To procure a supply sufficient for the entire parish, as it now exists, and even allowing for future expansion, it would be necessary to make trial borings. The spring adjacent to the Shoreham road, and known as "Honeyman's Hole," affords an entirely reliable source of such a supply, and the utilisation of this natural outcrop of water has been suggested to us as one method of securing the object in view. It is probable that experimental borings would show that an adequate source of supply could be secured nearer to the centre of the parish, but the element of risk and the greater cost of well-sinking attendant on such an undertaking must not be forgotten.

ANOTHER ALTERNATIVE PROPOSAL.

Another alternative presents itself, and, indeed, may govern the general question of a Lancing parish water supply. This alternative is to demand to be supplied by the Shoreham and District Waterworks Company, whose main is already laid past the Sussex Pad Inn, and thence to Lancing College. We shall proceed to detail these schemes so far as we have been able, in this preliminary inquiry, to consider them. To begin with the scheme of obtaining the Shoreham supply. In 1879 the Shoreham and District Waterworks Company obtained from Parliament an extension of their limits of supply, as fixed by their previous Act of 1870, and Lancing parish was included under these further powers. Under Section 35 of the Waterworks Clauses Act, 1869, Lancing then became entitled to demand, on certain conditions, a "sufficient supply of pure and wholesome water for the domestic use of all the inhabitants." Stated generally, the conditions are these, that so many owners or occupiers shall enter into an agreement with the Water Company to take a supply of water for three successive years as that their aggregate annual water rates shall amount to one-tenth part of the expense of providing and laying down the pipes for conveying the water. From a communication

received unofficially from the Shoreham and District Waterworks Company, since confirmed in the public Press, we have ascertained that the expense referred to would be about £2,300, the length of pipe required being approximately 7,500 yards. Thus the annual charge for water throughout the parish, under this scheme, may be set down as not exceeding £230 per annum.

THE ANNUAL COST OF THE SUPPLY.

Then as to a supply from within the parish, and particularly from "Honeyman's Hole." As a result of professional assistance kindly given us, we are able to report that the capital cost of obtaining and supplying water from this source throughout the parish may be estimated, according to the method adopted, at from £2,700 to £3,800, and the annual working expenses at from £150 to £200. No provision has been made in this amount for the cost of procuring the necessary Parliamentary powers, nor for the acquisition of land, but neither of these items would largely increase the amount stated, more especially the former item, as we are advised that the process of obtaining, as a parish, official sanction to introduce waterworks is not an expensive one. Dismissing these items then from the present consideration the amount of the annual cost of the parish supply would stand: Interest on £2,700, at say 3 per cent., £94 10s.; working expenses, £150 10s.; minimum expenditure, £244 10s.; interest on £3,800, £133; working expenses, £200; maximum expenditure, £333. These figures are based on a supply of 40,000 gallons per diem; to supply 3,000 people with 20 gallons of water per head per diem would only increase the expenditure for coals by £20 per annum, the other items remaining the same. It only remains for us to announce our decision as to the best method that can be adopted in the interests of the parish. Our inclination, and we feel that of the ratepayers generally, would be to take the necessary steps to erect Waterworks, and to have a parish supply within the district, but questions of cost and feasibility deter us from recommending the adoption of this course. In order to apply, with any fair chance of success, to the Local Government Board to be declared a district for a public water supply, we should have to show, in the face of the powers acquired by the Shoreham and District Waterworks Company, either that the Company assented to the undertaking, or that the demands of the Company were excessive as compared with the cost of the parish undertaking. On the whole, therefore, we recommend an application to the Shoreham and District Waterworks Company, and believe that negotiations would procure from the Company a definite proposal to supply the parish with water at an annual charge, such as would be within the power of the ratepayers to contribute.

SUSSEX CHEMICAL WORKS.

Upon a waste of beach in the parish of Lancing, and nearly opposite a point midway between New Shoreham and Kingston, there have been established for many years some Chemical Works, where various products are made from gas tar and gas liquor. The manufacture of these substances has considerably increased in recent years, and now there is in addition machinery for making sulphuric acid, which in former times used to be brought to the works. The buildings are situated about 1,000 yards from Kingston Church, and about the same distance from the station at New Shoreham. To the south of the works there is an open expanse of sea, to the east and west there is an open beach, while to the north, and separated from it by the river Adur, there is the lower road which runs from Shoreham to Brighton. The nearest row of houses is Kingston Terrace, which is about a quarter of a mile away. The gas products are conveyed to Kingston wharf in barrels, or in a large tank, whence the supply for the Hove Gas works is obtained. The contents are then pumped into a closed reservoir and they are allowed to stand; the heavy gas tar sinks to the bottom, while the lighter gas liquor remains at the top. From these two products various substances are produced. There does not seem to be any nuisance caused by conveying the above materials to the works. The gas liquor and the gas tar receive different treatment which may be thus shortly described.

GAS LIQUOR.

This is used for the manufacture of sulphate of ammonia. The fluid is pumped to the top of two lofty chambers, whence it trickles down and mixes with steam, which is forced in from below. In this process ammonia is given off, and this material is conveyed into two leaden chambers where it meets with sulphuric acid; the salt, so produced, is ladled out, and being placed in a vessel which rotates with great velocity, it is at once dried and stored for use. An offensive gas, known as sulphuretted hydrogen, is given off in the course of manufacture, and if this escapes into the open air it causes a great nuisance, even at a distance of half a mile. To prevent a nuisance, this gas is first of all washed, and then it passes through layers of oxide of iron, whereby it is held in combination. If this process be thoroughly carried out, no nuisance would be caused, but in the delivery pipes leading to the vessels which contain the oxide of iron, there is a small plug which can easily be removed, and then the offensive gas can pass unpurified into the open air. I think more care should be taken that such an escape can never occur when the wind is blowing towards the shore.

GAS TAR.

This substance is pumped into a retort, and by the various distillations naphtha, creosote, and anthracene are produced. The first two products, being volatile, are received into closed vessels, and the third product is not offensive. A nuisance may arise in this process from running off the pitch from the retort at a high temperature. After the above three substances have been distilled the pitch remains in a liquid condition, and then it is run off into a boiler on the ground level, where it is allowed to cool down and then the thick fluid passes away into a large open pit. Pitch, when cold and solid, gives off no odour, but when liquid and hot pungent fumes are evolved which some persons may consider unpleasant. Carboic acid is produced here by treating creosote with caustic soda, but this is done in a closed iron vessel, and it does not appear to cause any nuisance. Solid creosote and anthracene are stored in large quantities on the premises, but they produce no ill effect.

SULPHURIC ACID.

This is made from copper pyrites, which, being burnt, give off a gas known as sulphurous acid; this passes into a chamber containing pots charged with nitre; the gases then are conducted into leaden chambers where they meet with steam, and sulphuric acid is formed. A Glover tower and a Gay Lussac tower have been constructed so as not only to economise the products, but also to prevent a nuisance. Various acid fumes are given off in this manufacture, and may cause a nuisance in the neighbourhood. At my last visit I noticed a small escape of sulphuric acid from the joints of the leaden sheets which form part of the chamber, but such a leak could soon be remedied. I think that there are some gases, such as sulphurous and nitrous acids, which are given off in this manufacture, which cause irritation and cough, when inhaled.

EFFECT ON HEALTH.

There is no evidence of any serious injury to health arising from the manufacture of the various substances at these works. The men employed, about forty in number, enjoy excellent health, and some who had been delicate before going there had become strong and hearty. Those living in the immediate neighbourhood, while they may complain of the odours, cannot ascribe any illness to this cause. Yet such a manufacture cannot be carried on without various fumes being produced which are unpleasant to some people, and which may cause such symptoms as headache and loss of appetite, or, in a less degree, they make life unpleasant. To those accustomed to the odours in some manufacturing towns in the North, such fumes as are here produced would hardly be

noticeable, and even here the great majority of people accept without complaint the condition of things, as they recognise the importance of the industry, and they know that their health is in no danger.

SANITARY ACTS.

The Public Health Act, 1875, deals with offensive trades under Sections 112 and 115, but these Sections only relate to urban districts, and therefore they do not apply to the present case. Section 91 deals with various kinds of nuisances and defines them, but no definition seems to include such a case as these Chemical Works. Some years ago when these works were in a crude state, and when the gases evolved were at times very offensive, your Authority took proceedings before the Steyning Bench of Magistrates, but the case was dismissed. I think that now, as then, it would not be possible to prove any nuisance under the Sanitary Acts, and that those who complain would have to take their case into a higher Court of Law.

NOTIFICATION OF INFECTIOUS DISEASE.

The Act has not yet been adopted in this district.

COWSHEDS AND DAIRIES.

There are 41 registered cowsheds and dairies, and in these there are kept about 858 cows, the number slightly varying from time to time. In a few cases, butter only is made, and the skimmed or separated milk is either sold, given away, or used as food for pigs.

In a few cases, 30 or 40 cows are kept, and, as a rule, the larger the establishment, the better is the method of keeping the animals, and much care is taken in providing good water and good means of lighting, ventilation and drainage.

In small places, the cows are often kept in the open fields for the greater part of the year, and the cowshed is only used at night; in such cases, the cowsheds require much less attention than in places where the animals are kept in covered buildings or sheds all the year round.

The sheds have been frequently inspected, and they have been well kept.

MARGARINE ACT.

There are 45 grocers in the district, but, except in the more populous places, very little margarine is sold. There seems to be very little demand for it in small villages or hamlets. In places where it is sold the clauses of the Act have been complied with.

BAKEHOUSES.

There are 44 bakehouses in the district, and these have been duly inspected, and kept in a clean condition.

SLAUGHTERHOUSES.

There are 10 slaughterhouses in the four largest parishes, and none in the smaller places. These have been often inspected, and they have been kept in a clean condition.

INQUESTS.

Inquests were held in twenty cases:—Female, 14 days, over-feeding ; male, 4 years, diphtheria ; male, 80 years, syncope ; female, 41 years, peritonitis ; female, 28 years, acute nephritis ; female, 2 years, concussion of brain ; male, 46 years, heart disease ; male, 13 months, congestion of the lungs ; male, 23 days, inanition ; male, 66 years, failure of heart's action ; male, 49 years, poisoning by morphia ; male, 53 years, fall of earth ; male, 87 years, suicide by drowning ; female, 48 years, disease of the heart ; male, 59 years, suffocated on a clamp of bricks ; male, 69 years, apoplexy ; female, 3 months, convulsions ; male, 16 years, accidentally run over ; male, 16 years, accidentally drowned ; female, 42 years, accidental fall.

There was only one death returned as “not certified” in the Shoreham Sub-District out of a total of 192 deaths:—Female, 3 months, convulsions.

There were no deaths returned as “not certified” in the Steyning Sub-District out of a total of 89 deaths.

A few cases of overcrowding have been dealt with during the year, and the nuisance has been abated.

No cases occurred in which it was necessary to condemn meat or any other article of food.

There is no common lodging house in the District.

No proceedings were taken before the Magistrates during the year.

For the statistical tables see pp. i-viii.

RURAL SANITARY DISTRICT OF HORSHAM.

POPULATION IN 1871	14,131
" " 1881	15,426
AREA IN ACRES	69,706
NUMBER OF HOUSES IN 1871	2,781
" " 1881	3,013

BIRTHS AND BIRTH-RATE.

During the year 1890, the births of 420 children were registered ; of these 207 were male, and 213 were female.

Estimating the population in the middle of the year at 16,800, the birth-rate was equal to 25·0 per 1,000 persons living.

The births and birth-rate in the district during the past ten years have been as follows :—

Year.	Births.	Birth-rate.	Year.	Births.	Birth-rate.
1881 ...	503 ...	32·4	1886 ...	496 ...	30·0
1882 ...	487 ...	31·0	1887 ...	452 ...	27·0
1883 ...	480 ...	30·3	1888 ...	454 ...	27·1
1884 ...	546 ...	33·6	1889 ...	418 ...	24·9
1885 ...	429 ...	26·1	1890 ...	420 ...	25·0

The mean number of births is 468, and the mean birth-rate is 28·7.

There has been a steady decline in the birth-rate since 1884, and this decline is general throughout the country, for the birth-rate of England and Wales during 1890 was lower than in any previous year since the commencement of registration in 1838, being as low as 29·7 per 1,000, and it was 2·9 below the mean rate in the ten preceding years.

The births appear to be least numerous in the last quarter of the year :—

	1881-87	1888	1889.	1890.	Total.	Per cent.
1st Quarter.....	880	120	104	115	1,219	26·0
2nd "	852	124	103	91	1,170	25·0
3rd "	860	102	104	108	1,174	25·0
4th "	801	108	107	106	1,122	24·0
Total	3393	454	418	420	4,685	100·0

The following table shows the birth-rate in each sub-district during the past twelve years, and as the populations are similar in age and occupation the rates are very uniform throughout the district —

	1879-88. Mean.	1889.	1890.
South Sub-District	29'4	27'2	22'5
North Sub-District	30'3	24'2	26'3
West Sub-District	30'0	23'7	24'9
Total	30'0	24'9	25'0

GENERAL MORTALITY.

There were 221 deaths registered in this district during the year 1890, but from this number there should be deducted eleven deaths in Horsham Workhouse of persons belonging to the Urban Sanitary District of Horsham, thus leaving the number of deaths from all causes in the rural district at 210. There were altogether 24 deaths in the Union Workhouse, and the remaining 13 were distributed amongst the several parishes whence each inmate came. viz. :—West Grinstead, 1 ; Shipley, 2 ; Lower Beeding, 1 ; Crawley, 1 ; Rusper, 1 ; Warnham, 2 ; Itchingfield, 1 ; Billingshurst, 4 ; in all, 13.

Estimating the population in the middle of the year at 16,800 the death-rate was equal to 12'5 per 1,000 persons living. This rate is lower than any rate which has been recorded within this district, with the exception of 1887, when it was also 12'5.

Grouping the previous fifteen years into periods of five years each, the general death-rate will be seen to have varied as follows :—

Period.....	1875-79.	1880-84.	1885-89.
Death-rate ...	15'5	13'1	13'9

The population, as in many country districts, contains more males than females, and this distribution tends to slightly increase the death-rate when a comparison is made with the other districts. The mortality may, therefore, be considered to be low, as in country places throughout England and Wales the mean rate for the past five years has been 17'2 per 1,000 of population.

The variations in the death-rate during the past ten years have been as follows :—

Year.	Deaths.	Death-rate.	Year.	Deaths.	Death-rate.
1881 ...	197 ...	12'7	1886 ...	291 ...	17'5
1882 ...	198 ...	12'6	1887 ...	209 ...	12'5
1883 ...	202 ...	12'7	1888 ...	219 ...	13'1
1884 ...	217 ...	13'3	1889 ...	213 ...	12'6
1885 ...	228 ...	13'8	1890 ...	210 ...	12'5

Thus there have been during the above period 2,184 deaths and a mean mortality of 13·3 per 1,000. During the same period there were 4,685 births, so that the natural increase of population by excess of births over deaths was 2,501; thus, although the birth-rate was much lower than in urban districts, yet the births here were more than twice as numerous as the deaths.

The population was 15,426 in 1881; adding to this number the excess of births over deaths, there should be now a population of 17,927. I have estimated the number for the past year at 16,800, as being more correct, for except at Ifield there has been no rapid increase since the last census.

In each parish the deaths were as follows:—Horsham (south) 9; West Grinstead, 25; Shipley, 15; Nuthurst, 9; Horsham (north), 28; Lower Beeding, 15; Ifield, 33; Crawley, 3; Rusper, 9; Warnham, 15; Slinfold, 9; Itchingfield, 4; Rudgwick, 13; Billingshurst, 23; in all—210.

A comparative statement of the deaths in each quarter during the past ten years shows that the deaths are most numerous in the first quarter of the year:—

	1881-87.	1888.	1889.	1890.	Total.	Per cent.
1st Quarter	425	64	59	72	620	28·4
2nd „	418	63	60	45	586	26·8
3rd „	341	44	43	42	470	21·5
4th „	358	48	51	51	508	23·3
Total ...	1,542	219	213	210	2,184	100·0

INFANT MORTALITY.

The *infant mortality* is here given as measured by the number of deaths under one year of age to the total number of births in the year:—

	Deaths under Births	one year	Ratio to 1000 Births	Ratio 1889	Mean 1879-88
South sub-district	95	10	105	70	93
North sub-district	221	23	104	83	91
West sub-district.....	104	14	134	71	79
Total	420	47	112	76	88

The 47 *infantile* deaths included 1 from measles, 4 from whooping-cough, 1 from diarrhœa, 1 from tuberculosis, 6 from convulsions, 12 from lung diseases, 5 from gastritis, 6 from debility, and 2 from marasmus. Nine infants were born prematurely.

The rate of infant mortality in England and Wales, in 1890 was 151 per 1,000, against 145, 136, and 144 in the three preceding years. The excess of mortality was almost entirely in the fourth quarter of the year.

ZYMOTIC MORTALITY.

The deaths from zymotic disorders were 15 in number, against 26, 22, 17, 17, 18, 23, 54, 17, 14 and 8 in the ten preceding years.

The rate of mortality from these disorders was 0·9 per 1,000 persons living against a rate of 1·6, 1·4, 1·0, 1·0, 1·1, 1·4, 3·2, 1·0, 0·8 and 0·4 in the ten preceding years.

The 15 deaths included 4 from measles, 1 from scarlatina, 2 from diphtheria, 4 from whooping-cough, and 2 from diarrhoea.

The Infectious Diseases (Notification) Act, 1889, came into operation in this district on April 2nd, 1890, and up to the close of the year 31 cases had been reported, occurring in 26 houses. There were 20 cases of scarlatina met with in 14 houses; 3 of diphtheria in 2 houses, 7 of enteric fever in 3 houses, and only 1 case of erysipelas.

INFLUENZA.

This disease was very prevalent in the first quarter of the year. It began about the second week of January, and then it spread all over the district, reaching its height about the middle of February. As this is a rural district, it took some time for the disorder to reach scattered hamlets, and lonely houses. About one-seventh of the population was attacked. The elementary schools in five districts were closed at various periods from January 21st to February 26th, partly because the children could not attend, and partly because the teachers were too ill to teach. The epidemic declined towards the end of February, and it had almost died out at the end of March.

All classes were attacked, but adults suffered more than children. There were three deaths, of which two occurred in February and one in April. All the deaths were among males, and they were aged respectively 41, 42 and 55 years. There is no infectious hospital in the district except the one at the Union Workhouse, which is used for the reception of pauper cases.

COWSHEDS AND DAIRIES.

There are 47 registered cowsheds and dairies, and in these about 646 cows, are kept, but the number varies slightly from time to time. Many of these sheds contain from 40 to 80 cows on a farm, and they are very well kept, care being taken that there is an ample supply of good water, plenty of light and ventilation, frequent removal of refuse and cleansing of the walls and floor.

The cows in many cases are kept in the open field for the greater part of the year, the cowsheds being used at night,

The sheds have been frequently inspected, and they have been well kept.

MARGARINE ACT.

Very little margarine is sold here by the grocers, and where it can be obtained the regulations of the Act have been complied with. There seems to be no demand for this substance on the part of the scattered agricultural population.

BAKEHOUSES.

These are 36 in number ; they have been often inspected, and they have been well kept. There is no bakehouse on a large scale, and the chief duty is to see that they are frequently cleansed and limewashed. In each case there is a good amount of light and air, and in no case is there any drain within the building.

SLAUGHTERHOUSES.

These are 14 in number, and they are very well kept as regards cleanliness and removal of refuse. In many instances animals are only killed once or twice a week, so that there is no difficulty in keeping them clean and tidy. Each slaughterhouse is often limewashed, and the blood is generally removed at once for use in a garden.

INQUESTS.

Inquests were held in fourteen cases :—Male, 47 years, found drowned ; male, 7 years, accidental blow ; male, 59 years, suicide on the railway ; male, 9 months, convulsions ; male, 68 years, apoplexy ; male, 54 years, suicide on the railway ; male, 19 years, drowned in a mill-pond ; male, 81 years, run over by a train ; male 44 years, congestion of the lungs ; female, 32 years, epilepsy ; female, 13 months, weak heart ; male, 5 months, pneumonia ; male, 74 years, suicide by hanging ; male, 6 years, accidentally drowned in a pond.

There were two deaths returned as “not certified” in the South sub-district out of a total of 58 deaths :—Male, 73 years, heart disease ; male, 2 months, bronchitis.

There were four deaths returned as “not certified” in the North sub-district, out of a total of 103 deaths :—Male, 75 years, age ; male, 7 weeks, convulsions ; female, 75 years, heart disease ; male, 5 hours, prematurely born.

There were three deaths returned as "not certified" in the West sub-district out of a total of 49 deaths :—Male, 8 months, bronchitis; female, 3 months, peritonitis, produced by improper feeding; male, 2 days, measles, broncho-pneumonia.

No proceedings were taken before the Magistrates during the year.

There is no common lodging house in the district.

For the statistical tables see pp. ix. to xvi.



Incidents were held in fourteen cases :—Male, 17 years, found drowned; male, 7 years, accidental blow; male, 20 years, suicide on the railway; male, 9 months, convulsions; male, 08 years, (brother); male, 21 years, suicide on the railway; male, 10 years, drowned in a mill-pond; male, 21 years, run over by a train; male, 44 years, congestion of the lungs; female, 42 years, cholera; female, 12 months, weak heart; male, 2 months, pneumonia; male, 74 years, suicide by hanging; male, 10 years, accidentally drowned in a pond.

There were two deaths returned as "not certified" in the South sub-district out of a total of 28 deaths :—Male, 71 years, heart disease; male, 2 months, bronchitis.

There were four deaths returned as "not certified" in the North sub-district out of a total of 102 deaths :—Male, 75 years, heart disease; male, 17 weeks, convulsions; female, 22 years, heart disease; male, 21 months, pneumonia; female, 10 years, heart disease.

RURAL SANITARY DISTRICT OF PETWORTH.

POPULATION IN 1871	10,138
" " 1881	9,595
AREA IN ACRES	45,701
NUMBER OF HOUSES IN 1871	2,008
" " 1881	1,994

BIRTHS AND BIRTH-RATE.

During the year 1890 the births of 223 children were registered; of these 108 were male, and 115 were female.

Estimating the population in the middle of the year at 9,550, the birth-rate was equal to 23·3 per 1,000 persons living.

The births and birth-rate in the district during the past ten years have been as follows:—

Year.	Births.	Birth-rate.	Year.	Births.	Birth-rate.
1881	292	30·6	1886	284	29·7
1882	275	28·9	1887	264	27·6
1883	262	27·5	1888	240	25·1
1884	304	31·8	1889	263	27·5
1885	246	25·7	1890	223	23·3

The mean number of births is 265, and the mean birth-rate is 27·8.

There has been a steady decline in the birth-rate since 1884, and this decline is general throughout the country, for the birth-rate of England and Wales during 1890 was lower than in any previous year since the commencement of registration in 1838, being as low as 29·7 per 1,000, and it was 2·9 below the mean rate in the preceding ten years.

The births in each quarter seem to be equally distributed when the mean of the past ten years is taken:—

	1881-87.	1888.	1889.	1890.	Total.	Per cent.
1st Quarter....	505	60	72	60	697	26·3
2nd "	463	74	67	55	659	24·8
3rd "	482	56	60	52	650	24·5
4th "	477	50	64	56	647	24·4
Total	1,927	240	263	223	2,653	100·0

The following table shows the birth-rate in each sub-district during the past twelve years, and as the populations are similar in age and occupation the rates are very uniform throughout the district :—

	1879-88 Mean.	1889.	1890.
North Sub-District	29·0	26·8	23·4
Petworth Parish	28·2	29·6	21·1
Rest of South Sub-District...	28·3	26·3	25·9
Total	28·6	27·5	23·3

GENERAL MORTALITY.

There were 136 deaths registered in this district during the year 1890, and of these eight took place in Petworth Workhouse and seven in Wisborough Green Workhouse. These fifteen deaths have been distributed among the several parishes whence each inmate came, viz. :—Wisborough Green, 4; Northchapel, 3; Kirdford, 4; Petworth, 2; Fittleworth, 1; Bury, 1; in all 15.

There were no deaths in Petworth Cottage Hospital.

Estimating the population in the middle of the year at 9,550, the death-rate was equal to 14·2 per 1,000 persons living. The death-rate in this district is nearly 2·0 per 1,000 higher than in a standard population, owing to the excess of males and aged persons, as shown in my last annual report.

Grouping the previous fifteen years into periods of five years each, the general death-rate will be seen to have varied as follows :—

Period	1875-79.	1880-84.	1885-89.
Death-rate	16·8	15·3	16·2

In country districts throughout England and Wales the mean death-rate for the past five years has been 17·2 per 1,000 of population.

The variations in the death-rate during the past ten years have been as follows :—

Year.	Deaths.	Death-rate.	Year.	Deaths.	Death-rate.
1881 ...	158 ...	16·5	1886 ...	202 ...	21·1
1882 ...	125 ...	13·1	1887 ...	131 ...	13·7
1883 ...	171 ...	18·0	1888 ...	143 ...	14·9
1884 ...	140 ...	14·6	1889 ...	142 ...	14·8
1885 ...	155 ...	16·2	1890 ...	136 ...	14·2

Thus there have been during the above period 1,503 deaths and a mean mortality of 15·8 per 1,000. During the same period

there were 2,653 births, so that the natural increase of population by excess of births over deaths was 1,150.

The population in 1881 was 9,595; adding to this number the excess of births over deaths there should be a population of 10,745. Instead of any such increase there has probably been a slight decrease, and I have estimated the number at the present time at rather less than those living in the year 1881. A considerable number of people must leave this district each year, and they are probably young adults who migrate to urban places for work.

In each parish the deaths were as follows:—Wisborough Green, 30; Northchapel, 13; Kirdford, 26; Petworth, 38; Egdean, 0; Fittleworth, 10; Stophani, 1; Coates, 0; Burton, 1; Duncton, 0; Barlavington, 0; Sutton, 5; Bignor, 4; Bury, 8; in all—136.

A comparative statement of the deaths in each quarter during the past ten years shows that the deaths are most numerous in the first quarter of the year:—

	1881-87.	1888.	1889.	1890.	Total.	Per cent.
1st Quarter.....	316	40	44	60	460	30·5
2nd „	285	26	33	34	378	25·2
3rd „	226	37	33	21	317	21·1
4th „	255	40	32	21	348	23·2
Total	1082	143	142	136	1503	100·0

DISTRIBUTION OF POPULATION ACCORDING TO AGE AND SEX.

The recorded death-rate of this district is made higher because of the excessive number of aged people, and because there are more males than females. Comparing the numbers with those met with in the standard population, it will be found that there is an excess in the district of those under fifteen and of those over fifty-five years of age, while there are fewer people living between the ages of fifteen and fifty-five years. In each 1,000 persons living in England and Wales there are 364 under fifteen, 531 between fifteen and fifty-five, and 105 over fifty-five years.

In each 1,000 persons living in Petworth the numbers are respectively 379, 470, and 151.

Throughout England there are 486 males, and 514 females in each 1,000. Here the males are 506 and the females are 494. But since the male death-rate is higher than the female death-rate, this excess of males raises the mortality to a slight extent.

The extent to which the elements of age and sex operate will be shown in the general report. It may suffice to state here that

the effect of these conditions reduces the recorded death-rate by nearly 2·0 per 1,000 persons living.

INFANT MORTALITY.

The *infant mortality* is here given as measured by the number of deaths under one year of age to the total number of births in the year :—

	Births.	Deaths under one year.	Ratio to 1,000 births.	Ratio 1889.	Mean 1879-88.
North Sub-District	97	7	72	63	68
Petworth Parish	62	6	96	103	91
Rest of South S.D.	64	1	16	123	86
Total.....	223	14	63	81	79

The 14 infantile deaths included three from convulsions, four from lung diseases, one from gastritis, and three from debility; three infants were born prematurely.

The rate of infant mortality in England and Wales in 1890 was 151 per 1,000, against 145, 136, and 144 in the three preceding years; the excess of mortality was almost entirely in the fourth quarter of the year.

ZYMOTIC MORTALITY.

The deaths from *zymotic* disorders were 2 in number against 12, 4, 8, 9, 5, 10, 18, 4, 12 and 7 in the ten preceding years. The two deaths included one infant from diarrhœa, and one adult from enteric fever. The rate of mortality from these disorders was 0·2 per 1,000 persons living, against a rate of 1·2, 0·4, 0·8, 0·9, 0·5, 1·0, 1·8, 0·4, 1·2 and 0·7 in the ten preceding years.

INFLUENZA.

Influenza appeared soon after Christmas, 1889, and it was very prevalent throughout the district in the first quarter of 1890.

It began at Tillington, and at one or two isolated houses where friends had come down from London for the holidays. Then it spread to Petworth, where there were a great many cases by the middle of January. As this is a rural district, the disease took a long time to spread through the scattered hamlets and lonely houses.

All sorts and conditions of people were attacked, and probably one-fifth of the population suffered. No one died from this disease. The public elementary schools in many cases were closed, partly because the children could not attend, and partly because the teachers were too ill to teach.

There was no illness among any domestic animals. Adults seemed to suffer more than children, and more males were attacked than females. Although the death-rate during the year was low, there was a very large amount of sickness, and many persons felt the effects of the influenza attack long after the epidemic had passed away at the end of March.

WATER SUPPLY AND DRAINAGE.

Petworth is the only town in the district, and this has now a good water supply and a good system of drainage.

In the small villages and hamlets, no large system of drainage is required. Each house or cottage can nearly always be kept clean and healthy by utilising all refuse on the garden, or by frequent removal to some distant spot. During the year each parish has been inspected, and several minor nuisances have been remedied, such as the removal of refuse, the cleansing of ditches and cesspits, and the erection of improved closets.

The sewage from the Petworth Kennels no longer runs into a ditch where it caused a nuisance on Hamper's Common, but the effluent flows over and irrigates a meadow.

The water supply in the district is good, although in the clay districts, the inhabitants drink the water from dipping holes, or surface springs. Such water is often thick in wet weather from suspended clayey particles; the custom, however, is always to boil such water before using it, as the women here strongly object to the children drinking "raw" water. This kind of water is generally much softer than that obtained from wells; the only objection seems to be, that the supply is but scanty in dry weather.

NOTIFICATION OF INFECTIOUS DISEASE.

On December 16th, 1890, the Sanitary Authority passed a resolution adopting this Act, which was to come into operation on February 2nd, 1891.

It is all the more desirable that its provisions should be carried out, as there is an isolated cottage near Petworth which can be used for the treatment of infectious cases.

COWSHEDS AND DAIRIES.

These are in most cases very well kept, care being taken that there is an ample supply of good water, plenty of light and ventilation, frequent removal of refuse and cleansing of the walls and floors.

MARGARINE ACT.

Very little margarine is sold here by the grocers, and where it can be obtained the regulations of the Act have been complied with. There seems to be no demand for this substance on the part of the scattered agricultural population.

BAKEHOUSES.

These have been often inspected, and they have been well kept. There is no bakehouse on a large scale, and the chief duty is to see that they are frequently cleansed and limewashed. In each case there is a good amount of light and air, and in no case is there any drain within the building.

SLAUGHTERHOUSES.

These are very well kept as regards cleanliness and removal of refuse. In many instances animals are only killed once or twice a week, so that there is no difficulty in keeping them clean and tidy. Each slaughterhouse is often limewashed, and the blood is generally removed at once for use in a garden.

No proceedings were taken before the Magistrates during the year.

There is one common lodging house in the district and this has been kept clean.

No cases occurred in which it was necessary to condemn meat or any other article of food.

INQUESTS.

Inquests were held in 11 cases:—Male, 43 years, accidentally suffocated in an epileptic fit; male, 4 months, congestion of the lungs; male, 10 months, bronchitis; male, 30 years, found drowned; male, 1 hour, prematurely born; male, 17 years, accidentally drowned; female, 35 years, death by poisoning; female, 52 years, suicide by hanging; male, 70 years, suicide by hanging; female, 13 hours, prematurely born; male, 15 months, pneumonia.

There were two deaths returned as “not certified” in the North sub-district out of a total of 69 deaths:—Male, 86 years, cause unknown; male, 91 years, old age.

There were two deaths returned as “not certified” in the South sub-district out of a total of 67 deaths:—Female, 38 years, heart disease; male, 63 years, heart disease.

RAINFALL.

The amount of rainfall during the year was taken daily by the Rev. C. Holland, Petworth Rectory, who has kindly allowed me to use his tables :—

Month.	Total depth in inches.	No. of rainy days.	Rainfall in 1889.
January	4.51	22	1.07
February	1.20	3	2.83
March	1.79	10	2.70
April	3.09	15	2.13
May	1.95	8	2.76
June	3.24	15	1.37
July	4.03	16	2.02
August	2.93	14	2.65
September	1.70	7	0.63
October	1.26	7	6.63
November	2.87	18	1.66
December	0.73	4	1.90
Total	29.30	139	28.35

The rain guage is placed 18ft. 4in. above the ground and 190ft. above the sea level ; diameter of funnel, 5in.

For the statistical tables see pp. ix. to xvi.



RURAL SANITARY DISTRICT OF THAKEHAM.

POPULATION IN 1871	8,335
" " 1881	8,285
AREA IN ACRES	40,636
NUMBER OF HOUSES IN 1871	1,705
" " 1881	1,652

BIRTHS AND BIRTH-RATE.

During the year 1890 the births of 210 children were registered ; of these 110 were male, and 100 were female.

Estimating the population in the middle of the year at 8,250, the birth-rate was equal to 25·4 per 1,000 persons living.

The births and birth-rate in the district during the past ten years have been as follows :—

Year.	Births.	Birth-rate.	Year.	Births.	Birth-rate.
1881	231	27·8	1886	220	26·6
1882	251	30·3	1887	245	29·7
1883	232	28·0	1888	230	27·8
1884	247	29·9	1889	232	28·1
1885	261	31·6	1890	210	25·4

The mean number of births is 236, and the mean birth-rate is 28·5.

There has been a steady decline in the birth-rate since 1880, and this decline is general throughout the country, for the birth-rate of England and Wales during 1890 was lower than in any previous year since the commencement of registration in 1838, being as low as 29·7 per 1,000, and it was 2·9 below the mean rate in the preceding ten years.

The births appear to be most numerous in the first and second quarters of the year :—

	1881-87.	1888.	1889.	1890.	Total.	Per cent.
1st Quarter....	448	66	52	53	619	26·3
2nd "	433	67	65	53	618	26·2
3rd "	427	44	61	40	572	24·2
4th "	379	53	54	64	550	23·3
Total	1,687	230	232	210	2,359	100·0

The following table shows the birth-rate in each sub-district during the past twelve years, and as the populations are similar in age and occupation the rates are very uniform throughout the district :—

	1879-88 Mean.	1889.	1890.
Pulborough Parish	31'3	29'2	30'4
Rest of Pulborough Sub-District	29'2	30'5	23'3
Storrington Parish	28'0	28'4	20'7
Rest of Washington Sub-District	29'6	25'6	26'0
Total	29'7	28'1	25'4

GENERAL MORTALITY.

There were 101 deaths registered in this district during the year 1890, and of these ten took place in Thakeham Workhouse. These ten deaths have been distributed amongst the several parishes whence each inmate came, viz. :—Pulborough, 2 ; West Chiltington, 1 ; Storrington, 2 ; Thakeham, 1 ; Wiston, 2 ; Findon, 2 ; in all, 10.

Estimating the population in the middle of the year at 8,250, the death-rate was equal to 12'0 per 1,000 persons living.

Grouping the previous fifteen years into periods of five years each, the general death-rate will be found to have declined considerably :—

Period.....	1875-79.	1880-84.	1885-89.
Death-rate	16'1	14'8	14'4

In country districts throughout England and Wales the mean death-rate for the past five years has been 17'2 per 1,000 of population.

The variations in the death-rate during the past ten years have been as follows :—

Year.	Deaths.	Death-rate.	Year.	Deaths.	Death-rate.
1881 ...	114 ...	13'7	1886 ...	118 ...	14'3
1882 ...	103 ...	12'4	1887 ...	123 ...	14'9
1883 ...	121 ...	14'6	1888 ...	106 ...	12'8
1884 ...	126 ...	15'2	1889 ...	127 ...	15'4
1885 ...	119 ...	14'4	1890 ...	101 ...	12'0

Thus there have been during the above period 1,158 deaths and a mean mortality of 14'0 per 1,000. During the same period there were 2,359 births, so that the natural increase of population by excess of births over deaths was 1,201. The births, in fact, were twice as numerous as the deaths.

The population in 1881 was 8,285; adding to this number the excess of births over deaths there should be a population of 9,486. Instead of any such increase there has probably been a slight decrease, and I have estimated the number at the present time at rather less than those living in the year 1881. A considerable number of people must leave this district each year, and they are probably young adults who migrate to urban places for work.

In each parish the deaths were as follows:—North Stoke, 0; Amberley, 16; Rackham, 3; Greatham, 1; Hardham, 0; Coldwaltham, 7; Wiggonholt, 0; Pulborough, 19; West Chilington, 4; Parham, 1; Storrington, 17; Sullington, 1; Thakeham, 4; Warminghurst, 0; Ashington, 7; Wiston, 6; Washington, 7; Findon, 8; in all, 101.

A comparative statement of the deaths in each quarter during the past ten years shows that the deaths are most numerous in the first and fourth quarters of the year:—

	1881-87.	1888.	1889.	1890.	Total.	Per cent.
1st Quarter.....	226	21	40	40	327	28·2
2nd „	206	27	20	22	275	23·8
3rd „	172	19	34	15	240	20·7
4th „	220	39	33	24	316	27·3
Total	824	106	127	101	1158	100·0

INFANT MORTALITY.

The *infant mortality* is here given as measured by the number of deaths under one year of age to the total number of births in the year:—

	Births.	Deaths under one year.	Ratio to 1,000 births.	Ratio 1889.	Mean 1879-88.
Pulborough Parish	55	1	18	94	72
Rest of Pulborough S.D....	49	6	122	78	87
Storrington Parish	27	3	111	27	84
Rest of Washington S.D....	79	2	25	102	67
Total.....	210	12	57	82	75

The 12 infantile deaths included one from tuberculosis, two from convulsions, two from bronchitis, two from gastritis, and one from debility; four infants were born prematurely.

The rate of infant mortality in England and Wales in 1890 was 151 per 1,000, against 145, 136, and 144 in the three preceding years; the excess of mortality was almost entirely in the fourth quarter of the year.

ZYMOTIC MORTALITY.

The deaths from *zymotic* disorders were 3 in number against 29, 6, 6, 7, 12, 14, 16, 13, 7 and 23 in the ten preceding years.

The rate of mortality from these disorders was 0·3 per 1,000 persons living, against a rate of 3·4, 0·7, 0·7, 0·8, 1·4, 1·6, 1·9, 0·5, 0·8 and 2·7 in the ten preceding years.

The three deaths included one from measles, one from enteric fever, and one from diarrhœa.

INFLUENZA.

This disease was very prevalent in the first quarter of the year. A few cases appeared on New Year's Day, and by the middle of January it had spread very rapidly. The first cases seem to have been imported from London, or some large town. The disease then went on spreading from the larger villages to the scattered hamlets and isolated houses. It attacked all ages and all classes, and about one-fifth of the population suffered. There were four deaths, viz., one in January, one in February, and two in March. The two males who died were aged respectively 56 and 77 years, and the two females who died were aged respectively 53 and 84 years. Adults suffered more than children and males more than females; those engaged in outdoor work felt it most acutely, and numbers were in a weakly state of health long after the epidemic had passed away by the end of March.

No disease was observed among domestic animals. Several of the elementary schools were closed, as the pupils could not attend, or the teachers were ill, and there was a great excess of sickness among the members of provident clubs.

WATER SUPPLY AND DRAINAGE.

There is no public supply of water to any place in the district, nor does there seem to be any necessity for any large scheme of that sort.

There are a few houses, however, around the square at Storrington where two wells have this year been polluted by a soakage from the gas-works, and a new well has been sunk which now provides good water.

• If a good public well could be sunk in the middle of this square it would be a great benefit to the people living near.

• In the small villages and hamlets, no large system of drainage is required. Each house or cottage can nearly always be kept clean and healthy by utilising all refuse on the garden, or by frequent removal to some distant spot. During the year each

parish has been inspected, and several minor nuisances have been remedied, such as the removal of refuse, the cleansing of ditches and cesspits, and the erection of improved closets.

NOTIFICATION OF INFECTIOUS DISEASE.

This Act came into operation on January 1st, 1890, and during the year 33 cases were notified. Of these 33 cases, 6 were due to enteric fever, 7 to diphtheria, 8 to erysipelas, and 12 to scarlet fever.

Four of the enteric fever cases contracted the disease from Arundel where it was very prevalent at the close of the year. Scarlet fever appeared in three houses at Wiston during September where several children had mild attacks, but early notice of the disease served to stop any spread by school attendance. There was only one death amongst these 33 cases, where a farm labourer, 67 years of age, died at Cold Waltham of enteric fever in April. There was here no spread of the disease.

COWSHEDS AND DAIRIES.

These are in most cases very well kept, care being taken that there is an ample supply of good water, plenty of light and ventilation, frequent removal of refuse and cleansing of the walls and floors.

It seems to me that more care should be taken to complete the register, as there are a few small cowsheds which are not included.

MARGARINE ACT.

Very little margarine is sold here by the grocers, and where it can be obtained the regulations of the Act have been complied with. There seems to be no demand for this substance on the part of the scattered agricultural population.

BAKEHOUSES.

These have been often inspected, and they have been well kept. There is no bakehouse on a large scale, and the chief duty is to see that they are frequently cleansed and limewashed. In each case there is a good amount of light and air, and in no case is there any drain within the building.

SLAUGHTERHOUSES.

These are very well kept as regards cleanliness and removal of refuse. In many instances animals are only killed once or twice

a week, so that there is no difficulty in keeping them clean and tidy. Each slaughterhouse is often limewashed, and the blood is generally removed at once for use in a garden.

PROCEEDINGS BEFORE THE MAGISTRATES.

No proceedings were taken before the Magistrates during the year.

COMMON LODGING HOUSES.

There are no registered common lodging houses in this District.

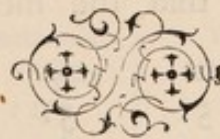
INQUESTS.

Inquests were held in thirteen cases ; male, 2 months, bronchitis ; female, 61 years, heart disease ; male, 31 years, accidentally run over ; male, 49 years, concussion of the brain ; male, 55 years, suicide by drowning ; male, 26 years, accidental fall ; male, 16 days, acute gastritis ; male, 56 years, accidentally run over ; female, 4 years, perforation of the stomach and collapse ; female, 5 years, enteritis ; male, 62 years, suicide by hanging ; male, 11 years, accidentally kicked by a horse ; male, 46 years, accidentally thrown from a cart.

There were no deaths returned as "not certified" out of a total of 101 deaths.

No cases occurred in which it was necessary to condemn meat or any other article of food.

For the statistical tables see pp. xxv. to xxxii.



Faint statistical tables with columns and rows of numbers, partially obscured by the decorative ornament and bleed-through from the reverse side of the page.

RURAL SANITARY DISTRICT OF EAST PRESTON.

POPULATION IN 1871	7,680
" " 1881	8,025
AREA IN ACRES	30,696
NUMBER OF HOUSES IN 1871	1,467
" " 1881	1,662

BIRTHS AND BIRTH-RATE.

During the year 1890, the births of 204 children were registered ; of these 93 were male, and 111 were female.

Estimating the population in the middle of the year at 8,900, the birth-rate was equal to 22·9 per 1,000 persons living.

The births and birth-rate in the district during the past ten years have been as follows :—

Year.	Births.	Birth-rate.	Year.	Births.	Birth-rate.
1881 ...	233 ...	28·8	1886 ...	246 ...	28·5
1882 ...	266 ...	32·3	1887 ...	241 ...	27·5
1883 ...	262 ...	31·4	1888 ...	226 ...	25·5
1884 ...	247 ...	29·5	1889 ...	230 ...	25·8
1885 ...	234 ...	27·4	1890 ...	204 ...	22·9

The mean number of births is 239, and the mean birth-rate is 28·0.

There has been a steady decline in the birth-rate since 1882, and this decline is general throughout the country, for the birth-rate of England and Wales during 1890 was lower than in any previous year since the commencement of registration in 1838, being as low as 29·7 per 1,000, and it was 2·9 below the mean rate in the ten preceding years.

A comparative statement of the births in each quarter during a term of ten years shows that the mean number varies very slightly :—

	1881-87	1888	1889.	1890.	Total.	Per cent.
1st Quarter.....	435	51	51	53	590	24·7
2nd " 	420	73	55	50	598	25·0
3rd " 	462	41	61	54	618	25·9
4th " 	412	61	63	47	583	24·4
Total	1,729	226	230	204	2,389	100·0

The following table shows the birth-rate in each sub-district during the last twelve years:—

	1879-88. Mean.	1889.	1890.
Worthing Sub-District.....	29·2	23·4	22·5
Littlehampton	29·9	28·6	23·6
Arundel	28·6	25·5	22·5
Total	29·4	25·8	22·9

GENERAL MORTALITY.

There were 127 deaths registered in this district during the year 1890, but from this number must be deducted the deaths of seven persons coming from urban areas outside this district. These seven persons died in East Preston Workhouse, of whom five came from Worthing, one from Littlehampton, and one from Arundel. There were also fourteen other deaths in the Workhouse, and these have been distributed among the several parishes whence each inmate came, viz.:—Broadwater, 4; Clapham, 1; Durrington, 1; Ferring, 1; East Preston, 1; Angmering, 2; Lyminster, 1; Lyminster (north), 2; Houghton, 1; in all, 14.

To these 120 deaths must be added the deaths of two persons in the Worthing Infirmary, making a total of 122 deaths.

Estimating the population in the middle of the year at 8,900, the death-rate was equal to 13·7 per 1,000 persons living.

Grouping the previous fifteen years into periods of five years each, the general death-rate will be seen to have declined considerably:—

Period.....	1875-79.	1880-84.	1885-89.
Death-rate ...	16·9	14·4	13·2

In country districts throughout England and Wales the mean death-rate for the past five years has been 17·2 per 1,000 of population.

The variations in the death-rate during the past ten years have been as follows:—

Year.	Deaths.	Death-rate.	Year.	Deaths.	Death-rate.
1881 ...	128 ...	15·8	1886 ...	106 ...	12·3
1882 ...	97 ...	11·7	1887 ...	114 ...	13·0
1883 ...	130 ...	15·6	1888 ...	108 ...	12·2
1884 ...	116 ...	13·8	1889 ...	116 ...	13·0
1885 ...	132 ...	15·4	1890 ...	122 ...	13·7

Thus there have been during the above period 1,169 deaths and a mean mortality of 13·7 per 1,000. During the same period

there were 2,389 births, so that the natural increase of population by excess of births over deaths was 1,220, and the births were more than twice as numerous as the deaths.

The population in 1881 was 8,025; adding to this number the excess of births over deaths, there should be a population of 9,245. I estimate the number at 8,900, as many young adults have left the district to seek employment elsewhere.

In each parish the deaths were as follows:—Broadwater, 18; Heene, 1; West Tarring, 15; Clapham, 5; Durrington, 1; Goring, 6; Ferring, 8; Kingston, 0; East Preston, 4; Angmering, 15; Lyminster, 15; Rustington, 6; Climping, 2; Ford, 0; Tortington, 2; Poling, 3; Patching, 6; Angmering (north), 1; Warningcamp, 1; Lyminster (north), 3; Burpham, 5; South Stoke, 3; Houghton, 2; in all, 122.

A comparative statement of the deaths in each quarter during the past ten years shows that the deaths are most numerous in the first quarter of the year:—

	1881-87.	1888.	1889.	1890.	Total.	Per cent
1st Quarter	238	31	31	31	331	28·3
2nd „	192	31	27	24	274	23·4
3rd „	201	23	30	34	288	24·7
4th „	192	23	28	33	276	23·6
Total ...	823	108	116	122	1,169	100·0

INFANT MORTALITY.

The *infant mortality* is here given as measured by the number of deaths under one year of age to the total number of births in the year:—

	Births	Deaths under one year	Ratio to 1000 Births	Ratio 1889	Mean 1879-88
Worthing Sub-District	80	9	112	12	86
Littlehampton Sub-District ...	79	6	76	135	74
Arundel Sub-District	45	3	66	117	83
Total	204	18	88	88	79

The 18 *infantile* deaths included 2 from whooping-cough, 3 from diarrhoea, 1 from convulsions, 1 from heart disease, 5 from lung disease, 2 from debility, and 1 from marasmus. Three infants were born prematurely.

The rate of infant mortality in England and Wales in 1890 was 151 per 1,000, against 145, 136, and 144 in the three preceding years; the excess of mortality was almost entirely in the fourth quarter of the year.

ZYMOTIC MORTALITY.

The deaths from *zymotic* disorders were 6 in number, against 16, 20, 7, 9, 11, 8, 14, 9, 17 and 8 in the ten preceding years.

The rate of mortality from these disorders was 0·6 per 1,000 persons living, against a rate of 2·0, 2·4, 0·8, 1·0, 1·3, 0·9, 1·6, 1·0, 1·9, and 0·9 in the ten preceding years.

The 6 deaths included 2 from whooping-cough, 1 from diphtheria, and 3 from diarrhœa.

Diphtheria caused one death in a new cottage in a row of houses at Tortington. The family consisted of the parents, two sisters, and five young children, from one to 10 years of age. An adult sister came here from Essex on a visit and a fortnight after her arrival she failed with diphtheria, on September 12th. The mother and a delicate girl, 3 years old, fell ill with diphtheria on September 19th. The child died on September 30th, but the other two cases recovered. There were no drains inside the house; there was a good water closet, and the drain in the yard was well trapped. There were no other cases in this row of houses. Fogs were at the time very prevalent about here in the evening.

In one of a group of four railway cottages at Ford Junction, there was a case of diphtheria. There were in the house the parents, and one girl, 3 years old. This child failed on June 28th, but it recovered, and there was no spread of the disorder. The closets to these houses were on the old-fashioned system, and they were too near the dwellings; they have since been converted into water closets with hopper pans and traps, so that the nuisance has been abated.

Enteric Fever appeared in four houses in this district, and in each case, it was imported from Arundel.

1. Louis M., 16 years old, worked at High Street, Arundel, in a printing office, going to the office twice a day. He lived with his parents in a large old farm house about a mile from Arundel, situated high up on chalky soil, and with a good slope to the south. There were no drains or closets inside the house which was occupied by the parents, eight children, from 5 to 20 years of age, and two lodgers. There was plenty of room for all these inmates. Louis M. drank cold water from the Arundel town pump, and he was taken poorly on November 8th, but he went back to his work for a few days; on November 13th he came home ill with enteric fever, and in due time he recovered. There were no other cases of fever in this house, but the youth was well nursed and isolated.

2. In Wick there is a cottage occupied by a widow with her son and daughter. Albert B., 13½ years old, was engaged at the bookstall at Arundel station, which is about half-a-mile from the town square. Wick is near Littlehampton, and the boy used to come over by rail every morning, and return home every evening. He never delivered papers in Arundel, nor could I find that he ever drank cold water from the polluted well in the square. The water at the Railway Station at Arundel is from quite a distinct source. The boy's mother kept a small-shop, and she also sold mineral waters. It was her custom, every now and then, and chiefly on Saturday nights, at the end of the week's work, to give her son lemonade or ginger beer, and these mineral waters I found to be made at a factory in Arundel close to the town pump, and this polluted water was used in its manufacture. The boy fell ill on November 6th, but he recovered, and there was no spread of the disease. The few bottles that remained in Wick at this shop and at another were ordered to be destroyed, and there was no other case at Wick from this cause.

3. In an old cottage at West Tarring, there dwelt last October an aged couple with their grandchild, Jesse H., 11 years old. Jesse's parents lived at Arundel where they had five other children, some of whom have since had enteric fever. On October 27th, Mary H., 4 months old, died of "cholera infantum" at a time when much diarrhoea prevailed at Arundel. Jesse H., went to his infant sister's funeral, remained at Arundel for a few days, and while there he drank the town pump water; at the same time, the father's cottage being small, the boy was exposed to any infective matter in the house. As the rest of the children had enteric fever in November and December, it seems very probable that the cause of death in the infant was due to a similar cause. On his return to West Tarring Jesse had an attack of enteric fever. The grandfather's cottage was clean and neat; there were no drains or closets in the house, and the w.c. in the garden was provided with a pan and trap. The boy recovered, but the grandmother, who nursed him, was attacked with enteric fever in December, and she also recovered.

4. Francis F., 15 years old, in service at an Inn, close to the Market Square, Arundel, came home to her parent's cottage at Wick on November 25th. She used to drink cold water from the town pump, and other cases were reported from this Inn. She had been ill a week before her return home, but she in time recovered. The parents and three other persons lived in this cottage, but there was no spread of the disorder.

For an account of the enteric fever outbreak at Arundel, the report for that Authority should be referred to.

INFLUENZA.

This disease was epidemic in the district during the first quarter of the year. It did not commence here quite so early as in the neighbouring towns, because a certain interval of time had to elapse before the disorder could spread to the various hamlets and outlying places. By the end of January it was very prevalent, and the disease did not subside until the middle of April. About one-sixth of the population was attacked, but no one died from this cause. All sorts and conditions of persons suffered, but male adults were chiefly affected. In some villages farm work was seriously interfered with in consequence of the illness among the labourers, and the amount of sickness among the members of the village clubs was greatly increased.

BROADWATER

In the early part of 1890 was provided with a good *supply of water* from the Worthing Waterworks. Early in December, 1889, the Worthing Local Board adopted the following report of its Roads' Committee:—"The water supply to many of the houses in the village of Broadwater it is known has for some years past been unfit for drinking purposes, and a recent analysis of that procurable from the wells at the Manor House shows that it cannot safely be used. Under these circumstances Mr. Ritchie, the tenant of that property, applied to your Committee for the terms on which the Board would consent to extend their main and supply his property with water. The Board being empowered by Act of Parliament to supply the village, your Committee arranged with that gentleman that he should ascertain what number of the inhabitants were prepared to join in his request, and a public meeting was therefore called for that purpose. The result of that meeting is an application to supply about 80 properties, the combined rateable value of which is £750, whilst there is reason to believe that several other persons are prepared to take water. Apart from the fact that it is of some moment to the Board that Broadwater should be a healthy village, there appears to be no reason, financial or otherwise, why the application should not be complied with. The cost of laying the mains and other requisite appliances it is estimated will amount to £360, and a charge somewhat in excess of that made in the town will afford a reasonable return on this sum. Your Committee therefore recommend that the mains in the first instance be extended to the east side of Broadwater Green on the west, and eastwards as far as may be found necessary; that the charge for water supplied be $7\frac{1}{2}$ per cent. on the rateable value of the properties supplied, or 1s. 6d. per 1,000 gallons by meter, to be reduced to $6\frac{1}{4}$ per cent. when in the aggregate such rateable values amount to £1,200 and upwards, and 1s. 3d. per 1,000 gallons by meter."

This report was in consequence of an application to the Local Board from the inhabitants of Broadwater.

A great many houses are now connected and the work is steadily going on.

No *drainage* system has yet been adopted, but much discussion took place last year on the subject. The late Inspector, Mr. A. G. Gibbs, made a report to the Authority on the subject:—

“Having called on Mr. Ritchie, of Broadwater, according to instructions from the Chairman on Jan. 27th, I beg to report that Mr. Ritchie desires to call the attention of the Authority to the system of house drainage existing at the present time in the rural portion of the parish of Broadwater. There are about 184 houses in this portion of the parish, most of which have one cesspool to contain sewage from the house and w.c. Several blocks of houses have only one, and in some cases two cesspools, and after a heavy shower of rain these become full and overflow in the gardens or yards attached to the houses. There are six large laundries, the cesspool accommodation at these being quite inadequate to contain the quantity of water necessary to carry on the trade. They are compelled to make use of the water courses of the roads to carry away soapsuds etc., which become very offensive in hot or heavy weather. There are also a number of small laundries, all having insufficient cesspool accommodation. Mr. Ritchie having spoken to several of the owners and occupiers of property, all of whom are in favour of the village being drained, he would ask the Authority to consider a scheme by which there could be one system of drainage throughout the village, by means of a sewer being laid and connected to the Worthing sewer; and he believes it is the wish of the inhabitants that such a system should be adopted.”

The question of drainage was afterwards discussed at a meeting of ratepayers in the rural portion of Broadwater, held on August 8th, 1890, when the following resolution, passed at a special meeting of the Worthing Local Board, was read:—

“That in case the rural part of Broadwater is sewered the Board consent to the sewers being connected with their outfall on payment of an annual sum equal to a rate of 6d. in the pound on the rateable value for the time being of the property in that part of the parish, and one half the cost of extending the Board’s sewer in Broadwater Road to the district boundary.”

It was stated at the meeting that the rateable value of the property comprised in the drainage area was £4,000, which at 6d. in the pound would produce a rate of £100. The village would have to pay the sum of £210, half the cost of connecting with the Board’s sewer in Broadwater Road; the cost of carrying the main drain through the village would be £1,120; and for con-

tingencies and clerk of the works they must allow £160, which would make a total of £1,500. This sum would have to be borrowed on the security of the rates of that parish, thus necessitating the repayment of the sum of £84 a year for thirty years. Added to that £84 they would have to pay the Local Board £100 a year for the use of their sewer, and in addition to this there would be the cost of levying the rate, which would bring the total annual sum required to £200. This would practically amount to a rate of 1s. in the pound, beyond all which there would devolve upon the owners the cost—a considerable one—of connecting their respective properties with the main drain.

After much discussion the scheme was thought to be too expensive, and the vestry resolved "That if greater attention be paid to cesspools and other sanitary matters it is not necessary to create the rural portion of the parish a special drainage district, and this Vestry recommends a Parochial Committee be formed." Early in October a Parochial Committee was formed consisting of three members of the Rural Sanitary Committee and three ratepayers.

Several meetings have been held and a house to house inspection of the village was commenced, and many minor defects have been remedied.

The Committee then asked the Authority to apply for certain urban powers to be granted to the contributory place of Broadwater. This order has been made by the Local Government Board, dated December 15th, 1890, and to come into operation on January 26th, 1891. The provisions of the Public Health Act, 1875, which will then come into force are

Sections 42 and 44, dealing with scavenging and cleansing.

Sections 112, 113 and 114, dealing with offensive trades.

Sections 169 (second and third paragraphs) and 170, dealing with slaughterhouses.

WICK.

West Tarring and Broadwater are now provided with means to put the houses in good sanitary order, there remains a third place to be dealt with. Steps were taken about two years ago to supply Wick with water from Littlehampton, but there was no sufficient supply available. Now that there is a much increased supply of water at the Littlehampton Waterworks, the work could be easily and cheaply carried out.

A Parochial Committee should be formed for this purpose, and urban powers should be applied for under sections 42 and 44 of the Public Health Act, 1875.

WEST TARRING

Is now in great measure a suburb of Worthing. There are 159 houses in the area of drainage, and of these 119 have water-closets; of these 119 closets 113 are connected with the new sewer, 4 empty into cesspits, as the houses are not within 100ft. of the main drain, and 2 empty into cesspits when the contents are used on market gardens. One hundred and five water closets are provided with flushing tanks supplied from the West Worthing Waterworks Company, 6 from a private water supply, while 8 are supplied by force pumps. There are 36 earth closets, which are all well kept.

A great improvement has been made in this village during the past two years, in which time a good water supply and a main system of sewers have been provided.

Many complaints were made of escape of foul air from the man-holes of the sewer on the ground level. A remedy has been provided by closing the manholes and by putting up several large ventilating pipes in convenient places.

The Parochial Committee at West Tarring, appointed in 1889, arranged very cheaply for the scavenging and cleansing of the district, the cost at present being at the rate of 1s. 6d. per week. The house refuse only is dealt with, and such refuse is placed outside the house in some suitable vessel every Saturday between 7 a.m. and 9 a.m., so that the dustman may easily get it, and empty and replace the vessel.

The village is growing rapidly; it is now provided with a drainage system into the Worthing sewer, a good supply of water from the West Worthing Waterworks, and a gas supply from the Worthing Gas Company.

NOTIFICATION OF INFECTIOUS DISEASE.

This Act was not in force during the year, but the Authority has since adopted it, and it will come into operation early in 1891. The Authority has also adopted the Infectious Disease (Prevention) Act, 1890, and Part III. of the Public Health Acts (Amendment Act), 1890.

ALTERATION OF AREA.

The rural portion of Heene parish, which contains about 30 houses and 150 inhabitants, was incorporated into the new Borough of Worthing during the autumn of the year. Heene, in future years, will therefore disappear from this district. Clump Square, a wretched group of six or seven houses in Heene Parish, has been closed, and the houses are now almost a ruin.

COWSHEDS AND DAIRIES.

These are 26 in number ; they are in most cases very well kept, care being taken that there is an ample supply of good water, plenty of light and ventilation, frequent removal of refuse and cleansing of the walls and floors.

MARGARINE ACT.

Very little margarine is sold here by the grocers, and where it can be obtained the regulations of the Act have been complied with. There seems to be no demand for this substance on the part of the scattered agricultural population.

BAKEHOUSES.

These, which are nine in number, have been often inspected, and they have been well kept. There is no bakehouse on a large scale, and the chief duty is to see that they are frequently cleansed and limewashed. In each case there is a good amount of light and air, and in no case is there any drain within the building.

SLAUGHTERHOUSES.

These are generally very well kept as regards cleanliness and removal of refuse. In many instances animals are only killed once or twice a week, so that there is no difficulty in keeping them clean and tidy. Each slaughterhouse is often limewashed, and the blood is generally removed at once for use in a garden.

COMMON LODGING HOUSES.

There is no common lodging-house in this District.

PROCEEDINGS BEFORE THE MAGISTRATES.

A butcher was summoned before the Worthing Bench on March 26th, 1890, for a nuisance existing at his slaughter-house at West Tarring, arising from defective drainage, bad paving, &c. The defendant admitted that a nuisance existed, and that the only remedy was the provision of a system of drainage ; but he did not consider it his province to undertake the work, which, he thought, was a matter for the owner. The Bench made an order requiring the defendant to abate the nuisance within twenty-eight days, and to pay the costs of the case, amounting to £1. The works were carried out and the nuisance was abated.

INQUESTS.

Inquests were held in six cases :—Male, 39 years, accidentally suffocated ; male, 37 years, accidentally drowned ; male, 17 years, accidentally drowned ; male, 15 years, accidentally drowned ; female, 65 years, suicide by drowning ; male, 15 years, accidentally drowned.

There were no deaths returned as “not certified” in the Worthing and Arundel sub-districts out of a total of 80 deaths.

There were three deaths returned as “not certified” in the Littlehampton sub-district out of a total of 42 deaths : Male, 66 years, probably bronchitis ; female, 73 years, disease of heart and liver ; male, 9 months, diarrhœa.

A few cases of overcrowding were dealt with during the year ; in one case, the whole family left the district, and in the rest the nuisance was abated by sending the lodgers or some of the elder children away.

No case occurred in which it was necessary to condemn meat or any other article of food.

For the statistical tables see pp. xxxiii. to xl.



RURAL SANITARY DISTRICT OF MIDHURST.

POPULATION IN 1871	13,042
" " 1881	13,933
AREA IN ACRES	66,571
NUMBER OF HOUSES IN 1871	2,623
" " 1881	2,797

BIRTHS AND BIRTH-RATE.

During the year 1890 the births of 348 children were registered ; of these 167 were male, and 181 were female.

Estimating the population in the middle of the year at 14,900, the birth-rate was equal to 23·3 per 1,000 persons living.

The births and birth-rate in the district during the past ten years have been as follows :—

Year.	Births.	Birth-rate.	Year.	Births.	Birth-rate.
1881	412	29·4	1886	419	28·6
1882	438	31·0	1887	345	23·4
1883	402	28·4	1888	399	26·9
1884	419	29·1	1889	366	24·6
1885	406	28·0	1890	348	23·3

The mean number of births is 395, and the mean birth-rate is 27·3.

There has been a steady decline in the birth-rate since 1882, and this decline is general throughout the country, for the birth-rate of England and Wales during 1890 was lower than in any previous year since the commencement of registration in 1838, being as low as 29·7 per 1,000, and it was 2·9 below the mean rate in the preceding ten years.

The births appear to be most numerous in the first quarter of the year :—

	1881-87.	1888.	1889.	1890.	Total.	Percent.
1st Quarter....	804	95	82	81	1,062	26·9
2nd "	723	111	104	87	1,025	25·9
3rd "	666	103	79	89	937	23·7
4th "	648	90	101	91	930	23·5
Total	2,841	399	366	348	3,954	100·0

The following table shows the birth-rate in different localities during the last twelve years:—

	1879-88 Mean.	1889.	1890.
Midhurst Parish	26·1	22·7	23·7
Rest of Midhurst S.D.	28·0	23·1	21·4
Fernhurst S.D.....	30·0	27·2	26·4
Harting S.D.	29·2	25·6	23·8
Total	28·5	24·6	23·3

GENERAL MORTALITY.

There were 191 deaths registered in this district during the year 1890, and of these twelve took place in Easebourne Workhouse. These twelve deaths have been distributed amongst the several parishes whence each inmate came, viz.:—Selham, 1; Midhurst, 3; Fernhurst, 2; Iping, 1; Chithurst, 1; Rogate, 1; Harting, 2; Treyford, 1; in all, 12.

Estimating the population in the middle of the year at 14,900, the death-rate was equal to 12·8 per 1,000 persons living.

This rate is lower than that recorded in any previous year with the exception of 1889, when it was 10·5 per 1,000.

Grouping the previous fourteen years into three periods, the general death-rate will be found to have steadily declined:—

Period.....	1876-79.	1880-84.	1885-89.
Death-rate	15·8	15·0	14·2

In country districts throughout England and Wales the mean death-rate for the past five years has been 17·2 per 1,000 of population.

The variations in the death-rate during the past ten years have been as follows:—

Year.	Deaths.	Death-rate.	Year.	Deaths.	Death-rate.
1881 ...	205 ...	14·6	1886 ...	243 ...	16·5
1882 ...	240 ...	17·0	1887 ...	219 ...	14·9
1883 ...	188 ...	13·2	1888 ...	191 ...	12·9
1884 ...	230 ...	16·0	1889 ...	157 ...	10·5
1885 ...	233 ...	16·0	1890 ...	191 ...	12·8

Thus there have been during the above period 2,097 deaths and a mean mortality of 14·5 per 1,000. During the same period there were 3,954 births, so that the natural increase of population by excess of births over deaths was 1,857.

The population in 1881 was 13,933; adding to this number

the excess of births over deaths, there should be a population of 15,790. I estimate the number at 890 less, as many young adults have left the district to seek employment elsewhere.

In each parish the deaths were as follows:—East Lavington, 2; West Lavington, 1; Tillington, 15; Lodsworth, 11; Selham, 1; Heyshott, 6; Graffham, 5; Cocking, 5; Midhurst, 27; Woolbeding, 2; Easebourne, 13; South Ambersham, 0; North Ambersham, 0; Lurgashall, 12; Fernhurst, 18; Linchmere, 6; Linch, 2; Stedham, 11; Iping, 8; Trotton, 4; Chithurst, 3; Terwick, 3; Rogate, 13; Harting, 15; Elsted, 1; Treyford, 4; Didling, 0; Bepton, 3; in all, 191.

A comparative statement of the deaths in each quarter during the past ten years shows that the deaths are most numerous in the first quarter of the year:—

	1881-87.	1888.	1889.	1890.	Total.	Per cent.
1st Quarter	448	57	47	55	607	29'0
2nd „	413	61	33	43	550	26'2
3rd „	350	31	38	36	455	21'7
4th „	347	42	39	57	485	23'1
Total	1,558	191	157	191	2,097	100'0

INFANT MORTALITY.

The *infant mortality* is here given as measured by the number of deaths under one year of age to the total number of births in the year:—

	Births.	Deaths under one year.	Ratio to 1,000 births.	Ratio 1889.	Mean 1879-88.
Midhurst Parish	44	6	136	47	92
Rest of Midhurst S.D.....	119	6	50	86	78
Fernhurst S.D.	66	5	76	59	88
Harting S.D.....	119	13	109	55	93
Total.....	348	30	86	66	87

The 30 infantile deaths included one from whooping-cough, one from diarrhœa, one from tuberculosis, four from convulsions, five from bronchitis, one from gastritis, one from hernia, six from debility, and two from marasmus; eight infants were born prematurely.

The rate of infant mortality in England and Wales in 1890 was 151 per 1,000, against 145, 136, and 144 in the three preceding years; the excess of mortality was almost entirely in the fourth quarter of the year.

ZYMOTIC MORTALITY.

The deaths from *zymotic* disorders were 7 in number against 9, 19, 32, 16, 18, 25, 30, 10, 17 and 8 in the ten preceding years.

The rate of mortality from these disorders was 0·4 per 1,000 persons living, against a rate of 0·6, 1·3, 2·2, 1·1, 1·2, 1·7, 2·0, 0·6, 1·1 and 0·5 in the ten preceding years.

The seven deaths included one from scarlatina, three from whooping cough, two from diarrhœa, and one from enteric fever.

SCARLATINA.

Scarlatina in a mild form appeared in several isolated cottages in Linchmere and Fernhurst. In the autumn of 1889, there had been a case in a house at Linchmere Marsh, but its history could not be traced. In December, 1889, Elizabeth C., aged 13 years, called at this cottage several times, and she may have carried the infection home to her home at High Buildings, where her parents and five other children lived. Two of the boys, 11 and 9 years, fell ill on December 19th, 1889, and soon recovered; another boy, 6 years, and a girl, 4 years, were attacked on January 7th, and they were well in a short time. The baby, 2 years, did not fall ill, nor the parents, nor Elizabeth, who was sent from home when the illness began. At the close of the month, a servant at the Vicarage had the fever, but the other inmates escaped. There were then no more cases until May, when the fever attacked four children in an old thatched cottage in Linchmere Marsh: Lily S., 7 years, on May 15th; William S., 4 years, on May 19th; Arthur S., 6 years, on May 22nd; and Ellen S., 2½ years, on May 29th. The baby, 6 months old, escaped. The father had had scarlet fever when a boy, but the mother had never had it. Lily and Arthur attended Linchmere School, and it is possible that they caught the disease there, as the children of two families living at Shotter Mill, just over the county border, had had "some kind of a rash" a short time before.

The next case was at a lonely farmhouse on the edge of Henley Common, Fernhurst, occupied by Mr. and Mrs. W., an adult son, and Frances, 6 years old. This child fell ill on June 21st, and she was nursed by her mother, and in due time recovered. At this farm a large quantity of butter was made weekly, but steps were at once taken to carry on the dairy work in a house across the common, and those who made the butter were kept away from the patient. No milk was sold here. The house was large, very clean, and surrounded by a large garden, so that isolation was easily carried out. This child attended Fernhurst School, at a distance of two miles, and there was no possibility of her having

been near the Linchmere cases. She had spent June 5th at Horsham, whither she went with her parents for the day, but if she had come across any infective case then, the incubation period must have been much longer than usual.

At Tipples, Fernhurst, Charles F., $5\frac{1}{2}$ years of age, fell ill on June 28th, having been at Fernhurst School the day before; he was in the same class as Frances W. Two other children, 3 years and $1\frac{1}{2}$ years, escaped. The parents could not remember if they had had scarlet fever when young. They lived in a semi-detached cottage: next door there dwelt three girls, 6, 10, and 15 years old, and they escaped.

On July 3rd, another child fell ill in a cottage at Linchmere Marsh, occupied by Fred. F., wife, and five children. The parents and baby, $1\frac{1}{2}$ year old, went to another house on July 8th, and a nurse was provided for the children. Ernest F., 6 years, came home from Linchmere school on July 3rd, feeling unwell. Fanny, 4 years, fell ill on July 9th, Margaret F., 3 years, on July 13th, and John F., 8 years, on July 15th. Ernest was a delicate child, and he died on July 17th. The rest recovered. The parents had never had scarlet fever. After this, there were no more cases of the fever at Linchmere.

At Kingsley Marsh, Fernhurst, there are three cottages near the Green, occupied respectively by James B., wife, and two young children, Edwin B., wife, and six young children, and Stephen F., wife, adult son, and two young children.

At James B's cottage, Ellen B., 3 years, fell ill on July 6th, and Alice B., 1 year, also on the same day, with scarlet fever. None of these children attended school, and as the weather was very wet, they had not been out of the house for some days. There were no other cases of scarlatina within two miles of these houses at the time. There were no other cases in the two adjacent houses, but four of the children living there had scarlet fever in 1885, and the only four likely to have it now were aged 1, 3, 4, and $4\frac{3}{4}$ years respectively.

At the Tan Yard, Fernhurst, a lonely spot, about a mile from the village, there are three cottages occupied respectively by William B., wife, and 6 young children, Stephen H., wife, an adult son, and two daughters, and Noah C., wife, adult son, and 3 young children. In William B's house, Frank, 7 years, fell ill on July 16th, having been at Fernhurst School the previous day; Ada, 10 years, and Laura, 11 years, were ill on July 21st; Dora 9 years, and Cornelia, $2\frac{1}{2}$ years on July 24th; and Sarah, 8 years, on July 25th. The father had scarlet fever when young, but the mother does not know whether she had it or not. All the children recovered.

In Stephen H's house, Clara H., 11 years, failed on July 19th, having been at Fernhurst School the previous day; Edith H., 14 years, failed on July 27th; these were mild cases, and they soon recovered.

In Noah C's house there were no cases at this time, but on October 4th, Harry C., 9 years old, was attacked, but the two younger children, 8 years and 7 years, escaped. The family had been away hopping, and returned home on September 27th.

At the Cylinders, Fernhurst, there are 11 houses in three groups, where several children lived. In one cottage, occupied by William R., wife, and four children, Clement R., 6 years, failed on July 19th, having been at school on the previous day. Ralph R., 8 years, was poorly on July 6th with a slight rash and sore throat; he stayed away from Fernhurst School a week, but he went back from July 14th to July 21st. He was probably then in an infectious state, as he was slightly peeling on July 25th. This case was not notified, and, although seen by a medical man, the attack was so mild, that its nature was not recognised. There were no other cases in this house nor in the adjacent houses.

At Kingsley Marsh, Fernhurst, there are two cottages occupied by Ephraim S. and William W. In Ephraim S.'s cottage there were his wife and five children. George S., 10 years, fell ill on July 23rd, after his return from Fernhurst school. John, 12 years, who had left school, failed on August 12th. They recovered, and the three other children—16, 8 and 6 years—escaped. The parents had had scarlet fever when young.

The other cottage was occupied by William W., wife, and two children. William W., 7 years, fell ill on July 18th, and his sister was sent away at once; she was 5 years old, and did not go to school, but William had been attending Fernhurst school. When the house had been fumigated, cleansed and limewashed, the sister returned home, and on October 9th she had a mild attack and recovered. The epidemic now ceased.

Linchmere is a small parish containing 73 houses and 350 persons. The scarlatina appeared here in four houses, containing ten adults and sixteen young children; of these children seven boys and five girls were attacked; one boy and three girls escaped, but three of these were very young, and infants often escape. The ages of the males attacked were 11, 9, 8, 6, 6, 4 years; of the females 7, 4, 4, 3, $2\frac{1}{2}$ years; of the male not attacked, $1\frac{1}{2}$ year; of the females not attacked, 13, 2, and 6 months. One boy died of scarlet fever and pneumonia; the rest recovered. The disease appeared in the first house early in January, in the second house on January 24th, in the third house on May 15th, and in the fourth house on July 3rd. Each house was well

isolated, and there seemed to be no visiting from one to the other ; some of the houses were a long distance apart. Only one female adult was attacked.

Fernhurst is an adjoining parish with also a very scattered population ; it contains 230 houses and 1,140 persons. Scarlatina appeared here in nine houses, all of which were at some distance from the village. The first case occurred in a house at Henley Common, about two miles south of Fernhurst School on June 21st ; in the second house, about midway between the common and the school, it appeared on June 28th.

In the third house it appeared on July 6th, at Kingsley Green, a place two miles north of Fernhurst School, but none of these children attended school. The three houses at Tan Yard are situated about a mile east of Fernhurst School, and here the fever showed itself on July 19th. In the seventh house it appeared on July 19th, at the Cylinders, a place about half-a-mile south of Fernhurst School. The eighth and ninth houses were at Kingsley Marsh, very near to the third house ; it broke out here on July 18th and July 23rd. It will be remembered that Ralph R., an unnotified case, returned to school from July 14th to 21st, and he may have infected several children during that period. On July 23rd Fernhurst School was closed, and the disease afterwards appeared in no fresh house. About 190 children attend this school.

The above nine houses contained twenty-one adults and twenty-eight children. Of these children eight boys and eleven girls were attacked ; five boys and four girls escaped. The ages of the boys attacked were 12, 10, 9, 8, 7, 7, 6 and 5 years ; of the girls attacked 14, 11, 11, 10, 9, 8, 6, 5, 3, $2\frac{1}{2}$ years and 1 year respectively. The ages of the boys not attacked were 13, 8, 6, 3 years, and 20 months ; of the girls not attacked 16, 11, 8 and 7 years respectively. No adults were affected, and there were no deaths.

These houses were in very various conditions as regards their sanitary surroundings ; some were very clean, and others dirty according to the differing habits of the people. They had nothing in common as regards water-supply, drainage, or milk supply. No house had any drains within its walls. The usual precautions were taken as regards isolation, disinfection, and cleansing and limewashing.

ENTERIC FEVER.

Enteric Fever was notified on two occasions : in January, twice ; in April, once ; in August, once ; in September, three times ; in November, twice and in December once.

In each case the disease was confined to the person first attacked, and there was no spread of the disorder. A servant, 22 years old, was sent home from service in November, and she died. All the other cases recovered.

INFLUENZA

was very prevalent in the first quarter of the year. The first case occurred on December 24th, 1889, and the second on December 27th. In a fortnight's time it was very widely spread. At a private house, where some guests were down from London, it spread rapidly amongst those who were present.

In the third week of January, Midhurst, Cocking, and West Lavington Schools were closed. The disorder spread all over the district, attacking all classes, ages and sexes. Adult males seemed to suffer more than others, and probably on the whole one-sixth of the population suffered. There were in all five deaths from this cause; in January, one; in February, one; in March, one; and in April, two. The three males who died were aged respectively 44, 59, and 70 years; the two females who died were aged 11 and 51 years. There was no disease met with among any domestic animals.

The epidemic ceased at the end of March, but several cases were met with in April in outlying districts.

NOTIFICATION OF INFECTIOUS DISEASE.

This Act came into operation on January 1st, 1890, and 55 new cases of infectious sickness were reported.

Disease	New cases	Deaths.	Recovery.
Scarlatina	36	1	35
Diphtheria	2	0	2
Enteric Fever.....	10	1	9
Erysipelas	7	0	7
	—	—	—
Total	55	2	53

The scarlatina experience seemed to show that even with notification there may exist one or two cases so mild as to miss recognition, and yet capable of spreading the disease through school attendance.

The enteric fever experience was that there was no second case in a house in which the initial case appeared.

MIDHURST WATER SUPPLY.

Nothing was done during the year, and the question remains in the condition in which it has remained for years, and which has been often described in my previous reports.

A good supply of water for Midhurst is a necessity, but the inhabitants do not care to go to the expense.

MIDHURST DRAINAGE AND SEWAGE.

Colonel John Ord Hasted, R.E., one of the Inspectors of the Local Government Board, held an inquiry at the Town Hall, on May 14th, 1890, into the subject of an application made by the Midhurst Rural Sanitary Authority for sanction to borrow a sum of £700 to carry out certain sewerage works in the town. Mr. Albery explained that some few years ago a comprehensive scheme of drainage for the town was prepared by Mr. Horne, the estimated cost being between £3,000 and £4,000. That was thought by the Sanitary Authority to be much more money than they would be justified in spending on behalf of the ratepayers, and consequently the scheme fell through. Complaints, however, were made last year as to the state of the open ditches in the northern part of the town, leading into the river, and a further scheme was prepared by Mr. H. Howard, the Town Surveyor of Littlehampton, in conjunction with the Inspector of Nuisances. This scheme it was proposed to carry out at a cost of £700, to borrow which amount the Sanitary Authority sought the permission of the Local Government Board. Plans of the proposed scheme were produced and explained to the Inspector by Mr. Howard. There would, it appeared, be a very good outfall all the way, whilst the average depth at which it would be necessary to lay the pipes would not exceed five feet. It was proposed to deal with the sewage by means of filtration, for which purpose coke would be used, thereby preventing anything beyond the liquid portions finding its way to the adjacent stream. At present all the solid matter travelled thither, so that the new scheme would in this respect be a great improvement on existing arrangements.

The Local Government Board refused to sanction the loan on the ground that the scheme was inadequate, and only dealt with the northern portion of the town; that there was no due provision for the purification of the sewage which should be made to pass over land. The present drains are not constructed to carry sewage. A new system of main drainage is much required for the whole of Midhurst. In the mean time no land can be obtained.

No structural works of any importance were carried out in the various villages, but during the year each parish has been inspected,

and several minor nuisances have been remedied, such as the removal of refuse, the erection of improved closets, and the cleansing of ditches and cesspits.

NEW HOUSES.

Certificates were given in the case of all new houses where a good supply of wholesome water had been provided.

COWSHEDS AND DAIRIES.

These are in most cases very well kept, care being taken that there is an ample supply of good water, plenty of light and ventilation, frequent removal of refuse and cleansing of the walls and floors.

MARGARINE ACT.

There seem to be only three shops in this district where margarine is sold, and where it can be obtained the regulations of the Act have been complied with. There seems to be no demand for this substance on the part of the scattered agricultural population.

BAKEHOUSES.

These have been often inspected, and they have been well kept. There is no bakehouse on a large scale, and the chief duty is to see that they are frequently cleansed and limewashed. In each case there is a good amount of light and air, and in no case is there any drain within the building.

SLAUGHTERHOUSES.

There are five slaughterhouses, and these have been very well kept as regards cleanliness and removal of refuse. Each slaughterhouse is often limewashed, and the blood is generally removed at once for use in a garden.

PROCEEDINGS BEFORE THE MAGISTRATES.

Proceedings were taken before the Magistrates once during the year.

On February 27th, 1890, the owner of some cottages at West Harting was summoned for allowing one of these dwelling houses to be in such a state as to be a nuisance and injurious to health. The house was in a ruinous condition owing to want of repairs.

The case was one of interest as the Bench decided that there was apparently no nuisance whatever existing, but that the house was unfit to live in owing to want of repairs, and they considered that more specific information was required. The Clerk to the Authority thereupon withdrew the summons.

Shortly afterwards the owner did the needful repairs without any more legal proceedings being taken. The nature of the case may be best seen from the following extract of the proceedings from a local paper :—

“An owner of property at Harting, who did not appear, was summoned at the instance of the Midhurst Board of Guardians, acting as the Rural Sanitary Authority, for allowing a dwelling house at West Harting to be in such a state as to be a nuisance and injurious to health.

Mr. Albery, Clerk to the Guardians, appeared in support of the summons.

Before the case was entered into, the Chairman drew attention to the incomplete form in which the information was drawn up. The real nature of the nuisance was not specified at all.

Mr. Albery said he should call Dr. Kelly to prove that the condition of the house in itself constituted a nuisance, and that it was injurious to health.

The Chairman remarked that there ought to be something mentioned as to the cause; the defect in the premises should be specified, for this was what the Magistrates really had to enquire into. If a nuisance was alleged to exist in a dwelling house, the nature of it should be set forth on the information, so that the defendant might know what he was proceeded against for.

Mr. Albery pointed out that the summons had been issued in accordance with the general section of the Act of Parliament, and the proceedings were taken in the usual way.

The Chairman said he drew attention to the matter so that in the future, informations might be more specific. It would be just as well to charge a man with larceny without specifying the article which he was alleged to have stolen.

Mr. Albery then proceeded to adduce evidence, first of all calling Mr. R. Caddy, the Inspector of Nuisances, who deposed to examining the cottage at West Harting (one of a block of three), owned by defendant, on January 3rd. On the 17th January he laid his report before the Rural Sanitary Authority, who caused a notice to be served upon defendant, requiring him to abate the nuisance which was found to exist on the premises, within a period of 28 days. That term expired on the 9th inst., and no remedial measures having been taken, a summons was subsequently issued.

Witness made another examination of the house on the 24th inst., when he found it in precisely the same condition as before. Upstairs both the windows were completely out, and old sacks had been stuffed into the vacancies in order to keep out the weather. Tiles were off the roof in several places, allowing the rain to come pattering into the bedrooms. The ceilings and walls were in a wretched condition both upstairs and down, whilst the flooring in the living room was in a deplorable state. The wash-house adjoining the cottage was in a tumble-down condition, and as it possessed no door the wind had an uninterrupted entrance to the house. A man named William Greenshade was the occupant, with a family of six children. The mother had died some time ago.

At this juncture the Chairman again drew attention to the incomplete form of the information. One might be led from reading it to believe that there was something the matter with the drainage of the house, or that some other sanitary nuisance existed. The alleged offence was one of a seriously criminal nature, and the defendant was certainly entitled to know by the information laid against him with what he was really charged. There was apparently no nuisance whatever existing, but the house was unfit to live in owing to want of repairs.

Mr. Albery remarked that the Bench had the power, if they found the house in such a condition as to constitute a nuisance, to order it to be made habitable.

The Chairman said the Bench would really be asked to deal with the defendant for an offence which had not been specifically described. If the Bench made an order, it would be in the absence of any proof that there was a real nuisance.

Mr. Albery said his contention would be that the house was in such a condition as to be injurious to health, a fact which Dr. Kelly could testify to.

After some further comments from the Chairman, Mr. Albery undertook to withdraw the summons and to lay a fresh information if the case was proceeded with."

INQUESTS.

Inquests were held in seven cases:—Female, 2 $\frac{3}{4}$ years, accidentally burnt; male, 43 years, accident to spine; female, 43 years, exhaustion brought on by insufficiency of food; male, 67 years, bronchial asthma; male, 66 years, accidental fall from a rick of hay; male, 81 years, accidental fall from a hay stack; male, 29 years, accidentally run over by a wagon.

There were two deaths returned as "not certified" in Midhurst Sub-district out of a total of 88 deaths; male, 87 years, old age; female, 55 years, apoplexy. There were no deaths returned as "not certified" in Fernhurst Sub-District out of a total of 38 deaths. There were two deaths returned as "not certified" in Harting Sub-District out of a total of 65 deaths:—Male, 8 months, teething, convulsions; male, 10 days, convulsions.

No cases occurred in which it was necessary to condemn meat or any other article of food.

A few cases of overcrowding were abated during the year.

For the statistical tables see pp. xli. to xlvi.



RURAL SANITARY DISTRICT OF WESTBOURNE.

POPULATION IN 1871	7,221
" " 1881	7,420
AREA IN ACRES	32,040
NUMBER OF HOUSES IN 1871	1,495
" " 1881	1,533

BIRTHS AND BIRTH-RATE.

During the year 1890 the births of 207 children were registered ; of these 102 were male, and 105 were female.

Estimating the population in the middle of the year at 7,600, the birth-rate was equal to 27·2 per 1,000 persons living.

The births and birth-rate in the district during the past ten years have been as follows :—

Year.	Births.	Birth-rate.	Year.	Births.	Birth-rate.
1881	212	28·5	1886	208	27·5
1882	213	28·6	1887	225	29·6
1883	215	28·7	1888	204	26·8
1884	222	29·6	1889	203	26·7
1885	212	28·2	1890	207	27·2

The mean number of births is 212, and the mean birth-rate is 28·1.

There has been a steady decline in the birth-rate since 1884, and this decline is general throughout the country, for the birth-rate of England and Wales during 1890 was lower than in any previous year since the commencement of registration in 1838, being as low as 29·7 per 1,000, and it was 2·9 below the mean rate in the preceding ten years.

On the average of ten years it would appear that the births are most numerous in the first and third quarters of the years :—

	1881-87.	1888.	1889.	1890.	Total.	Per cent.
1st Quarter....	391	61	45	64	561	26·4
2nd "	360	65	54	42	521	24·6
3rd "	382	50	57	54	543	25·6
4th "	374	28	47	47	496	23·4
Total	1,507	204	203	348	2,121	100·0

The following table shows the birth-rate in different localities during the last ten years:—

	1881-88 Mean.	1889.	1890.
Funtington Parish	22·8	26·2	17·5
Bosham „	34·2	34·1	38·8
Westbourne „	29·2	29·3	27·7
Rest of District	26·9	20·8	25·3
Total	28·4	26·7	27·2

GENERAL MORTALITY.

There were 97 deaths registered in this district during the year 1890, and of these fourteen took place in Westbourne Workhouse. These fourteen deaths have been distributed amongst the several parishes whence each inmate came, viz.:—West Dean, 2; North Marden, 1; Up Marden, 1; Stoughton, 1; Compton, 1; Funtington, 3; Westbourne, 5; in all, 14.

Estimating the population in the middle of the year at 7,600, the death-rate was equal to 12·7 per 1,000 persons living.

This rate is 2·8 per 1,000 lower than the mean annual death-rate in the decade 1871-80.

Grouping the previous twenty years into three periods, the general death-rate will be seen to have varied as follows:—

Period.....	1871-80.	1880-84.	1885-89.
Death-rate	15·5	14·6	14·5

In country districts throughout England and Wales the mean death-rate for the past five years has been 17·2 per 1,000 of population.

The variations in the death-rate during the past ten years have been as follows:—

Year.	Deaths.	Death-rate.	Year.	Deaths.	Death-rate.
1881 ...	91 ...	12·2	1886 ...	132 ...	17·4
1882 ...	118 ...	15·8	1887 ...	108 ...	14·2
1883 ...	120 ...	16·0	1888 ...	96 ...	12·6
1884 ...	97 ...	12·9	1889 ...	89 ...	11·7
1885 ...	125 ...	16·6	1890 ...	97 ...	12·7

Thus there have been during the above period 1,073 deaths and a mean mortality of 14·2 per 1,000. During the same period there were 2,121 births, so that the natural increase of population by excess of births over deaths was 1,048. The births, in fact, were nearly twice as numerous as the deaths.

The population in 1881 was 7,420 ; adding to this number the excess of births over deaths there should be a population of 8,468. I have only estimated the present population at 7,600, as no doubt there has been a considerable migration of young people into more populous districts. The census in 1891 will show whether this view is correct.

In each parish the deaths were as follows:—West Dean, 11 ; East Marden, 1 ; North Marden, 1 ; Up Marden, 7 ; Stoughton, 7 ; Compton, 3 ; Racton, 0 ; Funtington, 16 ; Bosham, 10 ; Chidham 5 ; West Thorney, 0 ; Westbourne, 36 ; in all, 97.

A comparative statement of the deaths in each quarter during the past ten years shows that the deaths are most numerous in the first and last quarters of the year:—

	1881-87.	1888.	1889.	1890.	Total.	Per cent.
1st Quarter.....	208	36	24	16	284	26·5
2nd „	210	28	21	10	269	25·1
3rd „	158	14	22	36	230	21·4
4th „	215	18	22	35	290	27·0
Total	791	96	89	97	1,073	100·0

INFANT MORTALITY.

The *infant mortality* is here given as measured by the number of deaths under one year of age to the total number of births in the year:—

	Births.	Deaths under one year.	Ratio to 1,000 births.	Ratio 1889.	Mean 1881-88.
Funtington Parish	20	—	—	33	68
Bosham Parish.....	50	1	20	45	102
Westbourne Parish	70	5	71	54	91
Rest of District	67	7	104	127	87
Total.....	207	13	63	69	89

The 13 infantile deaths included four from whooping-cough, one from tuberculosis, one from meningitis, two from bronchitis, two from debility, and one from natural causes ; two infants were born prematurely.

The rate of infant mortality in England and Wales in 1890 was 151 per 1,000, against 145, 136, and 144 in the three preceding years ; the excess of mortality was almost entirely in the fourth quarter of the year.

ZYMOTIC MORTALITY.

The deaths from *zymotic* disorders were 10 in number against 4, 18, 7, 11, 13, 9, 3, 7 and 11 in the nine preceding years.

The rate of mortality from these disorders was 1·3 per 1,000 persons living, against a rate of 0·5, 2·4, 0·9, 1·4, 1·7, 1·1, 0·4, 0·9, and 1·4 in the nine preceding years.

The ten deaths included five from whooping cough, three from diphtheria, one from diarrhoea, and one from rheumatic fever.

INFLUENZA

was very prevalent in the first quarter of the year. It began on January 2nd, and by the middle of the month it had attacked great numbers of people. The general death-rate was not affected, as there were only 30 deaths in the first quarter of the year against an average of 39 deaths in the corresponding quarter of the previous four years, 1886-89. Several of the elementary schools were closed either because the teachers were ill, or the children were too unwell to attend. Both sexes and all ages were attacked, but adult males suffered the most. Three females died from this cause, two in March and one in April, viz. :— Female, 7 years, on March 2nd, influenza and meningitis ; female, 72 years, on March 5th, influenza and acute bronchitis ; female, 23 years, on April 6th, congestion of lungs, following influenza. The population is very scattered in this rural district, so that the disorder lingered in outlying hamlets and cottages, and it did not disappear before the middle of April.

There was no evidence of any unusual complaint among domestic animals.

NOTIFICATION OF INFECTIOUS DISEASE.

This Act has not yet been adopted, but the question has been left open for future consideration.

COMMON LODGING HOUSES.

There is only one house of this description, in which a few persons are taken in as lodgers ; it is not registered, but it is very well kept.

COWSHEDS AND DAIRIES.

There are only five registered at present, and these are in a good condition as regards cleanliness, ventilation, and water supply. There are several small owners who are not yet on the register, and a regular inspection will in future be made, so as to render the register complete.

MARGARINE ACT.

Very little margarine is sold here by the grocers, and where it can be obtained the regulations of the Act have been complied with. There seems to be no demand for this substance on the part of the scattered agricultural population.

BAKEHOUSES.

The bakehouses are fifteen in number ; they have been often inspected, and they have been well kept. There is no bakehouse on a large scale, and the chief duty is to see that they are frequently cleansed and limewashed. In each case there is a good amount of light and air, and in no case is there any drain within the building.

SLAUGHTERHOUSES.

These are only two in number, and they are very well kept as regards cleanliness and removal of refuse. In many instances animals are only killed once or twice a week, so that there is no difficulty in keeping them clean and tidy. Each slaughterhouse is often limewashed, and the blood is generally removed at once for use in a garden.

PROCEEDINGS BEFORE THE MAGISTRATES.

No proceedings were taken before the Magistrates during the year.

INQUESTS.

Inquests were held in five cases :—Male, 34 years, rupture of a blood vessel ; male, 53 years, cardiac syncope ; male, 57 years, accidental injuries ; female, 14 months, accidentally injured by a gate falling upon her ; male, 16 years, accidentally run over.

There were two deaths returned as “not certified” out of a total of 97 deaths : Male, 8 months, natural causes ; female, 74 years, cancer.

There was no case in which it was necessary to condemn meat or any other article of food.

A few cases of overcrowding were abated during the year.

For the statistical tables see pp. xlix. to lvi.

BOROUGH OF WORTHING.

On September 3rd, 1890, amid much rejoicing, the Charter of Incorporation was received whereby Worthing became a Municipal Borough. The new Borough now consists of Worthing, West Worthing and the rural portion of Heene. Worthing never was a parish; it is a portion of the parish of Broadwater, which was cut off and formed many years ago into a Local Board District. West Worthing, in like manner, was an area cut out of the parish of Heene, and formed into an Improvement Commissioners' District. The small remaining portion of Heene was in the East Preston Rural Sanitary District. All these areas are now combined into one, and as their interests are similar, there will now be uniformity in their government. Many persons desired that portions of Broadwater and West Tarring, which were of an urban character, should also be included, and the owners of property in these areas were willing to come in; but the Privy Council refused their sanction, chiefly on the ground of differential rating.

The whole Borough is now divided into five wards: No. 1, Eastern; No. 2, Central; No. 3, North-eastern; No. 4, North-western, and No. 5, West Ward. The West Ward area corresponds to West Worthing and rural Heene, *i.e.*, the whole of Heene parish. The other four wards correspond to the area of the Worthing Local Board District.

Each Ward has three members, except the Central Ward, which returns six members. On November 9th, 18 members were returned to the Council, from whom six Aldermen were chosen, and the vacancies thus made were filled up by a subsequent election. Alderman Cortis was selected as the first Mayor of the new Borough.

The coming census will show the population of each ward and of the whole town. To preserve uniformity I have framed my tables for this year on the old plan, but after this year, West Worthing will no longer appear as a separate district. There is much work for the Council to carry out, and many improvements are required in the town.

URBAN SANITARY DISTRICT OF WORTHING.

POPULATION IN 1871	7,401
" " 1881	10,976
AREA IN ACRES	979
NUMBER OF HOUSES IN 1871	1,331
" " 1881	1,959

BIRTHS AND BIRTH-RATE.

During the year 1890, the births of 338 children were registered ; of these 186 were male, and 152 were female.

The births and birth-rate in the district during the past ten years have been as follows :—

Year.	Births.	Birth-rate.	Year.	Births.	Birth-rate.
1881 ...	324 ...	29·2	1886 ...	366 ...	27·7
1882 ...	355 ...	30·7	1887 ...	327 ...	24·5
1883 ...	313 ...	25·7	1888 ...	322 ...	23·3
1884 ...	352 ...	27·8	1889 ...	362 ...	25·6
1885 ...	327 ...	25·0	1890 ...	338 ...	23·1

The mean number of births is 339, and the mean birth-rate is 26·3.

There has been a steady decline in the birth-rate since 1882, and this decline is general throughout the country, for the birth-rate of England and Wales during 1890 was lower than in any previous year since the commencement of registration in 1838, being as low as 29·7 per 1,000, and it was 2·9 below the mean rate in the ten preceding years.

A comparison of the births in each quarter during the past ten years shows that they are lowest in the third quarter and highest in the last quarter of the year :—

	1881-87.	1888.	1889.	1890.	Total.	Per cent.
1st Quarter.....	615	88	99	86	888	26·2
2nd " 	559	78	88	83	808	23·9
3rd " 	557	68	96	75	796	23·5
4th " 	633	88	79	94	894	26·4
Total	2,364	322	362	338	3,386	100·0

GENERAL MORTALITY.

There were 213 deaths registered in this district during the year 1890, but to this number must be added the deaths of five persons in the East Preston Workhouse, which is outside the area; of these 218 deaths, 119 were male and 99 were female.

The above number includes the deaths of six inmates in the Worthing Infirmary; it also includes the deaths of 37 visitors.

Estimating the population in the middle of the year at 14,600, the death-rate was equal to 14·9 per 1,000 persons living; excluding visitors, the rate was equal to 12·3 per 1,000.

Grouping the previous fifteen years into periods of five years each, the general death-rate will be seen to have varied as follows:—

Period.....	1875-79.	1880-84.	1885-89
Death-rate ...	17·5	14·9	15·3

The mortality may, therefore, be considered to be low, as in small towns and country districts throughout England and Wales the mean death-rate for the past five years has been 17·2 per 1,000 of population.

The variations in the death-rate during the past ten years have been as follows:—

Year.	Deaths.		Death-rate.	
	Including Visitors.	Excluding Visitors.	Including Visitors.	Excluding Visitors.
1881.....	170	150	15·3	13·5
1882.....	160	142	13·8	12·3
1883.....	164	151	13·4	12·4
1884.....	205	177	16·2	14·0
1885.....	178	161	13·6	12·3
1886.....	228	210	17·2	15·9
1887.....	231	206	17·3	15·4
1888.....	220	187	15·9	13·5
1889.....	179	145	12·6	10·2
1890.....	218	181	14·9	12·3

Thus there have been during the above period 1,710 deaths among the residents in this district, and a mean mortality of 13·2.

During the same period there were 3,386 births, so that the natural increase of population by excess of births over deaths was 1,676, and the births were nearly twice as numerous as the deaths.

On the average of the past ten years the deaths are most numerous in the first quarter of the year :—

	1881-87.	1888.	1889.	1890.	Total.	Per cent.
1st Quarter	391	69	44	57	561	28·7
2nd „	331	59	36	52	478	24·5
3rd „	300	47	41	48	436	22·3
4th „	314	45	58	61	478	24·5
Total ...	1336	220	179	218	1,953	100·0

The following table shows the changes that have taken place in the death-rate from all causes and from various causes during a long period of time. With a population which has doubled itself in the last twenty years the general death-rate has not altered much, but the zymotic and phthisis death-rates are very much lower. In this table care is taken to distinguish in each year the rates that include and exclude the deaths of visitors :—

Per 100,000 Persons living.	1843-52.	1853-56.	1857-63.	1880-89.	
	BEFORE	DURING	AFTER	Includ-	Exclud-
	Execution of	Sanitary	Works.	ing	ing
	Visitors.	Visitors.	Visitors.	Visitors.	Visitors.
General Death-rate	1550	1630	1530	1513	1342
Zymotic „	292	280	328	155	146
Phthisis „	305	282	195	155	125
Lung Disease Death-rate	147	185	185	204	187

ZYMOTIC MORTALITY.

The deaths from zymotic disorders were 16 in number, against 29, 10, 18, 15, 16, 15, 55, 12, 18, and 5 in the ten preceding years.

These sixteen deaths included three from measles, three from

scarlatina, one from whooping-cough, one from diphtheria, two from enteric fever, three from diarrhœa, two from erysipelas, and 1 from rheumatic fever.

The rate of mortality from these diseases was 1·1 per 1,000, against a rate of 2·7, 0·9, 1·5, 1·2, 1·2, 1·1, 4·1, 0·9, 1·3 and 0·3 in the ten preceding years.

During the last ten years there have been altogether 180 deaths in this class of disorders, or a mean annual rate of 1·3 per 1,000.

SCARLATINA.

Scarlatina appeared in the spring in a mild form, and it re-appeared in the autumn in various parts of the town. The first case was on February 21st, and in the same week it broke out in two other houses; in March the disease broke out in five other houses, and in April in seven more houses. In these fifteen houses there were twenty-one cases, of whom six were adults, and fifteen were children; three other persons were poorly, but the attack was indefinite. Among these twenty-one cases, there was only one death. In the autumn, after the Notification Act had been adopted, thirteen more cases were reported, and among these, there was one death.

DIPHThERIA.

Diphtheria was reported in five cases:—On September 16th, a girl, 10 years old, was attacked in a house containing the parents and three other young children, aged respectively 13, 8, and 5 years. The child recovered and the rest escaped.

On October 25th, a boy came from Brighton on a visit to some friends here; it was a very wet day, and the next morning he was attacked with diphtheria, and he died on November 10th. There were four adults in the house, but there was no spread of the disease.

In the third house there dwelt the parents, four young children, and a servant. A daughter, six years old, was attacked on October 24th; another daughter, three years old, fell ill on November 5th; and the servant, 18 years old, failed on November 2nd. The two boys, aged five years and one-and-a-half years respectively, and the parents, did not suffer. All the cases recovered, and there was no spread of the disorder. There had been no communication at all between the inmates of these three houses. Each house was clean, dry, and free from sanitary defects. Each house had the town water laid on and the closets and soil pipes were properly ventilated; all the waste pipes of these houses delivered in the open air. In no case was there any history of previous infection,

ENTERIC FEVER.

Enteric Fever was reported in ten cases in ten separate houses. Three of the cases occurred amongst men working in stables, but in no case could any distinct cause be made out. Two of the houses were very small and dirty, but the rest were in a good sanitary condition. Although many inmates were exposed to infection, the disease was confined to the initial cases, and there was no spread of the disorder. One death was recorded in December, but this was a somewhat doubtful case.

In all the above houses where infectious disease occurred, the usual precautions were taken, and the rooms were disinfected and cleansed.

INFLUENZA.

This disease prevailed in an epidemic form in the first quarter of the year. The first case occurred on Christmas Eve, 1889, and in the following week a few fresh cases appeared among those who had come down on a visit to their friends. There was pretty clear evidence that the initial cases were imported from London, or some other large town. By January 2nd, there were a great many attacked, and the numbers increased very rapidly up to January 8th and 9th, when it was prevalent all over the town. From information kindly afforded me by medical men and others, I estimate that one-fourth to one-fifth of the population was attacked. The majority of the cases were mild in character, but some adults suffered very severely, and they felt weak and ill for weeks after the epidemic had subsided. By the middle of February the disorder had reached its height, and then it gradually subsided, so that by the end of March the outbreak was nearly over. It spread from the town to all the neighbouring villages, where it appeared somewhat later than in populous places. It attacked all ages and all classes, but male adults suffered more severely than others. Yet in no case did it prove fatal, nor did it seem to affect the death-rate indirectly, as the deaths for the quarter were 57 against an average of 62 in the corresponding quarter of the previous four years, 1886-89.

There was no disease or unusual complaint among domestic animals; amongst horses there was rather less illness than usual, according to the evidence of livery stable keepers and cab drivers.

Policemen, postmen, railway servants, and men employed in out-door work were attacked more severely than others, and the increase in the sickness-rate among members of clubs was very great.

INFANT MORTALITY.

The *infant mortality* is here given as measured by the number of deaths under one year of age to the total number of births in the year :—

Year.	Births.	Deaths under one year.	Ratio to 1,000 Births.
1881	324	28	86
1882	355	34	95
1883	313	33	105
1884	352	43	122
1885	327	29	88
1886	366	54	147
1887	327	33	100
1888	322	30	93
1889	362	28	77
1890	338	46	136
Mean	339	36	105

The 46 infantile deaths in 1890 included one from measles, one from diarrhœa, two from tabes mesenterica, one from hydrocephalus, one from tuberculosis, one from meningitis, 12 from convulsions, 10 from lung disease, and seven from debility; eight infants were born prematurely.

The rate of infant mortality in England and Wales in 1890 was 151 per 1,000, against 145, 136, and 144 in the three preceding years; the excess of mortality was almost entirely in the fourth quarter of the year.

FRUIT GROWING AT WORTHING.

Within the last fifteen years an important industry has developed at Worthing in the cultivation of grapes, tomatoes, cucumbers, strawberries, and early garden produce. A similar industry is carried on at Broadwater, West Tarring, and Lancing, and vast quantities of fruit are sent away yearly. It has been estimated by Mr. J. Cheal that an average of thirty tons of fruit is sent from Worthing by rail in each week of the three summer months, and an average of five tons for the other nine months.

From Lancing it is estimated that an average of three tons a week is sent in the three summer months, and an average of one ton a week for the other nine months. This makes 585 tons of fruit from Worthing and 78 tons from Lancing. In addition, it is estimated that over twenty-five per cent. of the above quantities is sent to Brighton and other places by road from Worthing, as well as a considerable quantity from Lancing. About 350 tons of tomatoes are produced in the district yearly at an estimated value of £20,000, and the other fruit crop is valued at £14,000, making a total value of £34,000. This industry is rapidly increasing, and acres of land are now being covered with glass houses.

SEAWEED.

Each summer a great nuisance is caused by a vast quantity of seaweed being washed ashore on to the beach in front of the town. For the first few days no evil effects are noticed, but when the weed has been exposed in vast heaps to the hot rays of the sun it decomposes and gives off an odour which is to most people disagreeable, if not injurious. A good deal is taken away by farmers for agricultural purposes, but the demand at that time of the year is not nearly enough to remove all the weed. In 1888, 357 cart loads were removed to the Board's yard between July 11th and August 1st; on August 7th, 31, and on August 15th, 39 more loads were removed there. Another storm came and the nuisance was repeated, so that between August 31st and September 7th, 397 more loads were taken to the yard. Thus in the course of two months 824 loads were placed in a vast heap where the weed decomposed and caused a great nuisance.

In 1889, a still larger quantity had to be dealt with. Between July 13th and September 5th, 4,059 cartloads of seaweed were removed from the beach. Some of this was placed on some land at Heene, where it was a great nuisance, and some was placed in barges, and towed out to sea, when it was cast adrift. It is clear that the farmers around can only take away a small quantity, and it is also clear that it is useless to heap it up in large quantities near the town, as the air for a mile around is often very offensive. The natural place for the weed is the land, where it might be applied with benefit, but since the land is now covered with houses this cannot be done. Nature intended Worthing for a garden, and man has made of it a town. Two courses are open to deal with the weed. It might be raked up in small heaps on the beach where it could be quickly dried by the sun, and where the watery portion might drain away before decomposition sets in. The dried weed, much diminished in weight and bulk, could then be slowly burnt and the ashes, or kelp, so formed would be valuable as a manure, or they might be used in the manufacture of iodine. The objections to this plan are that the weather is generally wet and stormy when the weed is washed ashore, and that therefore it would not dry quickly enough; that the burning of the heaps in front of the town would be objectionable, while the previous removal of the weed to some convenient spot would involve great labour and expense.

The second plan is to remove it in barges as soon as the weed comes in, and then it could be towed out to sea by a steam tug, and thrown overboard. The success of this plan depends upon regular organization and preparation beforehand, so that the weed can be removed directly it comes ashore.

If a fortnight be allowed to pass before anything is done, the weed decomposes, and when it is stirred up for removal the nuisance is to many persons intolerable. This plan was tried in 1889

but it was tried too late, and, stormy weather coming on again, the work was carried on imperfectly, and one or two barges foundered.

In 1890 the nuisance was less than in the two previous years, and some good was done by employing men to throw back the weed into the sea as the tide flowed out. Mr. Butcher, who has paid much attention to the subject, strongly recommends the system of barge removal. In his opinion, the area on which the weeds grow extends from the Navarino Corner at East Worthing to the Kingmere Rocks at Bognor, a distance of about eighteen miles in length and about two miles in width; the inner edge is about a mile, and the outer edge is about three miles from the shore, so that there is an area of about 36 square miles of rough ground on which the seaweed flourishes. This question is now undergoing careful consideration by the Town Council.

WATER SUPPLY.

The water supply is in the same condition as described in previous reports. During the year the adjoining village of Broadwater was supplied with water from the public wells.

DRAINAGE AND SEWAGE.

No works of any public importance were carried out. In various parts of the town large drains were laid down to carry off storm or surface water directly to the sea, so as to diminish the flow of sewage.

ROAD WATERING.

Nothing has yet been done with regard to watering the streets with sea water, but the matter is at present under consideration.

NOTIFICATION OF INFECTIOUS DISEASE.

This Act was adopted by the Authority, and it came into operation on August 3rd, 1890. In these five months the following cases were reported and visited:—

	Aug.	Sept.	Oct.	Nov.	Dec.	Total.	Deaths.
Scarlatina	0	7	3	0	3	13	1
Diphtheria	0	1	2	2	0	5	1
Enteric Fever ...	2	3	4	0	1	10	1
Erysipelas	1	1	0	0	5	7	1
Total	3	12	9	2	9	35	4

COWSHEDS AND DAIRIES.

There are no cowsheds in the town. The dairies are numerous and they are very well kept. The rooms are light, well ventilated, clean, cool, and free from drains. Some of the smaller dairies afford excellent examples of cleanliness.

MARGARINE ACT.

Where this article is sold the provisions of the Act have been carried out.

BAKEHOUSES.

These have been often inspected, and they have been well kept. There is no bakehouse on a large scale, and the chief duty is to see that they are frequently cleansed and limewashed. In each case there is a good amount of light and air, and in no case is there any drain within the building.

SLAUGHTERHOUSES.

These have been well kept, and they are frequently inspected. In one case it seemed probable that blood passed into the main drain, but this has since been remedied. The meat in all cases has been of very good quality.

Various improvements of a minor nature were carried out during the year, such as the limewashing of courts and dirty houses, the flushing of drains, the disconnection of the water supply from the drains, the ventilation of house drains, &c., but there were no special matters of any public interest.

Nothing was done during the year with regard to pulling down any dilapidated houses. There are a few houses which might be demolished with advantage, but there has been no illness in them to justify their being pulled down on the score of health. The question of improving the poorer quarters of the town must now be dealt with by the new Council.

INQUESTS.

Inquests were held in six cases:—Male, newly born, natural causes, asphyxia; male, 3 years, inflammation of the brain; male, 79 years, syncope; male, 61 years, accidentally kicked by a horse; male, 14 years, accidentally drowned in the sea; female, 69 years, accidental fall.

There were two deaths returned as “not certified” out of a total of 218 deaths:—Female, 52 years, sudden failure of the heart's action; male, 68 years, syncope.

RAINFALL.

The amount of rainfall during the year was taken daily by W. J. Harris, Esq., F.R. Met. Soc., who has kindly allowed me to use his tables :—

Month.	Total depth in inches.	No. of rainy days.	Rainfall in 1889 in inches.
January	2'56	24	0'93
February	1'23	5	2'27
March	1'28	11	1'65
April	2'54	13	2'33
May	1'41	9	1'31
June	2'25	15	1'30
July	3'17	11	2'74
August	2'69	13	2'58
September	1'29	9	0'86
October	1'40	12	5'56
November	2'39	20	0'93
December	0'53	7	1'46
Total	22'74	149	23'92
Latitude ... ..	...	50°, 48', 40", N.	
Longitude ... ..	...	0°, 23', 13", W.	

The rain guage is placed 1 ft. above the ground, and 33'90 ft. above sea level ; diameter of funnel, 8 in.

For the statistical tables see pp. lvii. to lxiv.



URBAN SANITARY DISTRICT OF LITTLEHAMPTON.

POPULATION IN 1871	3,272
" " 1881	3,926
AREA IN ACRES	925
NUMBER OF HOUSES IN 1871	625
" " 1881	743

BIRTHS AND BIRTH-RATE.

During the year 1890, the births of 89 children were registered ; of these 47 were male, and 42 were female.

Estimating the population in the middle of the year at 4,300, the birth-rate was equal to 20·7 per 1,000 persons living.

The births and birth-rate in the district during the past ten years have been as follows :—

Year.	Births.	Birth-rate.	Year.	Births.	Birth-rate.
1881 ...	105 ...	26·8	1886 ...	89 ...	21·4
1882 ...	94 ...	23·6	1887 ...	116 ...	27·7
1883 ...	111 ...	27·7	1888 ...	99 ...	23·5
1884 ...	98 ...	24·5	1889 ...	104 ...	24·4
1885 ...	81 ...	19·7	1890 ...	89 ...	20·7

The mean number of births is 99, and the mean birth-rate is 24·0.

There has been a steady decline in the birth-rate since 1879, when it was 31·2, and this decline is general throughout the country, for the birth-rate of England and Wales during 1890 was lower than in any previous year since the commencement of registration in 1838, being as low as 29·7 per 1,000, and it was 2·9 below the mean rate in the preceding ten years.

A comparison of the births in each quarter during the past ten years shows that the births are most numerous in the first quarter and least numerous in the last quarter of the year :—

	1881-87.	1888.	1889.	1890.	Total.	Per cent.
1st Quarter.....	189	27	35	20	271	27·5
2nd " 	160	30	20	22	232	23·5
3rd " 	183	25	22	22	252	25·5
4th " 	162	17	27	25	231	23·5
Total	694	99	104	89	986	100·0

GENERAL MORTALITY.

There were 37 deaths registered in this district during the year 1890, but to this number must be added the death of one person in the East Preston Workhouse, which is outside the district. These 38 deaths include the death of one visitor.

Estimating the population in the middle of the year at 4,300, the death-rate was equal to 8·8 per 1,000 persons living. Excluding visitors, the rate was equal to 8·6 per 1,000 of population.

Grouping the previous fifteen years into periods of five years each, the general death-rate will be seen to have varied as follows:—

Period.....	1875-79.	1880-84.	1885-89.
Death-rate	14·6	14·2	13·3

The mortality may, therefore, be considered to be low, as in small towns and country districts throughout England and Wales the mean death-rate for the past five years has been 17·2 per 1,000 of population.

The variations in the death-rate during the past ten years have been as follows:—

Year.	Deaths.		Death-rate.	
	Including Visitors.	Excluding Visitors.	Including Visitors.	Excluding Visitors.
1881.....	58	55	14·7	14·0
1882.....	74	66	18·5	16·5
1883.....	55	54	13·7	13·5
1884.....	44	41	11·0	10·2
1885.....	47	46	11·4	11·2
1886.....	50	48	12·0	11·5
1887.....	59	51	14·1	12·2
1888.....	58	55	13·8	13·1
1889.....	65	59	15·3	13·9
1890.....	38	37	8·8	8·6

Thus there have been during the above period 512 deaths among the residents in this district, and a mean mortality among them of 12·5 per 1,000. During the same period there were 986 births, so that the natural increase of population by excess of births over deaths was 475.

The population was 3,926 in 1881; adding to this number the excess of births over deaths there should now be a population of 4,401. I have estimated the number at rather less, but the correct numbers will be known at the ensuing census in 1891.

On the average of the past ten years the deaths are most numerous in the first and third quarters of the year :—

	1881-87.	1888.	1889.	1890.	Total.	Per cent.
1st Quarter.....	115	17	14	11	157	28·6
2nd „	82	9	15	7	113	20·6
3rd „	107	14	26	9	156	28·6
4th „	83	18	10	11	122	22·2
Total	387	58	65	38	548	100·0

INFANT MORTALITY.

The *infant mortality* is here given as measured by the number of deaths under one year of age to the total number of births in the year :—

Year.	Births.	Deaths under one year.	Ratio to 1,000 Births.
1881	105	11	104
1882	94	16	170
1883	111	11	99
1884	98	3	30
1885	81	4	49
1886	89	10	112
1887	116	8	69
1888	99	10	101
1889	104	6	58
1890	89	4	45
Mean.....	99	8·3	84

The four *infantile* deaths included one from convulsions and three from bronchitis.

The rate of infant mortality in England and Wales in 1890 was 151 per 1,000, against 145, 136, and 144 in the three preceding years; the excess of mortality was almost entirely in the fourth quarter of the year.

ZYMOTIC MORTALITY.

There were no deaths from *zymotic* disorders, against 3, 1, 6, 2, 3, 7, 11, 3, 5, and 4 in the ten preceding years.

The rate of mortality from these diseases was 0·0 per 1,000, against a rate of 0·7, 0·2, 1·5, 0·5, 0·7, 1·7, 2·6, 0·7, 1·1, and 0·9 in the ten preceding years.

There have been altogether in the past ten years 42 deaths in this class of disorders, or a mean annual rate of 1·0 per 1,000 persons living.

INFLUENZA

Was very prevalent in the early part of the year. About one-fifth of the population was attacked, but the general mortality was not affected, as there were only eleven deaths in the quarter, against an average of fifteen deaths in the corresponding quarter of the previous four years, 1886-89. The death of one visitor, male, 44 years, was registered as due to influenza and bronchitis. All classes and ages were attacked, but the severity of the cases was less marked here than in Arundel. The first cases appeared to be imported during Christmas week, 1889, and by the middle of January great numbers of persons were attacked. Having spread all over the town, the epidemic died out by the end of March. There was no unusual complaint among domestic animals. The town is exposed to gales from the S.W., and high winds blew from this direction on several occasions during the epidemic; at other times, the wind was chiefly in the N. or N.E. The direction of the wind seemed to have no influence on the epidemic.

NOTIFICATION OF INFECTIOUS DISEASE.

The Act of 1889 came into operation on March 25th, 1890, and under it ten cases were notified during the nine months.

Month.	Scarlet Fever.	Diphtheria.	Enteric Fever.	Deaths.
May.....	0 ...	1 ...	0	0
July.....	1 ...	0 ...	0	0
August	0 ...	1 ...	0	0
September	0 ...	0 ...	1	0
October	0 ...	2 ...	1	0
November	1 ...	0 ...	2	0
Total	2 ...	4 ...	4	0

Each case recovered without there being any spread of the disease to any other house.

The two cases of enteric fever in November were imported from Arundel, and they were due to drinking polluted well water.

WATER SUPPLY.

The Local Board applied to the Local Government Board for sanction to borrow £600 for works of water supply. On April 9th, 1890, J. T. Harrison, Esq., held an inquiry into the matter. The object of the inquiry was to supplement the present supply by giving increased storage capacity, so as to meet the future re-

quirements of the town. The plans were submitted by Mr. Howard, the Town Surveyor, who gave the following description of the work :—

“At the present time there were two wells sunk, one at 60 feet and the other at 80 feet, and the boring pipes were 280 feet and 350 feet respectively. The present headings were N.E. and N.W. To obtain a constant supply of water it was necessary to pump 15 hours a day in the summer, and 10 hours in the winter. The average output was about 45,000 gallons per hour. During the hours there was no pumping the water rose to 25 feet below the surface. The surface was 21 feet above the Ordnance datum, the spring-tide level was 10·5 above Ordnance datum, and the low tide 5·5. The Waterworks were about half-a-mile from the sea. The proposed heading was to be six feet by three feet, 50 yards run, with circular top. The Board, however, proposed, if necessary, to make it 100 yards; the total cost of the 50 yards would be £290. There were at the works two sets of pumps, high level and low level sets. The pump in No. 1 well was 24 feet below the surface, and the depth of the well was 60 feet. The pump in No. 2 well was 48 feet below the surface, and the well was 80 feet deep. He had made the following calculations of the pumping :—At 9.30 a.m. on the 7th of September, 1889, before the pumps started, the water in both wells stood at a level of 25ft. from the ground surface. The low level pump only being at work, the foot valve on the bore inlet to well in the engine-house was closed down. At 3.30 p.m. the former well was emptied, and the outer well water line lowered to 70ft. from surface and 4ft. above the crown of headings, when the limit of the suction power of the low level pump was reached, leaving the 76 yards of 6ft. by 3ft. galleries still full, and unable to be emptied with the low level pump at its present level. For the three months ending the 30th June, 1889, on the average, the pumps lowered the water in the wells to line of high level suction about 41 feet from surface five times a day, that was starting from about 6 a.m. to 10 p.m., allowing stoppages between the spells of pumping for sufficient head of water to rise. On Sundays, the pumping averages three times during the day. The estimated daily consumption (excluding sewer flushing) could be put at 65,000 gallons. During the past summer season, since 1st July, 1889, the maximum daily consumption was about 75,000 gallons, the yield of the works at this period being about 4,500 gallons per hour. On the 18th November, the output was gauged from the standing tank supply at 10.15 a.m., the same registering 11·4 head of water, and on the following day at the same hour 4·6, showing a consumption during the 24 hours, of 44,884 gallons. This can be taken as almost the normal rate of consumption for the winter and spring months. The average daily output (taken from guagings) on 16th February, 1885,

was 15,609 gallons. With the increasing demand for the Board's water supply, as shown by about 250 new supplies having been laid on during the last five years, and no increase having been made as to yield at the works, or additional storage, it would be found necessary during the coming summer to pump at night as well as by day. Allowing, then, that the full total quantity able to be raised is 108,000 gallons, will leave a bare margin of 30,000 gallons, or, in all, about one-and-a-half days' supply."

The estimated cost of the proposed heading was £300, but the Board proposed to ask for £600, in case a second heading should be required.

Sanction to borrow this sum was given, and the work was commenced. It was nearly finished at the close of the year, at a cost of about £400, an additional expense being required for steining and doming. The water flows in from the north-west at a rate of a little over 61 gallons per minute, or, about 3,670 gallons per hour. This yield, taken with the flow from previously existing sources, represents an output of 8,750 gallons per hour, or about 210,000 gallons per day. The new heading increases the storage capacity by about 23,000 gallons, and the total reservoir capacity, including the tank, is now a little over 100,000 gallons.

A sample of the water from the new heading was sent on June 23rd to Mr. Otto Hehner, the Public Analyst for West Sussex.

The following is the Analyst's report:—

"100,000 parts of the sample were found to contain:—

Chlorine	...	...	...	...	5.45
Sulphuric acid	...	...	...	...	2.32
Nitric acid	...	...	...	...	1.81
Free ammonia	...	...	...	...	.0085
Albumenoid ammonia	...	...	...	...	.0052
Total solids	...	...	...	...	47.44
Loss on ignition	...	...	...	...	1.44

According to the above analysis, the water has the general characters of a chalky water; it is rich in lime, and is consequently very hard. It does not show any indications of sewage or animal pollution, and is, therefore, in my opinion, quite fit for drinking and other domestic use.

It contains a somewhat large quantity of chlorides, the occurrence of which is frequently observed in wells near the sea, but no objection can be raised on this account to the use of the water."

Now that there is an ample supply of water for the town, it is most desirable that the houses in Wick, which is a suburb of Littlehampton, should have a constant and wholesome supply. A scheme could be carried out at no great expense, and it is a matter which requires urgent consideration,

COWSHEDS AND DAIRIES.

There are eight cowsheds in the district in which there are about 92 cows; they are in most cases very well kept, care being taken that there is an ample supply of good water, plenty of light and ventilation, frequent removal of refuse, and cleansing of the walls and floors.

MARGARINE ACT.

There does not seem to be much demand for this article, but where it is kept the regulations of the Act have been complied with.

BAKEHOUSES.

There are seven bakehouses in the district, which have been frequently inspected and kept in a cleanly state. None of them have any drains inside the building, and the internal surfaces are often limewashed and cleansed.

COMMON LODGING HOUSES.

The two registered common lodging-houses have been often inspected, and they have been well kept during the year.

SLAUGHTERHOUSES.

These are three in number, and they have been kept in a satisfactory condition.

PROCEEDINGS BEFORE THE MAGISTRATES.

No proceedings were taken before the Magistrates during the year.

INQUESTS.

There were no inquests held during the year.

There were no deaths returned as "not certified" during the year out of a total of 38 deaths.

There was no case of overcrowding dealt with during the year.

For the statistical tables see pp. lxxiii. to lxxx.

URBAN SANITARY DISTRICT OF WEST WORTHING.

POPULATION IN 1871	276
" " 1881	689
AREA IN ACRES	350
NUMBER OF HOUSES IN 1871	40
" " 1881	89

West Worthing is now included in the Borough of Worthing, of which it forms the West Ward, in conjunction with the rural portion of Heene. The population on this area has rapidly increased in recent years, having more than doubled itself since the last census. In future reports this will no longer appear as a separate district. Hitherto, the water supply and the main system of sewers have been quite distinct from those of Worthing, and one of the first duties of the new Council will be to deal with the question of sewage disposal, as several complaints have arisen from the discharge of the sewage into the sea at the west end of the town.

Nearly all the houses on this area are new, but in the rural portion there are still a few old ones which are gradually being pulled down. One very dilapidated group of old cottages, known as Clump Square, was closed in November, 1890, and the dwellings are now in a ruinous condition.

No structural works were carried out during the year, as matters were left until the Incorporation was carried out. One effect of the union of these two towns will be to slightly lower the general death-rate of the Borough. The Infectious Diseases (Notification) Act, 1889, and the Infectious Diseases (Prevention) Act, 1890, will be adopted in this district early in 1891.

Influenza prevailed in the first quarter of the year, but there was no death from this cause, and during the rest of the year the district was in a very healthy state and free from infectious disease.

BIRTHS AND BIRTH-RATE.

During the year 1890 the births of 26 children were registered ; of these 13 were male, and 13 were female.

Estimating the population in the middle of the year at 1,600, the birth-rate was equal to 16·2 per 1,000 persons living.

The births and birth-rate in the district during the past ten years have been as follows :—

Year.	Births.	Birth-rate.	Year.	Births.	Birth-rate.
1881	12	17·1	1886	11	9·1
1882	12	15·8	1887	18	13·8
1883	10	11·7	1888	22	14·6
1884	9	9·0	1889	26	16·2
1885	7	6·3	1890	26	16·2

The mean number of births is 15, and the mean birth-rate is 13·0.

The number of inhabitants is small, and the exceptional distribution of the population as to age and sex accounts for the low birth-rates.

GENERAL MORTALITY.

There were 16 deaths registered in this district during the year 1890, and of these 9 were male, and 7 were female.

Estimating the population in the middle of the year at 1,600, the death-rate was equal to 10·0 per 1,000 persons living.

Grouping the previous 15 years into periods of five years each, the general death-rate will be seen to have varied as follows :—

Period.....	1875-79.	1880-84.	1885-89.
Death-rate	8·6	10·2	9·7

The deaths and death-rate during the past ten years have varied as follows :—

Year.	Deaths.	Death-rate.	Year.	Deaths.	Death-rate.
1881	5	7·1	1886	15	12·5
1882	10	13·1	1887	12	9·2
1883	12	14·1	1888	15	10·0
1884	9	9·0	1889	15	9·3
1885	8	7·3	1890	16	10·0

Thus there have been during the above period 117 deaths, and a mean mortality of 10·2 per 1,000. During the same period there were 153 births, so that the natural increase of population by excess of births over deaths was only 36. The actual increase has been very much larger, and the numbers have doubled since the last census.

INFANT MORTALITY.

There were three deaths of infants under one year of age, and as there were 26 births, the ratio of infant mortality to 1,000 births was 115.

These three *infantile* deaths included one from accidental suffocation, and one from debility; one newly-born infant was found dead.

The rate of infant mortality in England and Wales in 1890 was 151 per 1,000, against 145, 136, and 144 in the three preceding years; the excess of mortality was almost entirely in the fourth quarter of the year.

ZYMOTIC MORTALITY.

There were no deaths from any *zymotic* disease. During the past ten years there have been only eleven deaths in this group of disorders, viz. :—Measles, 3; whooping-cough, 1; enteric fever, 2; diarrhoea, 4; and rheumatic fever, 1. There have been no deaths from scarlatina, diphtheria, or small pox.

INQUESTS.

Inquests were held in two cases:—Male, newly born, bleeding from an untied umbilical cord; male, 1 month, accidentally suffocated.

There were no deaths returned as “not certified” during the year out of a total of 16 deaths.

For the statistical tables see pp. lxxv. to lxxii.



URBAN SANITARY DISTRICT OF ARUNDEL.

POPULATION IN 1871	2,956
" " 1881	2,748
AREA IN ACRES	1,969
NUMBER OF HOUSES IN 1871	546
" " 1881	522

BIRTHS AND BIRTH-RATE.

During the year 1890, the births of 79 children were registered ; of these 46 were male, and 33 were female.

Estimating the population in the middle of the year at 2,750, the birth-rate was equal to 28·7 per 1,000 persons living.

The births and birth-rate in the district during the past nine years have been as follows :—

Year.	Births.	Birth-rate.	Year.	Births.	Birth-rate.
1882 ...	82 ...	30·0	1887 ...	64 ...	23·2
1883 ...	71 ...	25·8	1888 ...	76 ...	27·6
1884 ...	70 ...	25·4	1889 ...	62 ...	22·5
1885 ...	69 ...	25·1	1890 ...	79 ...	28·7
1886 ...	66 ...	23·1			

The mean number of births is 71, and the mean birth-rate is 25·7.

There has been a steady decline in the birth-rate since 1882, and this decline is general throughout the country, for the birth-rate of England and Wales during 1890 was lower than in any previous year since the commencement of registration in 1838, being as low as 29·7 per 1,000, and it was 2·9 below the mean rate in the preceding ten years.

The births appear to be most numerous in the first quarter of the year:—

	1883-88.	1889.	1890.	Total.	Per cent.
1st Quarter.....	123	17	27	167	30'0
2nd „	105	13	14	132	23'7
3rd „	92	16	21	129	23'2
4th „	96	16	17	129	23'1
Total	416	62	79	557	100'0

GENERAL MORTALITY.

There were 69 deaths registered in this district during the year 1890, but to this number must be added the death of one person in the East Preston Workhouse, which is outside the district, so that the total number of deaths amount to 70; of these 39 were male and 31 were female.

Estimating the population in the middle of the year at 2,750, the death-rate was equal to 25'4 per 1,000 persons living.

In country places throughout England and Wales the mean rate for the past five years has been 17'2 per 1,000 of population.

The variations in the death-rate during the past nine years have been as follows:—

Year.	Deaths.	Death-rate.	Year.	Deaths.	Death-rate.
1882 ...	50 ...	18'1	1887 ...	77 ...	28'0
1883 ...	45 ...	16'3	1888 ...	56 ...	20'3
1884 ...	40 ...	14'5	1889 ...	47 ...	17'1
1885 ...	37 ...	13'4	1890 ...	70 ...	25'4
1886 ...	42 ...	15'2			

Thus there have been during the above period 464 deaths and a mean mortality of 18'7 per 1,000. During the same period there were 639 births, so that the natural increase of population by excess of births over deaths, was 175. The population was 2,748 in 1881; adding to this number the excess of births over deaths, there should now be a population of 2,923. I have estimated the number for the past year at 2,750, as there seems to have been little or no increase since the last census.

A comparative statement of the deaths in each quarter during the past eight years shows that the deaths are most numerous in the first quarter of the year:—

	1883-87.	1888.	1889.	1890.	Total.	Per cent.
1st Quarter	71	31	19	10	131	31'6
2nd „	45	7	8	10	70	17'0
3rd „	63	11	11	11	96	23'2
4th „	62	7	9	39	117	28'2
Total.....	241	56	47	70	414	100'0

INFANT MORTALITY.

The *infant mortality* is here given as measured by the number of deaths under one year of age to the total number of births in the year :—

Year.	Births.	Deaths under one year.	Ratio to 1,000 Births.
1883	71	6	84
1884	70	9	128
1885	69	3	43
1886	66	6	96
1887	64	8	125
1888	76	1	13
1889	62	9	145
1890	79	18	228
Mean	70	7.5	107

The rate of infant mortality in England and Wales in 1890 was 151 per 1,000, against 145, 136, and 144 in the three preceding years; the excess of mortality was almost entirely in the fourth quarter of the year.

ZYMOTIC MORTALITY.

The deaths from zymotic disorders were 17 in number, against 1, 4, 1, 4, 2, 17, and 3 in the seven preceding years.

OUTBREAK OF ENTERIC FEVER.

During August and September there was an unusual amount of diarrhoea in the town, affecting all classes and all ages, but only one death was recorded as due to this disorder. One infant died from "cholera infantum" on October 24th, and another infant died of "enteritis" on October 26th. In each of these houses cases of enteric fever shortly afterwards appeared. Several complaints were made from time to time about offensive smells from the drains, and there does not appear to have been sufficient flushing. This arose partly from the dry weather which then prevailed, and partly from the water supply being insufficient. Many years ago the Duke of Norfolk gave the town a free supply of water from large reservoirs in the Park. This water is obtained from a spring, which issues from the chalk to the north of the town, at a spot very near the Dairy, in Mill Lane. From this spring the water is pumped up a steep hill into a large covered tank, holding 180,000 gallons; from this there is an overflow into a second tank of similar size; then the overflow from No. 2 passes into another large covered tank, which holds 912 tons, or about 200,000 gallons of water; this is built at a rather lower level than the other two, and it is only used for the Castle. A pipe from this tank

passes into a fourth, and smaller one, which is also sunk in the chalk, and covered over. From this smaller reservoir a pipe runs nearly due south for about 500 yards, when it enters the town at the New Road ; thence it divides into two main branches, and a constant supply of good water is obtained from stand-pipes, or hydrants, in the streets. No water is laid on to the houses, and there is no direct connection between this public water supply and the system of drains and sewers. The water is pumped up from the spring by machinery, the water-wheel being driven by water which flows from Swanbourne Lake. On August 23rd the main shaft of the pump broke, and notice was at once given that the water supply of the town would be cut off until further notice, except from eight to ten a.m., and five to six p.m. Street watering from the pillars was discontinued, and the people were requested to use as little water from the pillars as possible, and only for household purposes. On August 29th, further notice was given that the supply of water from the tanks was so short that it could only be supplied for one hour a day, from eight to nine a.m. very small for some weeks, and even up to December water could only be obtained from the pillars for about four hours in the day. Thirty or forty men were employed at the waterworks, but there was no illness amongst them, and all this time the water, though deficient in quantity, seems to have been of very good quality.

A further public water supply is obtained from the town pump, in the Market Square, and most of the people who live around or near the Square, have fetched water from this source for years. When the above-named accident happened, numbers of persons from all parts of the town came to this pump for water, until they could obtain enough for their daily wants from the street pillars.

At this time the water on the Swanbourne Lake was lowered in order to lay down a large pipe to convey water to some newly-made water-cress beds. This proceeding caused also a lowering of the water in nearly all the wells in the town, so that not being able to use their pumps, numbers of persons were obliged to go to the town pump for a supply.

The traps in the various streets are of a pattern known as Burnett's patent ; they are very liable to get out of order by the entrance of silt or road *debris*, or by sticks or stones being pushed down the grating. There is no ventilation of the main drains, and sewage-gas can readily pass into the open air whenever a trap is open. I pointed out these defects seven years ago, but the general arrangement of the main drains is the same as it was then. All the sewage flows into the tidal river, and as the outlets are well above the bed of the stream, the drains are readily emptied between each tide.

On November 4th I first heard of the existence of enteric fever

in the district, and on visiting the town on that day I found that the disease had appeared in three houses in Orchard Place, in one house in Crown Yard, in one house in Surrey Street, and in three houses in High Street. The next day I found that fever existed in three more houses in High Street.

Inquiry was directed to the milk supply, the system of drainage, and the water supply. The milk supply was obtained from different sources, and not from one dairy. A few who were affected did not drink milk; some had a little milk in their tea; but none of them drank any quantity of cold milk.

I have seen nothing in the history of this outbreak to suggest any impurity whatever in the milk supply.

In each house in High Street there were sanitary defects, such as the non-ventilation of soil pipes in one or two cases, the presence of bell traps not properly looked after and cleansed, and in one case there was an offensive closet. Most of the houses were near offensive gratings in the main drain, and it seemed that the probable cause of the illness was the faulty condition of the sewers, which had become fouled by insufficient flushing. The main drains were at once flushed, and water was poured down the traps, so as to seal them properly.

A main drain in Tarrant Street was opened, and it was found to be in a very foul condition, which was remedied by flushing. On opening other main drains, however, I found them clean, and free from deposit.

There was no illness in Tarrant Street where the sewer was foul, but there was illness in other streets where the sewers were clean.

As there had been so much diarrhœa in the town, and perhaps some unrecognised cases of enteric fever, it seemed probable that by inhaling the sewer gas illness might be caused, as some injurious matter would have passed into the drains from the houses in which such disorders had occurred.

In a few days fresh cases were met with which could not be explained on this view. In a few houses there were no sanitary defects, and nearly all the fresh cases were in and around High Street and The Square.

On November 14th I found that fever had appeared in five houses in River Road, or Ship Yard, and in one house in Maltravers Street.

On again visiting the town, on Nov. 18th, I found an increase in the number of persons attacked, there being two houses in Maltravers Street and three in Mill Lane, where enteric fever existed, and two or three people were similarly affected in other parts of the town. There has been much difficulty in finding out the cases

of illness, as the Notification Act has not yet been adopted by this Authority. Up to the 18th inst. I visited 26 houses in which there has been enteric fever.

In 15 cases only one inmate has been attacked, in five cases two inmates have been attacked, and in six cases as many as three have had the disorder; thus there was up to that date a total amount of 43 persons who had been ill with enteric fever, and of this number three have died.

The inmates in 19 out of these 26 houses have obtained water supply from the town pump, because they lived in or near the Square, and most people living there prefer this water to any other. In one house it is uncertain whether this water was used. In three other houses, where other water was obtained, the person attacked had worked in High Street, and had drunk water from the town pump, while the rest of the household who have escaped drew their supply elsewhere.

In three other cottages the children attacked had drunk water from the town pump.

Thus in 25 out of the 26 houses, 42 out of 43 persons attacked had drunk water from the town pump shortly before the commencement of their illness.

There was very little sickness in the higher part of the town, nearly all the cases of fever being met with at the lower portion of the town.

The one condition that stood out prominently as being the most common to all was the water supply which was drawn from the town pump.

Last year a water main was laid down the street a few yards from the well, so that the ground around was more or less disturbed. Within the last few months a new drain has been laid from some new houses in The Square, in an oblique direction, a few feet to the south of this well, but no harm has resulted from this drain, as no sewage has yet passed down it, the house connections not being yet made. But in laying down this drain the ground around the well was opened and disturbed, so that some pollution may have entered the well. Since these pipes were laid down, I find that some persons have noticed that the water has once or twice been thick, and one person has noticed that it has been discoloured. Last March I analysed the water, and the result showed that it was of very good quality. I now found that there was a small quantity of ammonia present, and that the chlorides were three times in excess of what they were a few months ago. Good water from the chalk at Arundel contains 2.1 to 2.6 grains of chlorine per gallon, and the water from the pump, which contained 2.6 grains of chlorine in the spring, now contained 7.6 grains

per gallon. Chemistry is of no avail in finding out the injurious matter which causes enteric fever; we can but infer from the presence of organic matter and an excess of chlorine that some pollution has taken place.

I strongly advised that this well should at once be closed for a time, and that a sample of this water should be sent to an analyst for careful examination. Persons were told to boil all milk and water before being used for drinking purposes.

I also advised that the sewers and drains should be frequently flushed, and that steps should be taken for ventilating them at suitable points; that proper man-holes and lamp-holes should be provided, so as to enable one to examine into the condition of and to cleanse the sewers; that the well should be opened and examined, and that the present traps on the main drains should be replaced by gully traps.

The Well in The Square was opened on November 21st, and a leakage was found on the south side. The well is 5ft. 3in. in diameter, and 19ft. 6in. in depth. The water in the well stood at a height of 10ft. The water has been analysed by Dr. Dupré, F.R.S., and his report confirms the conclusion at which I arrived before. The analyst states that the water is undoubtedly polluted by sewage, as shown more particularly by the very high proportion of nitric acid, and also by the high proportion of chlorine, so that the water is not fit for drinking purposes. The well was closed on November 19th. On November 20th good water was supplied from a hydrant in The Square, free of cost, by the Duke of Norfolk. The analysis of the water supplied by the Duke of Norfolk to the town shows it is wholesome, and well fitted for drinking purposes.

CHEMICAL ANALYSIS OF THE WATER.

“No. 1.—Water from the Arundel Town Pump, November 19th, 1890.”

“No. 2.—Water from the Duke's Supply to Arundel, November 19th, 1890.”

WATER No. 1.—The water is clear, inodorous and free from poisonous metals. It is undoubtedly polluted by sewage, as shown more particularly by the very high proportion of nitric acid, and, if the pump is situated beyond the influence of the river, also by the high proportion of chlorine. The organic matters derived from the sewage are at present in great measure oxidized. The degree of oxidation varies, however, with the season of the year, and in case any infectious matters have entered the sewage such oxidation can never be relied on to render the water harmless. The water is not fit for drinking.

WATER No. 2.—This is in all respects a pure water, and, although somewhat hard, is wholesome, and well fitted for drinking. For general domestic purposes it might be improved by submitting it to a process of softening.

	"No. 1."	"No. 2."
Appearance	Clear.	Clear.
Colour	Yellowish green.	Very pale greenish.
Smell	Inodorous.	Inodorous.
Deposit	Trace.	Minute trace.
Nitrous Acid.....	None.	None.
Phosphoric Acid	Very minute trace.	None.
Poisonous Metals.....	None.	None.
Hardness before Boiling	21° Clark.	17° Clark.
" after "	6° "	4° "

	GRAINS PER GALLON.	
Oxygen absorbed from) permanganate	'035	'012
Total dry residue.....	40·6	23·8
Colour of residue	Brownish.	White.
Behaviour of residue) on ignition	Blackens slightly. Burns off readily.	Blackens slightly. Burns off readily.
Chlorine	6·86	1·26
Nitric acid	5·11	1·09
Ammonia.....	'0028	'0000
Albumenoid Ammonia...	'0034	'0017

An isolation hospital was formed on November 22nd out of an old cottage which was about to be pulled down. There were willing hands at work, and the home was ready to receive patients on November 24th, when two cases were admitted. It was kept open until February 21st, 1891, when all the patients were well. During this period there were twenty in-patients, of whom one delicate child died, and nineteen persons recovered. The hospital was of great use in treating efficiently many persons who had but poor accommodation at home. Over £110 were contributed in money, while the Duke of Norfolk, in addition to a large subscription, sent game, wine and milk; Messrs. Constable and Norris sent wine and brandy, and many others contributed necessaries to the amount of more than £50. Sister Phœbe from East Grinstead came to nurse cases in the town on November 15th, and she had charge of the hospital from its opening until January 6th, 1891, when she also was attacked with enteric fever, from which she happily in due time recovered.

A young nurse fell ill with the fever in December, but she also recovered.

Sister Phœbe attended altogether 58 cases in their homes and in the hospital, and her services were highly appreciated.

The work done at the hospital was of the greatest value ; amidst all the gloom and misery of those drear wintry days, the work done by Miss Holmes and by those who assisted her will ever remain a pleasant memory.

Enteric fever also appeared in three houses to the south of the river, and in each case the persons attacked had partaken of the water in question.

The river divides the town into two very unequal portions, but on the south side the water supply and drainage are quite distinct from the northern portion, where the main incidence of the epidemic fell. In every case that occurred on the south side I was able to prove that water had been fetched from the Town Pump on the north side, and had been consumed by the person attacked.

In eight cases which occurred in different parts of West Sussex, I was also able to prove that each person attacked had partaken of this particular polluted water when staying in the town.

In those houses in The Square, or in High Street, where the inmates have had a private supply, no cases of fever have occurred. In more distant parts of the town, those persons only have been attacked who drank the water from the town pump.

Up to December 3rd the fever had appeared in 43 houses in the district, and it had attacked 66 persons, of whom 42 were male, and 24 were female. There have been in addition nine other houses in outlying districts, where the person first attacked caught the disease by drinking this polluted water.

One source of danger arose from the fact that ærated waters were made at one house from this polluted water. I destroyed all the mineral waters that were at all likely to have become polluted, and all the ærated waters now supplied from this house are made from the water taken from the public mains. I visited all the shops in the town where such waters were sold, and in each case the contents of the bottles were thrown away.

There were two cases of fever in which the cause was traceable to drinking impure mineral waters, and several others had diarrhœa after partaking of it.

There was a marked decrease up to December 3rd in the number of persons attacked, and after that date there were very few fresh cases.

The ages of those who were attacked, and of those who died, were as follows :—

Cases.	0-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	Total.
Male	1	11	18	13	6	3	5	2	...	59
Female .....	...	5	8	6	3	8	...	3	2	35
Total	1	16	26	19	9	11	5	5	2	94
Deaths.										
Male .....	...	...	2	1	1	1	1	1	...	7
Female .....	...	...	...	...	2	1	1	...	1	5
Total .....	...	...	2	1	3	2	1	1	1	12

The deaths include the case of a servant who was sent home on being taken ill, and who died at Kirdford, in the Petworth District.

A great many more males were attacked than females, and especially among boys and youths. I think that this arose from the fact that boys were often sent to the pump to fetch water, and as there was a hole in the upper surface of the spout, they would often stop and take a draught of water from this hole. There were a few cases in which boys who adopted this practice were taken ill, where this particular water was not used in the house.

The dates of attack were as follows :—

Week ending.	Male.	Female.	Total.
Oct. 24	3	2	5
„ 31	7	8	15
Nov. 7	18	6	24
„ 14	12	8	20
„ 21	9	4	13
„ 28	3	2	5
Dec. 5	4	1	5
„ 12	2	2	4
„ 19 .....	...	...	...
„ 26	1	1	2
Jan. 2 .....	...	...	...
„ 9 .....	...	1	1
Total	59	35	94

The number of fresh cases rapidly ceased after the well was closed on November 19th. Allowing for an incubation period of a fortnight, it will be seen that only twelve fresh cases occurred

after the closure, and these were all in houses where initial cases were recovering. The fever appeared in no fresh house after the well was closed, but a few other inmates were attacked who had been in close contact with those previously affected. The last case was that of the Sister at the temporary hospital, but she had worked very hard, and she had constantly been exposed to infection.

In the first part of the epidemic, there seemed to be no spread of the disease from one individual to another, but later on there were three or four families, the members of which suffered severely one after another, so that the fever lingered in the house for several weeks.

November was a very dull and gloomy month, and fogs were very prevalent; after November 24th, very severe cold and frosty weather set in and lasted all through the epidemic.

The town pump must not be used again, and in its place there should be a supply laid on from the Duke of Norfolk's reservoirs.

The question of the water supply to the town should be carefully considered by your Authority. Many years ago the people drew their water from wells, and then the Duke of Norfolk supplemented the deficiency by laying down water mains, and erecting water pillars in the streets, whence good water could be drawn. No water was laid on to the houses, except in two or three special cases. In course of time the people ceased to use their wells, and depended altogether upon the Duke's supply.

The time has now come when I would advise your Authority to see that the water is laid on to each house, so that every house drain may be properly flushed. At present nearly every closet in the town is hand-flushed; in future, every closet should be provided with a flushing tank, and regulations should be drawn up, so as to prevent any waste of water.

All the evidence I could obtain pointed to some pollution of the water in the town pump well.

The surface of The Square around the pump was worn, broken and uneven. A fortnightly market is held here, and during November the surface was never properly cleansed, and small pools of stagnant water were often seen around the pump, some of which were discoloured with liquid manure. Such dirty water soaking into the subsoil may have polluted the water. The way in which the well water actually became polluted was, however, not clearly made out. The conditions preceding the outbreak were (1) the accidental break-down of the machinery at the water-works, with the subsequent delay in repairs; (2) the lowering of the subsoil water when the watercress beds were being made, whereby so many were obliged to fetch water from the town pump;

(3) the loosening of the subsoil when a new drain was laid down in The Square ; and (4) the dirty condition of the surface of the ground around the pump, which stands at the lower end of The Square. There was also a singular prevalence of diarrhœa six weeks or two months before the epidemic, which happened after a cool summer, and which was not to be found in any other part of the district. Nearly all who had the fever complained of having suffered from diarrhœa some weeks previously. Just as with diphtheria, there is often a marked prevalence of sore throats, so here, with enteric fever, there was a marked prevalence of diarrhœa.

The epidemic was nearly over by the end of the year, and since then the Duke of Norfolk has offered, under certain conditions, to give a constant supply of water to each house, and to contribute to a new system of sewerage and drainage. These matters are now under consideration by the Sanitary Authority.

INFLUENZA

was very prevalent in the first part of the year, and it seemed to attack people here more severely than in any other part of the combined district. In connection with this, it will be remembered that the epidemic of scarlet fever in 1888 was unusually fatal, and the epidemic of enteric fever in the autumn of 1890 was also very severe. There is always a great difficulty here in obtaining early information of infectious cases, and nothing but a house to house inspection discloses the real state of affairs. In future years the Notification of Infectious Diseases Act will be in force, whereby a great improvement may ensue.

Influenza caused two deaths :—Male, 73 years, on Feb. 2nd ; female, 70 years, on Feb. 28th. The general mortality for this quarter was not thereby affected, as there were but ten deaths against a mean of 21 deaths in the four years, 1886-89. All classes and ages were attacked, and about one-fourth of the population suffered. There was no unusual complaint among domestic animals.

NOTIFICATION OF INFECTIOUS DISEASE.

This Act will be adopted early in 1891, as well as the Infectious Disease (Prevention) Act, 1890.

MARGARINE ACT.

Several grocers sell margarine, and in each case the regulations of the Act have been complied with.

BAKEHOUSES.

These are six in number and they are very well kept. There is no bakehouse on a large scale, and the chief duty is to see that they are frequently cleansed and limewashed. In each case there is a good amount of light and air, and in no case is there any drain within the building.

SLAUGHTERHOUSES.

These are five in number, and they are very well kept as regards cleanliness and removal of refuse. The meat in all cases has seemed to be of very good quality.

COMMON LODGING-HOUSES.

These are three in number, but the number of inmates is very small. The houses are very well kept.

COWSHEDS AND DAIRIES.

These are five in number, and they are kept in a very clean condition.

INQUESTS.

Inquests were held in four cases :—Female; 7 months, marasmus ; male, 69 years, apoplexy ; male, 4 months, natural causes ; male, 75 years, accidentally burnt.

There were no deaths returned as “not certified” during the year out of a total of 70 deaths.

No proceedings were taken before the Magistrates during the year.

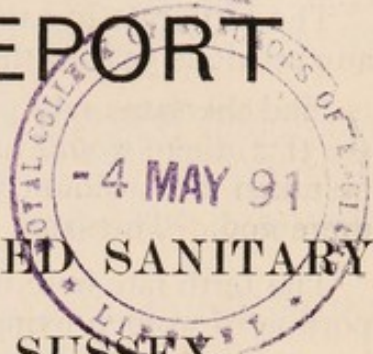
There was no occasion to condemn meat or any other article of food exposed for sale.

For the statistical tables see pp. lxxxi. to lxxxviii.

GENERAL REPORT

ON THE

HEALTH OF THE COMBINED SANITARY DISTRICT OF WEST SUSSEX.



POPULATION.

In the middle of 1890 the population was estimated at 103,110 or an increase of 10,502 in nine years. Although in the more rural districts the population has been nearly stationary, yet there has been a rapid increase in the populous places along the sea coast, and more especially at Worthing, West Worthing and Aldrington.

In comparing the figures in the following report it must be remembered that the facts for Arundel, with its population of 2,750, are only given for the years 1883-90, and for Westbourne since 1880.

BIRTHS AND BIRTH-RATE.

During the year 1890 the births of 2,628 children were registered, and of these 1,329 were male and 1,299 were female.

The following table shows the births and birth-rate during the past ten years :—

Year.	Population.	Births.		Total.	Rate per 1,000.
		Male.	Female.		
1881 ...	94,860 ...	1,463 ...	1,405 ...	2,868 ...	30·2
1882 ...	96,220 ...	1,592 ...	1,381 ...	2,973 ...	30·9
1883 ...	100,430 ...	1,460 ...	1,426 ...	2,886 ...	28·7
1884 ...	102,500 ...	1,578 ...	1,455 ...	3,033 ...	29·5
1885 ...	103,930 ...	1,456 ...	1,340 ...	2,796 ...	26·9
1886 ...	104,760 ...	1,495 ...	1,423 ...	2,918 ...	27·8
1887 ...	105,520 ...	1,400 ...	1,367 ...	2,767 ...	26·2
1888 ...	106,600 ...	1,437 ...	1,342 ...	2,779 ...	26·1
1889 ...	107,500 ...	1,419 ...	1,347 ...	2,766 ...	25·7
1890 ...	108,110 ...	1,329 ...	1,229 ...	2,628 ...	24·3
Total.....		14,629	13,785	28,414	27·6

The birth-rate in each of the last three years was lower than in any previous year in the above series.

Had the same rate prevailed in 1890 that was met with in 1879 (=31·1) there would have been 734 more births. This loss must be taken into account when the diminution in the death-rate is examined. The same fact may be noticed all over the country.

The birth-rate here is low, because in the rural districts the proportion of women living at the child-bearing ages is less than in large towns, and this is caused by the constant migration of young adults of both sexes into the larger centres of population.

There has been a steady decline in the birth-rate since 1880, and this decline is general throughout the country, for the birth-rate of England and Wales during 1890 was lower than in any previous year since the commencement of registration in 1838, being as low as 29·7 per 1,000, and it was 2·9 below the mean rate in the preceding ten years.

In each quarter of the year the births were thus distributed :—

	Male.	Female.	Total.	Per cent.
First Quarter	353	329	682	25·9
Second „	307	311	618	23·7
Third „	331	320	651	24·7
Fourth „	338	339	677	25·7
Total	1,329	1,299	2,628	100·0

During the past ten years there have been born in each year more boys than girls.

Out of the forty quarters during this period there were six quarters in which more females than males were born, viz., twice in each of the years 1881 and 1890, and once in each of the years 1887 and 1889. In thirty-four quarters the male births were in excess.

Births in each quarter, 1881-90 :—

	Male.	Female.	Total.	Per cent.
First Quarter	3,767	3,587	7,354	25·9
Second „	3,740	3,423	7,163	25·2
Third „	3,606	3,392	6,998	24·6
Fourth „	3,516	3,383	6,899	24·3
	14,629	13,785	28,414	100·0

During the whole period of 10 years there were 844 more boys born than girls, giving a proportion of 106·1 males born to every 100 females born.

This proportion is higher than that which prevailed throughout England during the ten years 1879-88, when it was 103·8 to 100.

In the whole of Sussex during the same period the proportion was 104·6 to 100.

The birth rate per 1,000 persons living in each district on the average of the past ten years is here contrasted :—

District.	Birth-rate.	District.	Birth-rate.
Steyning	29·0	Westbourne	28·1
Horsham	28·7	Worthing	26·6
Petworth	27·8	Littlehampton	24·8
Thakeham	28·5	West Worthing	13·4
East Preston	28·0	Arundel (9 years) ...	25·3
Midhurst	27·3		

The difference in the rates is to be accounted for by the greater proportion of married women in some districts than in others who are living at the child-bearing ages.

GENERAL MORTALITY.

During the year 1890, the deaths of 1,480 persons were registered, and of these 819 were male and 661 were female :—

District.	Population.	Deaths.	Death-rate.
Steyning	18,810	281	14·9
Horsham	16,800	210	12·5
Petworth	9,550	136	14·2
Thakeham	8,250	101	12·0
East Preston	8,900	122	13·7
Midhurst	14,900	191	12·8
Westbourne	7,600	97	12·7
Worthing	14,650	{ 218	14·8
		{ 181*	12·3*
Littlehampton ...	4,300	{ 38	8·8
		{ 37*	8·6*
West Worthing ...	1,600	16	10·0
Arundel	2,750	70	25·4
Total	108,110	1,480	13·7
		1,442*	13·3*

*Excluding Visitors.

There were 1,475 deaths actually registered in the whole district, but to this number should be added the deaths of 24 persons occurring outside the district among persons belonging thereto; from this total of 1,499 there should be deducted the deaths of 57 persons occurring within the district among persons not belonging thereto, leaving the total number at 1,442. Of these 57 persons 38 were visitors at Worthing, and Littlehampton, while 19 were persons who died in Workhouses, and who came from places not included in the combination. The 38 deaths among visitors added to the above number of 1,442 make a total of 1,480 deaths.

The deaths and death-rate in each of the past ten years are here shown:—

Year.	Population.	Deaths.		Total.	Rate. per 1,000.
		Male.	Female.		
1881	94,860	720	603	1,323	13·9
1882	96,220	705	671	1,376	14·3
1883	100,430	782	705	1,487	14·8
1884	102,500	756	731	1,487	14·5
1885	103,930	816	706	1,522	14·6
1886	104,760	930	815	1,718	16·4
1887	105,520	802	733	1,535	14·5
1888	106,600	730	724	1,454	13·6
1889	107,500	701	662	1,363	12·6
1890	108,810	819	661	1,480	13·6
Total.....		7,734	7,011	14,745	14·3

The death-rate in England and Wales in 1890 was equal to 19·2 per 1,000 persons living, the rate, however, being much higher in large towns than in smaller places:—

	Death-rate in 1890.	Mean 1881-89.
Chief Towns	20·1	19·8
Small Towns and County Parishes	17·5	17·3
England and Wales	19·2	19·1

The following summary shows the changes in the death-rate in various districts during the last sixteen years :—

	West Sussex.	Chief Towns.	Rural Districts.	England.
1875	17'0	24'2	20'7	22'7
1876-80.....	15'4	22'4	21'2	20'8
1881	13'9	20'1	16'9	18'9
1882	14'3	20'9	17'3	19'6
1883	14'8	20'5	17'9	19'5
1884	14'5	20'6	17'7	19'5
1885	14'6	19'7	17'8	19'0
1886	16'4	20'0	18'0	19'3
1887	14'5	19'7	17'2	18'8
1888	13'6	18'4	16'7	17'8
1889	12'6	18'6	16'5	17'9
1890	13'6	20'1	17'5	19'2

In each quarter of the past year the deaths were thus distributed :—

	Male.	Female.	Total.	Per cent.
First Quarter	239	212	451	30.5
Second „	189	135	324	21'9
Third „	174	135	309	20'9
Fourth „	217	179	396	26'7
Total	819	661	1,480	100'0

In each quarter of the past ten years the deaths were as follows :—

Year.	1st Qr.	2nd Qr.	3rd Qr.	4th Qr.	Total.
1881.....	369	354	307	293	1,323
1882.....	381	319	329	347	1,376
1883.....	399	424	322	342	1,487
1884.....	381	333	383	390	1,487
1885.....	448	360	345	369	1,522
1886.....	544	429	373	372	1,718
1887.....	420	389	338	388	1,535
1888.....	448	382	307	317	1,454
1889.....	374	305	337	347	1,363
1890.....	451	324	309	396	1,480
Total ...	4,215	3,619	3,350	3,561	14,745
Per cent.	28'6	24'5	22'7	24'2	100'0

The deaths on the average during the last decade were most numerous in the first, and least frequent in the third, quarter of the year.

The deaths at different groups of ages in each quarter during the past year were as follows:—

1890.	Under 1 year.	1-5.	5-15.	15-25.	25-60.	60 & over.	Total.
First Quarter...	71	26	12	19	99	224	451
Second „ ...	59	28	15	20	70	132	324
Third „ ...	62	19	15	19	67	127	309
Fourth „ ...	64	37	17	30	95	153	396
Total.....	256	110	59	88	331	636	1,480
Per 1,000 ...	173	74	40	60	223	430	1,000

When the figures for the past ten years are compared it will be seen that in infant life the first and third quarters are the most unfavourable; that in old age the first quarter is most fatal, while the third quarter shows the least mortality; and that from childhood up to sixty years of age the deaths are pretty uniformly distributed throughout the year.

1881-90.	Under 1 year.	1-5.	5-15.	15-25.	25-50.	60 & over.	Total.
First Quarter	735	445	199	181	909	1,746	4,215
Second „	591	361	185	189	877	1,416	3,619
Third „	653	282	165	183	812	1,255	3,350
Fourth „	538	328	183	194	886	1,432	3,561
Total.....	2,517	1,416	732	747	3,484	5,849	14,745
Per 10,000 ...	1,707	960	496	506	2,363	3,968	10,000

This table should be compared with Table V., where the mean temperature of each month is shown, and also the number of deaths in each month.

The influence of *season* may be better seen by dividing the year into three equal periods according to the temperature, and the

following figures show the number of deaths in the past ten years which occurred during each such period :—

		Deaths.	Per cent.
COLD.			
December to March *	36 deg.—41 deg.	5,501	37'3
MODERATE.			
April, May, Oct., Nov.....	41 deg.—57 deg.	4,835	32'8
HOT.			
June to September	57 deg.—63 deg.	4,409	29'9
Total		14,745	100'0

The following table shows the number of deaths in each year at different groups of ages :—

	All Ages.	Under 1 year.	1-5.	5-15.	15-25.	25-60.	60 and over.
1881	1,323	239	99	60	62	320	543
1882	1,376	269	154	81	66	312	494
1883	1,487	255	142	65	78	385	562
1884	1,487	262	137	95	72	368	553
1885	1,522	244	166	71	84	337	620
1886	1,718	328	232	83	69	373	633
1887	1,535	234	112	80	97	368	644
1888	1,454	217	149	72	62	365	589
1889	1,363	213	115	66	69	325	575
1890	1,480	256	110	59	88	331	636
Total ...	14,745	2,517	1,416	732	747	3,484	5,849
Per 10,000		1,707	960	496	507	2,363	3,967

These figures should be contrasted with Table IX., which shows the death-rate in twelve groups of ages, calculated for each sex on the estimated population in each group for the six years 1881-86 ; similar rates are given for the whole of England and Wales in the healthy year, 1881, whereby it will be seen how much lower the mortality is in rural districts.

For males, the rates are in nearly all cases higher than for females.

The mortality, which is at the rate of 25 per 1,000 for females under five years of age, sinks as low as 2·4 per 1,000 for females between ten and fifteen years of age ; it then rises gradually up to 10 per 1,000 for females between forty-five and fifty-five years of age ; the rate is nearly doubled in the next decade, and then there is a rapid increase up to the end of life.

Similar differences may be noted in the male death-rates.

EFFECT OF AGE AND SEX ON THE DEATH RATE.

An examination of Table VII. will show that the distribution of age and sex in this district is very different from that which obtains throughout England and Wales.

Under 5 years of age the numbers are nearly equal ; from 5 to 15 there are more in this district, but after that age the proportion is reversed up to 45 years of age, when the numbers again rise as old age comes on. This excess of old persons here tends to increase the death-rate, because at these ages the death-rate is always high. Excessive proportion of persons living from 15 to 45 years of age lowers the death-rate in large towns, as at these ages the death-rate is always low. Thus in any 1,000 of population the death-rate will be slightly affected by these cases, apart altogether from sanitary conditions.

Sex also has a small influence comparing one district with another. In England and Wales there are 487 males and 513 females in each 1,000 of population ; in West Sussex there are 499 males and 501 females in each 1,000.

Now, since the general male death-rate is rather higher than the general female death-rate, it follows that in those districts which have an excessive proportion of males the death-rate will be slightly raised. The combined result of age and sex distribution is to cause a higher death-rate in this district as compared with England and Wales, and the amount of the correction is given in Table VIII., where it is shown that the recorded death-rate must be multiplied by 0·9262, which is the factor for correction for age and sex in this combined district. In districts like this the corrected death-rate is usually lower than the recorded death-rate, while in large towns it is usually higher than the recorded death-rate.

The table is constructed by applying the mean annual death-rate for England and Wales, 1871-80, to the male and female population of this district as it existed at the last census in 1881. The mean annual death-rate for that period was 21·27 per 1,000, and the rate is given in the table at eleven different groups of ages. The population of this district in 1881 was 97,348, and by applying the rates at each group of ages to the numbers living at those ages, the result will be found in the two last columns as the

calculated number of deaths, which, added together, amount to 2,235 deaths. This number, worked out per 1,000 persons living, would give a rate of 22·964. In other words, if the population throughout the country were distributed as regards age and sex, as it is in this district, then the mean annual death-rate of 21·270 would have been raised to 22·964 per 1,000 from the action of this distribution of age and sex, and irrespective of sanitary conditions. $21·270$ divided by $22·964 = 0·9262$ which is the factor by which the recorded death-rate in this district must be multiplied so as to obtain the corrected death-rate for comparison with other districts.

The effect of this correction upon the death-rate in this district is here shown for the past ten years:—

	Recorded.		Corrected.		Recorded.		Corrected.
1881	... 13·9	...	12·9	1886	... 16·4	...	15·2
1882	... 14·3	...	13·2	1887	... 14·5	...	13·5
1883	... 14·8	...	13·7	1888	... 13·6	...	12·7
1884	... 14·5	...	13·4	1889	... 12·7	...	11·7
1885	... 14·6	...	13·6	1890	... 13·7	...	12·6

INFANT MORTALITY.

During the year 1890 there were 256 deaths of infants under one year of age out of a total of 1,480 deaths from all causes; of these, 159 were male and 97 were female.

There were 2,628 births, so that the infant mortality, as measured by the number of deaths under one year of age to every 1,000 children born, was 97, against a rate of 83, 90, 88, 86, 87, 112, 84, 77, and 77 in the nine preceding years. The mean rate for the whole of this period amounts to 88 deaths to every 1,000 children born. Throughout England and Wales the rate of infant mortality in 1890 was equal to 151 per 1,000 against 147, 138, 149, 145, 136, and 144 in the six preceding years. In large towns the infantile death-rate is very much higher.

In each district the rate of infant mortality on the average of the past twelve years is as follows:—

	Mean. 1879-88.	1889.	1890.		Mean 1879-88.	1889.	1890.
Steyning	100	66	105	Westbourne, 10			
Horsham ...	88	76	112	years	89	69	63
Petworth	79	81	63	Worthing	105	77	136
Thakeham ...	75	82	57	Littlehampton	89	58	45
East Preston	79	88	88	West Worthing	96	153	115
Midhurst ...	87	66	86	Arundel, 7 yrs.	80	145	228

ZYMOTIC MORTALITY..

Out of 1,480 deaths from all causes in 1890, 105 were due to this class of disorders, or 0·97 per 1,000 persons living.

This rate is lower than in any previous year, except in 1887, when it was 0·95, and in 1889, when it was 0·85.

There were 12 deaths from measles, 6 from scarlatina, 12 from diphtheria, 22 from whooping cough, 1 from typhus fever, 22 from enteric fever, 23 from diarrhœa, 2 from rheumatic fever, 3 from erysipelas and 1 from puerperal fever.

There was no death from small pox, nor was there any case during the year. There has, indeed, been no death from small pox since 1886. The death from typhus occurred in a small village where a girl was ill for a few days with indefinite symptoms; she had no rash, nor was there any history of infection, nor was there any spread of the disease. The chief feature of the year was the serious outbreak of enteric fever in the autumn at Arundel.

In each district the rate of zymotic mortality on the average of the past eleven years is as follows:—

	Mean. 1880-89.	1890.		Mean 1880-89.	1890.
Steyning	1·9	1·5	Westbourne, 9		
Horsham	1·3	0·9	years.....	1·2	1·3
Petworth	0·9	0·2	Worthing	1·5	1·1
Thakeham ...	1·6	0·3	Littlehampton	1·1	0·0
East Preston...	1·4	0·6	West Worthing	1·2	0·0
Midhurst	1·2	0·4	Arundel, 7 yrs	1·6	6·1

The mean zymotic death-rate for the ten years 1881-90 in West Sussex was 1·34 per 1,000 living. In comparing this rate with similar figures given in the Registrar-General's reports, it should be noted that the latter include only the seven principal zymotic diseases, while my tables, in addition, give the deaths from rheumatic fever, erysipelas, pyæmia, and puerperal fever. Deducting the deaths from these four diseases, the zymotic death-rate in West Sussex is reduced to 1·21 per 1,000 living. The mean annual death-rate in England and Wales from the principal zymotic diseases, which had been 3·95, 4·15, and 3·38 per 1,000 respectively in the three decennial periods 1851-60, 1861-70, and 1871-80, was only 2·30 in the decennium 1881-90. The rate in this combined district is not much more than one-half of that which is met with in England and Wales on the average of the past ten years.

INFLUENZA

was very prevalent all through the district in the first quarter of the year, but it had nearly subsided by the end of March. It attacked from one-fifth to one-sixth of the population, and it chiefly affected adult males engaged in outdoor work. On many farms agricultural labour was much interfered with; clubs and benefit societies had a large increase in the number of sick members, and railway porters and post-office officials felt its influence severely. Medical men were not exempt, and one-third of those in the district were attacked. Captain Drummond, the Chief Constable of West Sussex, has kindly informed me that out of a force of 128 men, 3 superintendents and 33 men were attacked, or 28 per cent. of the force under his charge; some of the men were indisposed, probably from slight attacks, and were excused night duty for a time. All ages and classes were affected.

The initial cases in Christmas week, 1889, were imported into the district, and then it spread rapidly in every direction, after January 7th, 1890. Meteorological conditions did not at all affect the disease. There was no unusual complaint among domestic animals.

There were 24 deaths up to the end of April, when the epidemic had passed away. The height of the outbreak varied in different places, being highest in January in the towns, and highest in smaller places in February, as the disease spread from village to village. The deaths were most numerous in April, some time after the main incidence of the epidemic had been felt.

In each month the deaths were as follows:—January, 3; February, 7; March, 5; and April, 9; in all, 24.

The mean temperature of the air for January was $6^{\circ}8$ above, for February $1^{\circ}3$ below, for March $2^{\circ}1$ above, and for April $0^{\circ}5$ below the average of 119 years, at Greenwich.

The general mortality for the quarter was not materially affected, there being 451 deaths against a mean of 446.5 in the four years, 1886-89.

The death of a female, 19 months old, was recorded in November in the Steyning district, but this had nothing to do with the previous epidemic; towards the close of the year, a few more cases of influenza were heard of here and there, but there was no spread of the disorder at that time.

In Worthing, West Worthing, Petworth, and East Preston districts there were no deaths; there were six deaths in Steyning, three in Horsham; four in Thakeham; five in Midhurst; three in Westbourne; one in Littlehampton; and two in Arundel districts.

Although the case-rate was highest amongst males, yet the death-rate was highest among females. There were eleven male,

and thirteen female deaths. Three females died, aged respectively 7, 11, and 23 years. The remaining twenty-one deaths occurred in persons between forty and ninety years of age :—

	40-50.	50-60.	60-70.	70-80.	80-90	Under 40 years.	Above 40 years.	Total.
Male	4	4	0	3	0	0	11	11
Female	1	2	2	2	3	3	10	13
Total	5	6	2	5	3	3	21	24

Up to middle life, the mortality was extremely small ; after middle life, the mortality was much higher, as not only were the deaths seven times more numerous, but they occurred among a much smaller number of persons. Out of an estimated population of 108,810, it may be assumed that the proportion living at the above two groups of ages is in round figures as follows :—

	Persons living.	Deaths.	Death-rate per 100,000 living.
Under 40 years ...	83,810	3	3·6
Above ,, ...	25,000	21	84·0
Total.....	108,810	24	22·0

INFECTIOUS DISEASE (NOTIFICATION) ACT, 1889.

This Act has been adopted by nine out of the ten sanitary authorities, but in four cases it will not come into operation until early in 1891.

The certificates sent in are much more numerous than might have been expected, but as they apply to varying periods of the year, no fair comparison can be made between one district and another at present.

District.	Came into operation 1890.	Scarlet fever.	Diphtheria.	Enteric fever.	Erysipelas.	Total.
Thakeham	Jan. 1	12	7	6	8	33
Midhurst	„ 1	36	2	10	7	55
Littlehampton	Mar. 25	2	4	4	0	10
Horsham	April 2	20	3	7	1	31
Worthing	Aug. 23	13	5	10	7	35
Total number of cases ...		83	21	37	23	164
Total number of deaths...		3	1	2	1	7
Ratio of deaths to 100 cases		3·6	4·8	5·4	4·3	4·4

In Steyning, Petworth, East Preston, and Arundel districts, the Act will be in operation early next year,

SALE OF FOOD AND DRUGS ACT, 1875 & 1879.

Report of the Public Analyst, Otto Hehner, Esq., appointed for the Western Division of the County of Sussex, upon the articles analysed by him under the above Act during the year 1890.

FIRST QUARTER, ENDING MARCH 31ST.

Article.	Results.	Remarks.
Milk, 4 samples.	All 4 samples genuine and of good quality.	
Butter, 2 „	Both genuine.	
Vinegar, 2 „	Both genuine and of good strength.	

Total number of samples analysed during the quarter, eight.
Adulterated, none.

SECOND QUARTER, ENDING JUNE 30TH.

Article.	Result.	Remarks.
Spirits, 29 samples.	14 samples were genuine, 9 adulterated with water to the extent of from 4 to 45.6 %, 6 very slightly below legal limit.	Of 29 spirits (whiskies), only 14 samples were above the minimum strength required by the Sale of Food and Drugs Amendment Act, viz.:—Stronger than 25 degrees under proof; 6 samples were of the minimum strength, or from 1 to 2 % below it; whilst 9 samples were decidedly watered in excess of the most liberal legal allowance.
Milk, 11 „	9 genuine, 2 adulterated with 10 % of water.	Of 11 milks, 9 were genuine and of fair quality, whilst 2 were watered.
Butter, 5 „	All genuine.	
Vinegar, 4 „	Genuine and of fair strength.	
Ipecacuanha Wine, 3 samples.	Genuine.	The vendor of one of these adulterated samples was summoned and fined 10s. and costs.
Pepper, 2 samples.	Genuine.	
Mustard, 2 „	Genuine.	

Total number of samples analysed during the quarter, 56,
Adulterated, 11.

THIRD QUARTER, ENDING SEPTEMBER 30TH.

Article.	Result.	Remarks.
Beer, 3 samples. } Lard, 7 " } Butter, 3 " } Cheese, 7 " } Milk, 7 " } Spirits, 12 " }	All genuine.	One of the samples of cheese had been prepared from skim milk, the six others having been made from whole milk.
	11 genuine; one adulterated with 28 % of water.	Two of the samples were very slightly below the minimum strength.
Coffee, 7 "	Six genuine; one consisted of 75 parts chicory and 25 parts coffee.	The mixture was labelled "mixed with chicory."

Total number of samples analysed during the quarter, 46.

Adulterated, 1. Mixed (notice given), 1.

FOURTH QUARTER, ENDING DECEMBER 31ST.

Article.	Result.	Remarks.
Milk, 14 samples.	12 genuine, two adulterated with 11 and 12 % of water respectively.	Milk, 2 samples adulterated with water. A prosecution has been undertaken so far, against one of the vendors, and he was fined £5.
Butter, 13 "	All Genuine.	Of the 13 butters, 11 were genuine, while 2, if not palpably adulterated, were of a most suspicious character. No prosecutions were instituted, but I have recommended that other samples be soon taken from the same vendors.
Coffee, 1 "	Genuine.	

Total number of samples analysed during the quarter, 28,

Adulterated, 2.

138 articles were submitted for analysis, and of these 14 were found adulterated, or rather diluted with water. In no case does it appear that any injurious matter was added. In four instances milk was watered, and in ten instances spirits were diluted.

RAINFALL.

The rainfall at two different places in the combined district is here contrasted for a term of ten years:—

Year.	WORTHING.		PETWORTH.	
	Inches.	Rainy Days.	Inches.	Rainy Days.
1881	29·97	... 161 ...	34·89	... 115
1882	32·70	... 191 ...	35·69	... 145
1883	28·10	... 170 ...	35·80	... 142
1884	24·75	... 119 ...	26·65	... 115
1885	29·28	... 150 ...	33·30	... 124
1886	31·89	... 164 ...	38·09	... 147
1887	21·30	... 127 ...	28·57	... 103
1888	25·73	... 175 ...	35·38	... 116
1889	23·10	... 149 ...	28·35	... 141
1890	22·74	... 149 ...	29·30	... 139
Mean	26·96	155	32·60	129

Grouping the rainfall for the past fifteen years into three periods of five years each, the last period is seen to be much drier than the first:—

Period.	WORTHING.	.....	PETWORTH.
	Mean of 5 years. Inches.		Mean of 5 years. Inches.
1876-80	32·00	.....	41·07
1881-85	28·96	.....	33·27
1886-90	24·95	.....	31·94

There was a difference of 7·05 inches at Worthing, and of 9·13 inches at Petworth between the first and last period. Since one inch of rain falling upon an acre means an amount of nearly 101 tons of water, it follows that between 700 and 900 tons less water have fallen per acre in the last five years than in the earlier exceptionally wet period. In the five years, 1881-85, the rainfall was above the average. The recent dry years have caused much anxiety, as the water supply is thereby seriously affected; should

another dry year occur, the matter must receive serious attention, so as to prevent all waste, and to look carefully after the storage.

DURATION OF BRIGHT SUNSHINE.

During the past year daily observations were taken of the amount of bright sunshine at Brighton, Hastings, Eastbourne, and Westbourne, so that for the first time we glean some idea of what is meant by the sunny south. The records will now be continuous from year to year, but it is said that at Worthing such a record cannot be taken, as there is no suitable spot where the recorder could be exposed to the sun's rays all the hours it is above the horizon. At Brighton, Hastings, and Eastbourne the Campbell burning recorder is used, while at Westbourne the Jordan photographic recorder is used, which is said to give a slightly more favourable result. The main worker at the subject is R. Sheward, Esq., F.R. Met. Soc., of Eastbourne, to whom my thanks are due for his monthly records.

In previous years I have given an approximate amount from the Kew records, which, though good for comparison year by year, are not so true for this district as the new returns. Brighton lies on the extreme east, and Westbourne on the extreme west of the coast-line of the combined district.

The hours of bright sunshine recorded in 1890 at these two places, and the names of the observers are here given:—

1890.	BRIGHTON Dr. A. Newsholme.		WESTBOURNE. Rev. L. B. Birkett.	
	Bright hours.	Sunless days.	Bright hours.	Sunless days.
Jan. 1 to Mar. 31	299·9	29	307·4	23
Jan. 1 to June 30	919·1	30	929·5	29
Jan. 1 to Sept. 30	1,481·4	30	1,526·1	36
Jan. 1 to Dec. 31	1,798·8	66	1,773·8	68

It would add to the value of these figures if for each month or quarter the "percentages of possible duration" were given with the differences from the average; also if the quantity of efficient heat could be shown as at Kew by giving the heat in day degrees above or below 42° F. A sunless day may not always be a cold day, and the yearly amount of bright sunshine might be the same in two years with a very different amount of efficient heat.

The duration of bright sunshine at Greenwich for the year 1890 amounted to 1,255 hours, the sun being above the horizon for 4,491 hours, or 28·0 per cent. of possible duration.

The following Table is also taken from observations made by W. J. Harris, Esq., F.R. Met. Soc., who has kindly allowed me to make use of them. The facts recorded concern Worthing only:—

MONTH.	TEMPERATURE.						Relative Humidity.	Amount of Cloud.	RAIN.	
	MEANS.			EXTREMES.					Amount.	No. of Days.
	9 a.m.	Min.	Max.	Range.	Mean.	Min.					Max.
January	deg. 43·6	deg. 38·2	deg. 48·1	deg. 9·9	deg. 43·2	deg. 28·5	deg. 54·9	6·3	inches. 2·56	24
February	37·9	34·1	43·6	9·5	38·8	27·1	47·9	5·6	1·23	5
March	42·9	35·7	48·2	12·5	42·0	19·4	56·2	6·1	1·28	11
April	46·6	39·5	52·5	13·0	46·0	32·0	63·4	6·6	2·54	13
May	55·8	45·9	61·7	15·8	53·8	37·8	78·0	5·7	1·41	9
June	57·7	49·7	62·2	12·5	55·9	40·2	67·5	7·2	2·25	15
July	59·7	52·1	64·9	12·8	58·5	41·7	73·0	9·2	3·17	11
August	60·6	52·3	65·7	13·4	59·0	41·2	71·4	6·5	2·69	13
September	61·2	52·2	65·7	13·5	58·9	39·5	73·7	5·2	1·29	9
October	51·7	42·7	57·6	14·9	50·1	26·0	64·5	5·2	1·40	12
November	43·6	37·4	49·4	12·0	43·4	14·9	56·7	6·0	2·39	20
December	31·4	26·8	35·7	8·9	31·2	16·8	42·5	6·9	0·53	7
Year 1890	49·4	42·2	54·6	12·4	48·4	14·9	78·0	6·4	22·74	149
" 1889	49·5	42·7	54·8	12·1	48·8	21·9	81·5	6·4	23·92	159
" 1888	48·0	42·4	53·3	10·9	47·8	20·2	78·8	6·4	25·88	181
" 1887	48·4	41·6	54·1	12·5	47·9	17·4	82·0	5·7	21·28	137
" 1886	50·0	44·0	55·2	11·2	49·6	23·2	78·0	5·8	31·89	164
" 1885	50·0	43·7	55·1	11·4	49·4	25·2	81·7	5·7	28·09	156
" 1884	52·0	45·6	56·8	11·2	51·2	27·0	83·3	5·8	23·51	126
" 1883	50·7	43·9	55·9	12·0	49·9	23·3	75·7	5·7	26·05	174

THE TEMPERATURE OF THE SOIL.

The temperature of the soil at 9 a.m., one foot below the surface of the ground at Worthing, has been taken daily by W. J. Harris, Esq., F.R. Met. Soc. and the results for each month for 1890, and also for a term of years, are here given :—

	1890.			1885. Mean.	1886. Mean.	1887. Mean.	1888. Mean.	1889. Mean.
	Mean.	Max.	Min.					
January	42·7	45·2	36·4	38·3	37·7	37·3	38·3	39·3
February ...	40·1	44·2	37·8	42·7	36·7	39·2	37·2	38·7
March	42·6	47·2	35·9	43·1	39·1	40·3	39·0	40·6
April	47·3	50·9	44·1	48·8	48·1	45·2	44·0	47·2
May	55·8	61·2	52·0	53·6	55·1	55·1	52·2	56·6
June	58·6	61·9	55·7	61·4	60·4	59·4	58·0	62·5
July	60·3	67·8	56·1	63·9	64·1	64·4	60·1	62·7
August	61·2	63·9	57·1	62·3	63·8	63·1	60·9	61·0
September...	59·9	61·8	56·3	58·9	61·6	57·2	58·4	58·6
October.....	52·3	59·2	44·1	50·4	54·2	49·9	49·8	51·5
November...	46·9	50·9	38·3	45·1	47·1	44·4	49·0	47·2
December...	36·0	40·2	33·8	40·6	39·0	40·2	44·2	40·5
Year ...	50·3	67·8	33·8	50·8	50·6	49·3	49·3	50·5

	Mean.		Max.		Min.
In 1885	50·8	.....	67·2	.....	36·1
In 1886	50·6	.....	67·2	.....	34·3
In 1887	49·3	.....	67·2	.....	35·0
In 1888	49·3	.....	64·2	.....	34·6
In 1889	50·5	.....	65·9	.....	35·3
In 1890	50·3	.....	67·8	.....	33·8

LEGISLATION IN 1890. 53 AND 54 VICT.

The most important Acts passed during the session were :—

1. The Infectious Disease (Prevention) Act, c, 34, which is really an important supplement to the Infectious Disease (Notification) Act, 1889. The Act relates to the following matters :—Inspection of Dairies in certain cases ; Power to prohibit supply of milk ; Cleansing and Disinfecting of Premises, &c. ; Disinfection of Bedding, &c. ; Penalty on persons ceasing to occupy houses without previous Disinfection or giving notice to Owner, or persons making false answers ; Prohibiting Retention of Dead Bodies in certain cases ; Bodies of persons dying of Infectious Diseases in Hospital, &c., to be removed only for Burial ; Justices may in certain cases order Dead Bodies to be Buried ; Disinfection of

Public Conveyances if used for carrying Corpses ; Detention of Infected Person without proper lodgings in Hospital by Order of Justice ; Infectious rubbish thrown into Ashpits, &c., to be disinfected ; Temporary shelter, &c. ; Power of Entry.

2. The Housing of the Working Classes Act, c. 70. It is a consolidating Act, embodying Cross's Acts, Torren's Acts, and Shaftesbury's Acts; it also makes some important additions to the old laws dealing with unhealthy areas, and unhealthy dwellings.

3. Public Health Acts' Amendment Act, c. 59. The third part is that which will be most useful in this district, and several of the Authorities intend to adopt it as well as the Infectious Disease (Prevention) Act, 1890. The other Acts relating to sanitary authorities merely require enumeration.

4. Open Spaces Act, 1890, c. 15.

5. Working Classes Dwellings Act, 1890, c. 16.

6. Allotments Act, 1890, c. 65.

7. Public Health (Rating of Orchards) Act, 1890, c. 17.

8. Public Libraries Act (Amendment) Act, 1890, c. 68

9. Customs and Inland Revenue Act, 1890, c. 8.



COMBINING SANITARY DISTRICT.

STATISTICAL TABLES,

117 to 129.

TABLE I.—Showing the Births in 1881-90.

DISTRICT.	FIRST QUARTER.			SECOND QUARTER.			THIRD QUARTER.			FOURTH QUARTER.			YEAR.	Per 1,000.		
	M.	F.	TL.	M.	F.	TL.	M.	F.	TL.	M.	F.	TL.				
1881.....	375	347	722	397	338	735	368	381	749	323	339	662	1463	1405	2868	30.2
1882.....	449	392	841	382	321	703	397	331	728	364	337	701	1592	1381	2973	30.9
1883.....	391	381	772	358	353	711	367	359	726	344	333	677	1460	1426	2886	28.7
1884.....	374	371	745	431	358	789	370	356	726	403	370	773	1578	1455	3033	29.5
1885.....	402	367	769	332	323	655	371	314	685	351	336	687	1456	1340	2796	26.9
1886.....	397	386	783	404	370	774	350	342	692	344	325	669	1495	1423	2918	27.8
1887.....	337	322	659	349	343	692	369	336	705	345	366	711	1400	1367	2767	26.2
1888.....	360	346	706	409	374	783	323	319	642	345	303	648	1437	1342	2779	26.0
1889.....	329	346	675	371	332	703	360	334	694	359	335	694	1419	1347	2766	25.7
1890.....	353	329	682	307	311	618	331	320	651	338	339	677	1329	1299	2628	24.3

TABLE II.—Showing the Deaths and Death-rate from Zymotic Diseases in 1890.

Sanitary District	Small-pox.	Scarlatina.	Diphtheria.	Membranous Croup.	Fevers.					Cholera.	Erysipelas.	Measles.	Whooping cough.	Diarrhoea and Dysentery.	Rheumatic Fever.	Ague.	Total.	Rate per 1,000 persons living.
					Typhus.	Enteric.	Continued.	Relapsing.	Puerperal.									
Steyning Rural..	3	...	...	5	...	1	...	...	3	7	9	...	...	...	29	1.5
Horsham "	...	1	2	...	1	1	...	...	...	...	4	4	2	...	...	...	15	0.9
Petworth "	1	1	...	...	...	...	...	...	1	...	...	...	2	0.2
Thakeham "	1	1	...	...	...	...	1	...	1	...	...	...	3	0.3
East Preston, "	1	...	...	...	...	...	...	...	...	2	3	...	...	...	6	0.7
Midhurst "	...	1	...	...	1	...	...	...	...	...	...	3	2	...	...	...	7	0.4
Westbourne, "	3	...	...	...	...	...	...	...	...	5	1	1	1	...	10	1.3
Worthing Urban	...	3	1	...	...	2	...	...	...	...	3	1	3	...	1	...	16	1.1
Littlehampton,	—	—
W. Worthing "	—	—
Arundel "	...	1	2	...	...	11	...	...	...	1	1	...	1	...	...	...	17	6.2
Total.....	—	6	12	—	1	22	—	1	—	1	3	12	22	23	2	—	105	0.9

TABLE III.—Showing the Deaths and Death-rate from Zymotic Diseases in each of the ten years, 1881-90.

Year.	Small Pox.	Measles.	Scarlatina.	Diphtheria.	Whooping Cough	Cont. Fevers.			Diarrhoea.	Rheumatic Fever.	Erysipelas.	Pyæmia.	Puerperal Fever.	Total.	Rate per 1,000 persons living.	Population.
						Typhus.	Enteric.	Other.								
1881.....	1	1	15	25	10	...	12	1	17	7	7	2	5	103	1.0	94,860
1882.....	...	16	15	35	53	...	10	3	19	4	7	1	1	164	1.7	96,220
1883.....	5	21	13	24	13	1	18	...	23	6	5	...	2	131	1.3	100,430
1884.....	...	5	22	32	14	2	12	...	38	...	11	3	4	143	1.3	102,500
1885.....	1	12	15	41	24	2	17	4	23	3	10	...	...	152	1.4	103,930
1886.....	3	45	9	23	88	1	20	...	54	3	4	2	4	256	2.4	104,760
1887.....	...	3	11	19	4	2	14	2	37	3	3	3	...	101	0.9	105,520
1888.....	...	4	22	23	51	...	3	...	15	...	8	1	4	131	1.2	106,600
1889.....	...	7	1	25	26	...	10	1	11	7	3	1	...	92	0.8	107,500
1890.....	...	12	6	12	22	1	22	...	24	2	3	...	1	105	0.9	108,110
Total	10	126	129	259	305	9	138	11	261	35	61	13	21	1378	1.3	

TABLE IV.—Showing the Deaths from Zymotic Diseases in each month in the year 1890.

DISEASE.	January.	February.	March.	1st Quarter.	April.	May.	June.	2nd Quarter.	July.	August.	September.	3rd Quarter.	October.	November.	December.	4th Quarter.	Year.
Small Pox
Scarlatina	1	1	1	..	1	2	1	..	1	2	1	..	..	1	6
Diphtheria	3	..	3	..	..	1	1	..	..	..	..	3	3	2	8	12
Membranous Croup
{ Typhus	1	..	1	..	..	..	2	..	..	1	1	2	..	..	18	1
{ Enteric	1	1	..	1	..	..	..	..	1	..	..	11	5	..	22
{ Continued
{ Relapsing
{ Puerperal	1	..	..	1	..	..	..	..	1
Cholera	1	..	..	..	1
Erysipelas	1	1	2	..	..	..	..	..	2	..	..	1	..	1	1	3
Measles	1	1	..	2	..	2	..	3	6	9	12
Whooping Cough	2	1	3	..	1	..	1	2	3	6	11	..	4	3	7	22
Diarrhoea and Dysentery	2	..	2	3	..	..	3	2	3	5	10	7	..	1	8	23
Rheumatic Fever	1	..	..	1	..	..	..	..	..	..	..	..	1	..	..	1	2
Ague
Total	1	9	4	14	5	2	3	10	6	8	13	27	15	21	18	54	105

TABLE V.—Showing the Deaths in each Month in the ten years 1881-90.

Month.	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	Total.	Average Temp.
January	125	132	127	117	182	155	130	135	108	149	1360	38·9
February	118	108	118	124	151	185	120	142	125	151	1342	39·7
March	126	141	154	140	115	204	170	171	141	151	1513	41·5
April	131	98	148	118	129	168	126	142	135	122	1317	47·2
May	117	118	137	101	130	140	144	137	98	121	1243	52·7
June	196	103	139	114	101	121	119	103	72	41	1059	59·8
July	93	100	107	116	117	111	112	97	116	104	1073	62·5
August	110	112	108	147	112	131	118	115	102	101	1149	61·9
September	104	117	107	120	116	131	115	95	119	104	1128	57·5
October	209	100	104	125	97	105	136	125	113	109	1123	50·9
November	98	116	125	121	130	116	118	99	103	126	1152	42·8
December	86	131	113	144	142	151	134	93	131	161	1286	40·8
Year	1323	1376	1487	1487	1522	1718	1535	1454	1363	1480	14745	—

The average temperature is taken from the records at Greenwich for the twenty years 1849-68.

TABLE VI.—Showing the Deaths and Death-rate from all causes and from various causes in the ten years, 1881-90.

Year.	Annual Number of Deaths.					Population.	Annual Rate per 100,000 living.				
	All Diseases.	Zymotic Disease.	Phtisis.	Lung Disease.	Heart Disease.		All Diseases.	Zymotic Disease.	Phtisis.	Lung Disease.	Heart Disease.
1881.....	1,323	103	117	193	128	94,860	1,396	108	123	203	135
1882.....	1,376	164	131	191	120	96,220	1,430	170	136	198	124
1883.....	1,487	131	158	209	134	100,430	1,480	130	157	208	133
1884.....	1,487	143	159	222	147	102,500	1,450	139	155	216	143
1885.....	1,522	152	126	266	126	103,930	1,464	146	121	256	121
1886.....	1,718	256	159	291	142	104,760	1,640	244	151	278	135
1887.....	1,535	101	189	245	158	105,520	1,454	95	179	232	150
1888.....	1,454	131	148	225	165	106,600	1,364	123	139	211	155
1889.....	1,363	92	138	197	135	107,500	1,268	85	128	183	125
1890.....	1,480	105	131	248	172	108,110	1,369	97	122	229	159
Total	14,745	1,378	1,456	2,287	1,427	.....	1,432	134	141	221	138

TABLE VII.—Showing the distribution of the population as to age and sex in West Sussex and in other districts in 1881.

		PROPORTION TO 100,000 PERSONS.											
		0-5.	5-15.	15-25.	25-45.	45-65.	65 and upds.	All ages.	Both sexes.				
Combined District ...	{M. ...	6,786	12,443	8,635	11,353	7,644	3,060	49,921	100,000				
	{F. ...	6,803	11,852	8,235	12,317	7,722	3,150	50,079					
Four Urban Districts...	{M. ...	6,140	11,914	7,939	10,524	5,911	2,280	44,708	100,000				
	{F. ...	6,189	11,249	11,560	14,723	8,152	3,419	55,292					
Seven Rural Districts	{M. ...	6,936	12,566	8,796	11,546	8,046	3,241	51,131	100,000				
	{F. ...	6,946	11,922	7,464	11,758	7,622	3,087	48,869					
Leeds and Birmingham	{M. ...	7,133	11,290	9,180	13,352	6,249	1,308	48,512	100,000				
	{F. ...	7,241	11,506	10,095	14,008	6,942	1,696	51,488					
England and Wales ...	{M. ...	6,767	11,437	9,195	12,472	6,760	2,062	48,663	100,000				
	{F. ...	6,788	11,451	9,605	13,455	7,514	2,514	51,337					

TABLE VIII.—Showing the effect of Distribution of Age and Sex on the Death-rate.

Age Period.	England and Wales. Mean for 1871-80.		Population in Combined District in 1881.		Calculated Number of Deaths.	
	Male Death-rate.	Female Death-rate.	Male.	Female.	Male.	Female.
Under 5	68.14	58.10	6,606	6,623	450,133	384,796
5—10	6.37	6.20	6,317	6,008	42,134	37,250
10—15	3.69	3.70	5,796	5,530	21,387	20,461
15—25	5.23	5.43	4,893	4,164	24,590	22,611
20—25	7.32	6.71	3,513	3,853	26,915	26,123
25—35	9.30	8.58	5,895	6,483	57,489	55,624
35—45	13.74	11.58	5,193	5,507	71,852	63,771
45—55	20.05	15.59	4,106	4,292	82,325	66,912
55—65	34.76	28.34	3,335	3,225	115,925	92,041
65—75	69.75	60.82	2,043	2,122	142,132	129,060
75 upwards	169.08	155.83	936	944	158,359	147,104
	48,597	48,751	1189,741	1045,753		
	97,348		2235,494			

TABLE IX.—Showing the Death-rate at 12 different Groups of Ages in the six years, 1881-86.

Year.	MALES.												85 and over.
	All Ages.	0-5.	5-10.	10-15.	15-20.	20-25.	25-35.	35-45.	45-55.	55-65.	65-75.	75-85.	
1881.....	15.2	32.3	3.2	1.3	2.3	6.8	7.7	7.8	13.6	24.0	49.2	122.2	406.2
1882.....	14.6	35.7	3.8	1.3	3.3	5.5	5.5	8.3	12.6	21.9	45.9	108.0	214.1
1883.....	15.6	30.2	3.6	1.1	4.1	4.7	7.6	10.4	18.4	22.1	48.3	135.9	290.0
1884.....	14.6	32.9	4.7	3.7	2.7	4.2	5.6	9.6	11.9	20.6	46.1	115.7	242.7
1885.....	15.7	33.6	3.2	1.6	3.6	5.3	5.7	9.2	13.7	26.4	55.0	119.5	394.2
1886.....	17.2	41.3	4.1	2.2	4.2	3.7	5.8	12.9	14.9	18.9	64.5	128.4	298.0
Mean	15.5	34.3	3.8	3.4	3.4	5.0	6.3	9.6	14.2	22.3	51.5	121.7	307.5
England, 1881 ...	20.0	56.4	5.9	4.6	4.6	6.2	8.3	13.1	18.1	35.5	65.0	137.5	259.3
FEMALES.													
1881.....	12.7	20.1	3.6	1.8	2.2	5.1	6.5	8.0	7.4	27.1	50.6	101.8	236.2
1882.....	13.9	28.6	4.7	3.3	4.6	3.1	6.8	8.6	4.9	18.5	44.0	108.9	263.1
1883.....	14.0	27.9	3.5	1.7	3.5	6.3	5.6	8.1	11.9	22.8	48.4	106.2	250.0
1884.....	14.1	23.9	3.3	3.5	3.8	6.2	6.8	9.4	12.0	19.9	41.0	113.6	292.8
1885.....	13.6	24.4	4.3	2.0	5.1	5.3	5.9	7.8	10.0	19.1	49.0	113.0	283.7
1886.....	15.5	37.3	4.2	2.5	4.7	2.9	6.0	6.6	11.7	21.6	52.1	122.4	267.6
Mean	14.0	27.0	3.9	2.5	4.0	4.8	6.3	8.1	10.5	21.5	47.5	111.0	265.6
England, 1881 ...	17.8	48.1	5.8	3.3	4.1	6.1	7.8	10.9	14.4	28.3	57.6	122.1	233.4

A)—Table of DEATHS during the Year 1890, in the Combined Sanitary District

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a)	MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES.							(i)	1	2	3
	At all ages. (b)	Under 1 year. (c)	1 and under 5. (d)	5 and under 15. (e)	15 and under 25. (f)	25 and under 60. (g)	60 and upwards. (h)		Small Pox. 1	Scarlatina. 2	Diphtheria. 3
Steyning Rural	268	51	32	17	15	54	99	Under 5 5 upwards.			1 2
Horsham Rural	221	49	11	11	12	53	85	Under 5 5 upwards.		1	2
Petworth Rural	136	14	4	3	7	32	76	Under 5 5 upwards.			
Thakeham Rural	100	12	4	3	5	25	51	Under 5 5 upwards.			
East Preston Rural	127	18	8	2	9	30	60	Under 5 5 upwards.			1
Midhurst Rural	191	30	14	6	6	41	94	Under 5 5 upwards.		1	
Westbourne Rural.....	97	13	9	6	6	19	44	Under 5 5 upwards.			2 1
Worthing and West Worthing Urban	229	49	18	7	18	53	84	Under 5 5 upwards.		3	1
Littlehampton Urban	37	4	2	1	5	10	15	Under 5 5 upwards.			
Arundel Urban	69	18	8	3	6	16	18	Under 5 5 upwards.		1	2
TOTALS	1475	258	110	59	89	333	626	Under 5 5 upwards.		4 2	8 4

The subjoined numbers have also to be taken into

Deaths occurring outside the District among persons belonging thereto.....	24	—	—	—	—	6	18	Under 5 5 upwards.			
Deaths occurring within the District among persons not belonging thereto.....	57	2	1	1	6	21	26	Under 5 5 upwards.			1

of WEST SUSSEX, classified according to Diseases, Ages, and Localities

MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN
UNDER FIVE YEARS OF AGE.

4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Membranous Group.	FEVERS.					Cholera.	Erysipelas.	Measles.	Whooping Cough.	Diarrhoea and Dysentery.	Rheumatic Fever.	Ague.	Phthisis.	Bronchitis, Pneumonia, Pleurisy.	Heart Disease.	Injuries.	All other Diseases.	TOTALS.
	Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.													
		1					1	3	7	8				14		1	47	8
		5			1					1			19	31	28	7	91	18
								2	4	1				18	1		32	6
	1	1						2		1			28	25	25	8	69	16
										1				6			11	1
		1											10	19	15	6	67	11
								1						4			11	1
		1								1			6	14	13	7	42	8
									2	3				7	1		12	2
													7	20	9	6	59	10
									3	2				8		1	30	4
		1											20	21	22	4	78	14
								4		1				5		1	9	2
								1			1		13	12	10	3	34	7
								3	1	3				11		1	45	6
		2					2				1		20	17	36	3	80	16
														3			3	
													7	3	6		15	3
								1		2				4			16	2
		11											3	4	7	2	16	4
		1					1	14	17	21				80	2	4	216	30
	1	22			1		2	3		3	2		133	166	171	46	551	116

account in judging of the above records of mortality.

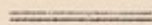
														3	1	1	19	2
								1									2	
		2					1						7	4	10	1	28	5

(B)—Table of POPULATION, BIRTHS, AND OF NEW CASES OF
of Health, during the year 1890, in the Combined Sanitary District

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a)	POPULATION AT ALL AGES.		Registered Births. (d)	Aged under 5 or over 5. (e)	NEW CASES COMING TO THE KNOWN				
	Census 1881. (b)	Estimated to middle of 1890. (c)			1 Small Pox.	2 Scarlatina.	3 Diphtheria.	4 Membranous Group.	5
Steyning Rural	16325	18810	484	Under 5 5 upwards.		1 4	2 4		
Horsham Rural	15426	16800	420	Under 5 5 upwards.		5 16	2 3		
Petworth Rural	9595	9550	223	Under 5 5 upwards.			1		
Thakeham Rural	8285	8250	210	Under 5 5 upwards.		3 9	1 6		
East Preston Rural	8025	8900	204	Under 5 5 upwards.			1 4		
Midhurst Rural	13933	14900	348	Under 5 5 upwards.		8 28		2	
Westbourne Rural.....	7420	7600	207	Under 5 5 upwards.			2 7		
Worthing Urban	10976	14650	338	Under 5 5 upwards.		10 24	1 4		
Littlehampton Urban	3926	4300	89	Under 5 5 upwards.			2 4		
West Worthing Urban	689	1600	26	Under 5 5 upwards.					
Arundel Urban	2748	2750	79	Under 5 5 upwards.		1 2	2		
TOTALS	97348	108110	2628	Under 5 5 upwards.		28 89	11 35		

Field	Value
Field 1	Value 1
Field 2	Value 2
Field 3	Value 3
Field 4	Value 4
Field 5	Value 5
Field 6	Value 6
Field 7	Value 7
Field 8	Value 8
Field 9	Value 9
Field 10	Value 10
Field 11	Value 11
Field 12	Value 12
Field 13	Value 13
Field 14	Value 14
Field 15	Value 15
Field 16	Value 16
Field 17	Value 17
Field 18	Value 18
Field 19	Value 19
Field 20	Value 20
Field 21	Value 21
Field 22	Value 22
Field 23	Value 23
Field 24	Value 24
Field 25	Value 25
Field 26	Value 26
Field 27	Value 27
Field 28	Value 28
Field 29	Value 29
Field 30	Value 30
Field 31	Value 31
Field 32	Value 32
Field 33	Value 33
Field 34	Value 34
Field 35	Value 35
Field 36	Value 36
Field 37	Value 37
Field 38	Value 38
Field 39	Value 39
Field 40	Value 40
Field 41	Value 41
Field 42	Value 42
Field 43	Value 43
Field 44	Value 44
Field 45	Value 45
Field 46	Value 46
Field 47	Value 47
Field 48	Value 48
Field 49	Value 49
Field 50	Value 50

STEYNING
RURAL SANITARY DISTRICT.



STATISTICAL TABLES,

i. to viii.

STATISTICS

OF THE DISTRICT OF COLUMBIA

STATISTICAL TABLES

1890

STEYNING RURAL SANITARY DISTRICT.

TABLE 1.—Showing the Deaths at various groups of ages in the ten years, 1881-90.

Year.	At all Ages.	Under 1 Year.	1 to 5.	5 to 15.	15 to 25.	25 to 60.	60 and over.
1881.....	197	48	14	3	10	44	78
1882.....	251	58	40	18	12	52	71
1883.....	279	58	33	21	21	66	80
1884.....	263	58	36	20	9	61	79
1885.....	260	57	34	8	12	55	94
1886.....	291	62	47	13	11	66	92
1887.....	252	45	17	17	16	64	93
1888.....	242	45	21	8	10	66	92
1889.....	213	33	21	7	10	52	90
1890.....	281	51	32	17	14	57	110
Total	2529	515	295	132	125	583	879
In 1000 Deaths	1000	203	116	52	50	231	348

TABLE 2.—Showing the Deaths and Death-rate in each of the ten years, 1881-90, from Zymotic Diseases.

YEAR.	Small Pox.	Measles.	Scarlatina.	Diphtheria.	Whoop-cough.	Con. Fevers.			Diarrhoea and Dysentery.	Rheumatic Fever.	Erysipelas.	Pyæmia.	Puerperal Fever.	TOTAL.	Rate per 1000 persons living.
						Typhus.	Enteric.	Other.							
1881	1	...	...	2	...	...	4	...	7	...	2	1	...	17	1'0
1882	...	2	4	8	23	...	3	2	6	1	1	...	...	50	2'0
1883	...	4	7	16	3	1	7	...	7	1	...	...	...	46	2'7
1884	...	3	10	5	...	...	6	...	17	...	1	...	2	44	2'4
1885	...	3	8	2	12	2	2	...	5	1	1	...	...	36	1'9
1886	...	3	...	2	14	1	5	...	13	...	2	1	...	41	2'2
1887	1	2	...	2	3	...	16	...	1	2	...	27	1'4
1888	1	3	8	...	...	...	3	...	2	...	...	17	0'9
1889	3	...	...	3	...	4	3	...	1	...	14	0'7
1890	...	3	...	3	7	...	5	...	9	...	1	...	1	29	1'5
Tl.	1	18	31	46	67	6	38	2	87	6	11	5	3	321	1'8

STEYNING RURAL SANITARY DISTRICT.

TABLE 3.—Showing the Total Deaths from Zymotic Diseases in each Parish in the ten years 1881-90.

PARISH.	Population in 1890.	Small Pox.	Measles.	Scarlatina.	Diphtheria.	Whooping Cough.	Continued Fever.			Diarrhoea and Dysentery.	Rheumatic Fever.	Erysipelas.	Pyæmia.	Puerperal Fever.	TOTAL.
							Typhus	Enteric or Typhoid.	Other or doubtful.						
Shoreham Sub-District.															
Preston	100	...	...	...	...	1	...	...	...	2	...	...	...	...	3
Patcham	920	...	1	1	1	1	...	...	...	7	...	...	...	...	15
W. Blatchington	60	1	...	...	...	...	...	...	1	...	...	...	...	...	1
Hangleton	80	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Portslade	4100	...	2	10	7	23	...	...	30	2	2	2	1	1	85
Aldrington	1800	...	4	4	1	5	...	...	11	...	...	1	1	1	28
Southwick	2650	...	...	4	6	11	4	8	11	...	3	...	1	1	48
Kingston	265	...	...	...	...	2	1	...	...	...	1	...	...	...	4
Lancing	1500	...	3	...	4	2	...	4	2	...	1	...	...	...	16
Old Shoreham	250	...	...	...	1	...	...	3	1	...	1	...	...	...	6
Sompting	700	...	4	4	5	5	...	...	4	...	...	...	...	...	18
Coombes	70	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Botolphs	95	...	1	...	...	...	...	...	...	...	...	...	...	...	1
Steyning Sub-District.															
Bramber	190	...	...	...	...	1	...	...	1	...	...	...	...	...	2
Steyning	1720	...	1	6	1	8	...	2	9	1	3	...	...	...	31
Upper Beeding	620	...	...	...	1	1	...	5	...	...	...	...	...	...	8
Edburton	350	...	...	...	...	2	...	...	1	...	...	...	...	...	3
Poynings	320	...	2	...	...	...	...	2	1	...	...	...	...	...	5
Woodmancote	350	...	1	...	...	...	...	...	1	...	...	...	...	...	1
Henfield	1920	...	1	...	17	3	4	4	3	...	...	1	...	...	30
Ashurst	380	...	...	...	2	1	1	1	2	...	...	...	...	...	6
Shermanbury	370	...	2	2	...	1	2	2	1	1	...	...	...	...	9
	18810	1	18	31	46	67	6	38	2	87	6	11	5	3	321

STEYNING RURAL SANITARY DISTRICT.

TABLE 4.—Showing the Deaths and Death-rate from all causes and from various causes in the ten years, 1881-90.

LOCALITY.	Deaths during the 10 years, 1881-90, from							Annual Death-rate per 100,000 living from				
	Population in middle of period.	All Diseases.	Zymotic Disease.	Phthisis.	Lung Disease.	Heart Disease.	All Diseases.	Zymotic Disease.	Phthisis.	Lung Disease.	Heart Disease.	All Diseases.
In 1881	16325	197	17	14	19	16	1207	104	85	116	98	1207
In 1882	16700	251	50	25	20	18	1503	300	150	120	108	1503
In 1883	17000	279	46	29	37	23	1641	270	170	217	135	1641
In 1884	17850	263	44	30	32	24	1473	246	168	179	134	1473
In 1885	18160	260	36	24	50	20	1431	198	132	275	110	1431
In 1886	18300	291	41	30	41	19	1590	224	164	224	103	1590
In 1887	18400	252	27	22	38	17	1369	146	120	206	92	1369
In 1888	18610	242	17	21	36	28	1300	91	112	193	150	1300
In 1889	18700	213	14	20	35	22	1139	75	107	187	118	1139
In 1890	18810	281	29	19	47	28	1494	154	101	250	149	1494
Whole District	18230	2529	321	234	355	215	1415	181	131	197	120	1415

(A)—Table of DEATHS during the Year 1890, in the Rural Sanitary District

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities.	MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES.							(i)	I Small Pox.	2 Scarlatina.	3 Diphtheria.
	(b) At all ages.	(c) Under 1 year.	(d) 1 and under 5.	(e) 5 and under 15.	(f) 15 and under 25.	(g) 25 and under 60.	(h) 60 and upwards.				
Portslade Parish	52	20	6	3	3	11	9	Under 5 5 upwards.			
Southwick Parish	41	8	3	4	2	8	16	Under 5 5 upwards.			
Rest of Shoreham Sub-District	93	16	12	3	2	19	41	Under 5 5 upwards.			
Steyning Parish	28	3	3	1	1	4	16	Under 5 5 upwards.			
Henfield Parish	23	—	4	3	1	4	11	Under 5 5 upwards.			
Rest of Steyning Sub-District	30	4	4	3	5	8	6	Under 5 5 upwards.			
Hangleton Hospital	1	—	—	—	1	—	—	Under 5 5 upwards.			
								Under 5 5 upwards.			
								Under 5 5 upwards.			
								Under 5 5 upwards.			
TOTALS	268	51	32	17	15	54	99	Under 5 5 upwards.			
The subjoined numbers have also to be taken											
Deaths occurring outside the District among persons belonging thereto.....	14	—	—	—	—	3	11	Under 5 5 upwards.			
Deaths occurring within the District among persons not belonging thereto.....	1	—	—	—	1	—	—	Under 5 5 upwards.			

(B)—Table of POPULATION, BIRTHS, AND OF NEW CASES of Health, during the year 1890, in the Rural Sanitary District of

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a)	POPULATION OF ALL AGES.		Registered Births. (d)	Aged under 5 or over 5. (e)	NEW CASES COMING TO THE KNOWLEDGE OF THE REGISTRAR.			
	Census 1881. (b)	Estimated to middle of 1890. (c)			1 Small Pox.	2 Scarlatina.	3 Diphtheria.	4 Membranous Croup.
Portslade Parish.....	3719	4100	117	Under 5 5 upwards.				
Southwick Parish	2561	2650	75	Under 5 5 upwards.				
Rest of Shoreham Sub-District..	3943	5840	139	Under 5 5 upwards.		1	2	2
Steyning Parish	1672	1720	44	Under 5 5 upwards.				
Henfield Parish	1890	1920	32	Under 5 5 upwards.				
Rest of Steyning Sub-District...	2540	2580	77	Under 5 5 upwards.		4	2	
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
TOTALS	16325	18810	484	Under 5 5 upwards.		1 4	2 4	

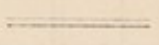
"Notification of Infectious Diseases"

FIGURE 1. CLASSIFIED ACCORDING TO THE SEXES AND AGES.

NUMBER OF SUCH CASES REPORTED FROM THIS DISTRICT IN THE SEVERAL LOCALITIES WHEREIN THE DISTRICT IS DIVIDED.		NUMBER OF SUCH CASES REPORTED FROM THIS DISTRICT IN THE SEVERAL LOCALITIES WHEREIN THE DISTRICT IS DIVIDED.	
Sex	Age	Sex	Age
Male	Under 15	Female	Under 15
Male	15 to 25	Female	15 to 25
Male	25 to 35	Female	25 to 35
Male	35 to 45	Female	35 to 45
Male	45 to 55	Female	45 to 55
Male	55 to 65	Female	55 to 65
Male	65 to 75	Female	65 to 75
Male	75 to 85	Female	75 to 85
Male	85 to 95	Female	85 to 95
Male	95 to 100	Female	85 to 95

HORSHAM

RURAL SANITARY DISTRICT.



STATISTICAL TABLES,

ix. to xvi.

HORSHAM RURAL SANITARY DISTRICT.

TABLE 1.—Showing the Deaths at various groups of ages in the ten years, 1881-90.

Year.	At all Ages.	Under 1 Year.	1 to 5.	5 to 15.	15 to 25.	25 to 60.	60 and over.
1881.....	197	40	14	8	9	55	71
1882.....	198	41	15	14	12	46	70
1883.....	202	32	15	9	8	61	77
1884.....	217	38	18	14	18	49	86
1885.....	228	38	31	12	14	45	88
1886.....	291	61	51	20	14	48	97
1887.....	209	46	15	12	8	45	83
1888.....	219	37	16	13	14	53	86
1889.....	213	32	17	20	12	36	96
1890.....	210	47	11	11	12	47	82
Total	2184	412	203	133	115	485	836
In 1000 Deaths	1000	188	93	61	53	222	383

TABLE 2.—Showing the Deaths and Death-rate in each of the ten years, 1881-90, from Zymotic Diseases.

YEAR.	Small Pox.	Measles.	Scarlatina.	Diphtheria.	Whoop-cough.	Con. Fevers.			Diarrhoea and Dysentery.	Rheumatic Fever.	Erysipelas.	Pyæmia.	Puerperal Fever.	TOTAL.	Rate per 1000 persons living.
						Typhus.	Enteric.	Other.							
1881	...	...	1	2	8	...	...	1	5	2	...	1	2	22	1·4
1882	3	1	5	2	2	...	1	1	1	1	2	...	...	17	1·0
1883	2	1	...	5	5	...	1	...	2	1	3	...	2	17	1·0
1884	...	...	...	10	...	1	1	...	5	...	...	1	...	18	1·1
1885	...	...	1	12	5	...	...	1	3	...	1	...	...	23	1·4
1886	1	23	3	4	15	...	...	...	8	...	...	...	...	54	3·2
1887	...	...	4	4	...	...	2	2	5	...	...	...	...	17	1·0
1888	...	...	1	...	5	...	...	...	5	...	2	1	...	14	0·8
1889	...	...	...	1	4	...	...	...	1	2	...	...	...	8	0·4
1890	4	1	2	4	4	1	1	...	2	...	...	...	...	15	0·8
Tl.	1	32	13	40	48	2	6	5	37	6	8	3	4	205	1·2

HORSHAM RURAL SANITARY DISTRICT.

TABLE 3.—Showing the Total Deaths from Zymotic Diseases in each Parish in the ten years 1881-90.

PARISH.	Population in 1890.	Small Pox.	Measles.	Scarlatina.	Diphtheria.	Whooping Cough.	Continued Fever.			Diarrhea and Dysentery.	Rheumatic Fever.	Erysipelas.	Pyæmia.	Puerperal Fever.	TOTAL.
							Typhus	Enteric or Typhoid.	Other or doubtful.						
South Sub-District (Horsham (part).. West Grinstead.. Shipley	720	...	3	...	1	3	...	1	1	1	...	...	...	9
	1560	...	5	3	7	3	2	1	2	...	1	1	1	26	
	1120	...	...	1	4	6	...	...	4	...	1	...	...	19
	820	...	1	1	1	1	...	...	2	...	...	...	...	6
North Sub-District (Horsham (part).. Lower Beeding.. Ifield	2300	...	4	2	...	9	...	...	8	1	...	1	2	27
	1320	...	2	...	2	6	...	...	2	...	...	...	1	13
	2700	1	7	2	9	7	1	1	7	2	1	...	...	38
	460	...	2	...	...	1	...	...	...	...	1	...	...	4
	540	...	...	1	...	...	...	...	...	...	1	...	...	2
	1080	...	5	1	3	4	...	...	3	1	...	...	...	17
West Sub-District (Slinfold	780	...	1	1	8	3	...	...	...	...	2	...	...	16
	440	...	...	...	...	...	1	1	2	...	...	...	...	4
	1130	...	1	1	1	1	...	...	2	1	1	1	...	9
	1830	...	1	...	4	4	...	...	4	1	...	...	...	15
	16800	1	32	13	40	48	2	6	5	37	6	8	3	4	205

HORSHAM RURAL SANITARY DISTRICT.

TABLE 4.—Showing the Deaths and Death-rate from all causes and from various causes in the ten years, 1881-90.

YEAR.	Deaths during the 10 years, 1881-90, from					Annual Death-rate per 100,000 living from				
	All Diseases.	Zymotic Disease.	Phthisis.	Lung Disease.	Heart Disease.	All Diseases.	Zymotic Disease.	Phthisis.	Lung Disease.	Heart Disease.
In 1881	197	22	22	30	13	1270	141	141	193	83
In 1882	198	17	21	28	12	1263	108	134	178	76
In 1883	202	17	24	32	17	1275	107	151	202	107
In 1884	217	18	15	44	16	1336	110	92	271	98
In 1885	228	23	15	49	21	1387	140	91	298	127
In 1886	291	54	31	50	21	1758	326	187	302	127
In 1887	209	17	12	27	20	1251	101	72	161	120
In 1888	219	14	31	31	22	1311	84	185	185	132
In 1889	213	8	21	38	17	1268	47	125	226	101
In 1890	210	15	26	43	24	1250	89	155	256	143
Whole District	2184	205	218	372	184	1337	125	133	227	111

(A)—Table of DEATHS during the Year 1890, in the Rural Sanitary District.

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a)	MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES.							(i)	1 Small Pox.	2 Scarlatina.
	At all ages. (b)	Under 1 year. (c)	1 and under 5. (d)	5 and under 15. (e)	15 and under 25. (f)	25 and under 60. (g)	60 and upwards. (h)			
South Sub-District	55	10	2	5	2	15	21	Under 5 5 upwards.		1
North Sub-District	98	23	8	1	5	24	37	Under 5 5 upwards.		2
West Sub-District.....	44	12	1	5	3	7	16	Under 5 5 upwards.		
Horsham Workhouse	24	4	—	—	2	7	11	Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
TOTALS	221	49	11	11	12	53	85	Under 5 5 upwards.		1
The subjoined numbers have also to be taken										
Deaths occurring outside the District among persons belonging thereto.....								Under 5 5 upwards.		
Deaths occurring within the District among persons not belonging thereto.....	11	2	—	—	—	6	3	Under 5 5 upwards.		

(B)—Table of POPULATION, BIRTHS, AND OF NEW CASES of Health, during the year 1890, in the Rural Sanitary District

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a)	POPULATION AT ALL AGES.		Registered Births. (d)	Aged under 5 or over 5. (e)	NEW CASES COMING TO THE KN			
	Census 1881. (b)	Estimated to middle of 1890. (c)			1 Small Pox.	2 Scarlatina.	3 Diphtheria.	4 Membranous Group.
South Sub-District.....	4083	4220	95	Under 5 5 upwards.		1 3		3
North Sub-District	7403	8400	221	Under 5 5 upwards.		1	2	
West Sub-District	3940	4180	104	Under 5 5 upwards.		4 12		
Horsham Workhouse .....	.....	.....	.....	Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
TOTALS	15426	16800	420	Under 5 5 upwards.		5 16	2 3	

"Notification of Infectious Disease" is compulsory in

INFECTIOUS SICKNESS, coming to the knowledge of the Medical Officer
 ORSHAM; classified according to DISEASES, AGES and LOCALITIES.

DISEASE IN EACH LOCALITY, AGE OF THE MEDICAL OFFICER HEALTH.				NUMBER OF SUCH CASES REMOVED FROM THEIR HOMES IN THE SEVERAL LOCALITIES FOR TREATMENT IN ISOLATION HOSPITAL.																		
				7	8	9	10	11	12	13	1	2	3	4	5	6	7	8	9	10	11	12	13
FEVERS.				FEVERS.																		
Typhoid.	Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.			Small Pox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.				

ct. There is no Isolation Hospital.

BY EACH LOCALITY.

SHOWS THE SEVERAL LOCALITIES FOR TREATMENT IN EACH LOCALITY.

BY LOCALITY HOSPITAL.										
FEVER.										
		1	2	3	4	5	6	7	8	9
Typhoid Cholera Typhus Dysentery Computed Enteric Enteric Cholera Dysentery Cholera Typhus										

PETWORTH
RURAL SANITARY DISTRICT.

STATISTICAL TABLES,

xvii. to xxiv.

PETWORTH RURAL SANITARY DISTRICT.

TABLE 1.—Showing the Deaths at various groups of ages in the ten years, 1881-90.

Year.	At all Ages.	Under 1 Year.	1 to 5.	5 to 15.	15 to 25.	25 to 60.	60 and over.
1881.....	158	28	10	9	9	34	68
1882.....	125	17	8	6	8	31	55
1883.....	171	25	13	6	6	41	80
1884.....	140	19	10	8	8	29	66
1885.....	155	20	16	5	8	34	72
1886.....	202	27	18	9	9	46	93
1887.....	131	16	8	6	9	29	63
1888.....	143	21	10	7	7	30	68
1889.....	142	24	7	7	7	37	60
1890.....	136	14	4	3	7	32	76
Total	1503	211	104	66	78	343	701
In 1000 Deaths	1000	140	69	44	52	228	466

TABLE 2.—Showing the Deaths and Death-rate in each of the ten years, 1881-90, from Zymotic Diseases.

YEAR.	Small Pox.	Measles.	Scarlatina.	Diphtheria.	Whoop-cough.	Con. Fevers.			Diarrhoea and Dysentery.	Rheumatic Fever.	Erysipelas.	Pyæmia.	Puerperal Fever.	TOTAL.	Rate per 1000 persons living.
						Typhus.	Enteric.	Other.							
1881	3	...	...	1	...	...	...	...	...	...	4	0·4
1882	1	3	...	...	...	3	...	1	...	...	8	0·8
1883	1	...	1	...	2	...	2	1	2	...	...	9	0·9
1884	2	1	...	...	...	...	...	...	2	...	5	0·5
1885	4	2	...	2	...	1	...	1	...	...	10	1·0
1886	...	2	1	4	5	...	4	...	1	...	1	...	...	18	1·8
1887	1	1	...	...	...	...	2	...	...	...	...	4	0·4
1888	7	2	...	1	...	1	...	1	...	...	12	1·2
1889	...	2	...	2	1	...	1	...	1	...	...	...	...	7	0·7
1890	1	...	1	...	...	...	...	2	0·2
Tl.		4	3	24	15		12		12	1	6	2		79	0·8

PETWORTH RURAL SANITARY DISTRICT.

TABLE 3.—Showing the Total Deaths from Zymotic Diseases in each Parish in the ten years 1881-90.

PARISH.	Population in 1890.	Small Pox.	Measles.	Scarlatina.	Diphtheria.	Whooping Cough.	Continued Fever.			Dysentery.	Rheumatic Fever.	Erysipelas.	Pyæmia.	Puerperal Fever.	TOTAL.
							Typhus	Enteric or Typhoid.	Other or doubtful.						
North Sub-District {	Wisboro' Green.	1650	2	...	2	1	...	2	...	1	1	...	...	...	9
	Northchapel —	790	...	...	4	...	...	...	...	...	1	1	...	...	6
	Kirdford	1700	1	...	8	1	...	3	...	1	...	...	...	...	14
South Sub-District {	Petworth	2940	1	2	4	10	...	5	...	6	1	4	...	...	33
	Egdean	75	...	...	1	...	...	1	...	1	...	...	...	...	3
	Fittleworth	700	...	...	2	...	...	...	...	1	...	...	...	...	3
	Stopham	160	...	...	...	...	...	...	...	...	...	...	...	...	1
	Coates	60	...	...	...	...	...	1	...	...	...	...	...	...	1
	Burton	70	...	...	...	...	...	...	...	...	...	...	...	...	...
	Duncton	265	...	...	...	...	...	...	...	...	...	...	...	...	...
	Barlavington	180	...	...	...	...	...	...	...	...	...	...	...	...	...
	Sutton	310	...	...	1	...	...	...	...	...	...	...	...	...	1
	Bignor	130	...	...	2	...	2	...	...	...	...	...	...	...	4
Bury	520	...	...	...	...	1	...	...	...	...	...	1	...	5	
Whole District	9550	—	4	3	24	15	—	12	—	12	1	6	2	—	79

PETWORTH RURAL SANITARY DISTRICT.

TABLE 4.—Showing the Deaths and Death-rate from all causes and from various causes in the ten years, 1881-90.

YEAR.	Deaths during the 10 years, 1881-90, from					Annual Death-rate per 100,000 living from					
	Population in middle of period.	All Diseases.	Zymotic Disease.	Phthisis.	Lung Disease.	Heart Disease.	All Diseases.	Zymotic Disease.	Phthisis.	Lung Disease.	Heart Disease.
In 1881	9550	158	4	13	38	16	1658	41	136	397	167
In 1882	9500	125	8	12	17	12	1315	84	126	179	126
In 1883	9500	171	9	15	26	18	1800	94	158	273	189
In 1884	9550	140	5	14	20	22	1466	52	146	209	230
In 1885	9550	155	10	15	25	8	1663	104	156	261	83
In 1886	9550	202	18	18	30	17	2115	188	188	314	178
In 1887	9550	131	4	16	23	17	1371	42	167	241	179
In 1888	9550	143	12	14	13	15	1497	125	146	136	157
In 1889	9550	142	7	12	26	19	1487	73	125	272	200
In 1890	9550	136	2	10	25	15	1424	21	105	262	157
Whole District	9550	1503	79	139	243	159	1580	82	145	254	167

(A)—Table of DEATHS during the Year 1890, in the Rural Sanitary Dis

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a)	MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES.							(i)	1	2
	At all ages. (b)	Under 1 year. (c)	1 and under 5. (d)	5 and under 15. (e)	15 and under 25. (f)	25 and under 60. (g)	60 and upwards. (h)		Small Pox.	Scarlatina.
North Sub-District	58	7	1	1	2	14	33	Under 5 5 upwards.		
Petworth Parish.....	36	6	2	—	3	10	15	Under 5 5 upwards.		
Rest of South Sub-District ...	27	1	1	1	2	5	17	Under 5 5 upwards.		
Petworth Workhouse	8	—	—	1	—	3	4	Under 5 5 upwards.		
Wisborough Green Workhouse	7	—	—	—	—	—	7	Under 5 5 upwards.		
Petworth Cottage Hospital ...	—	—	—	—	—	—	—	Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
TOTALS	136	14	4	3	7	32	76	Under 5 5 upwards.		
The subjoined numbers have also to be taken										
Deaths occurring outside the District among persons belonging thereto.....								Under 5 5 upwards.		
Deaths occurring within the District among persons not belonging thereto.....	—	—	—	—	—	—	—	Under 5 5 upwards.		

(B)—Table of POPULATION, BIRTHS, AND OF NEW CASES of Health, during the year 1890, in the Rural Sanitary District

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a)	POPULATION AT ALL AGES.		Registered Births. (d')	Aged under 5 or over 5. (e)	NEW CASES COMING TO THE K.			
	Census 1881. (b)	Estimated to middle of 1890. (c)			1 Small Pox.	2 Scarlatina.	3 Diphtheria.	4 Membranous Group.
North Sub-District	4160	4140	97	Under 5 5 upwards.			1	
Petworth Parish.....	2942	2940	62	Under 5 5 upwards.				
Rest of South Sub-District	2493	2470	64	Under 5 5 upwards.				
Petworth Workhouse	—	—	—	Under 5 5 upwards.				
Wisborough Green Workhouse...	—	—	—	Under 5 5 upwards.				
Petworth Cottage Hospital	—	—	—	Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
TOTALS	9595	9550	223	Under 5 5 upwards.			1	

INFECTIOUS SICKNESS, coming to the knowledge of the Medical Officer
 TWORTH; classified according to DISEASES, AGES and LOCALITIES.

SICKNESS IN EACH LOCALITY, NAME OF THE MEDICAL OFFICER LOCALITY.							NUMBER OF SUCH CASES REMOVED FROM THEIR HOMES IN THE SEVERAL LOCALITIES FOR TREATMENT IN ISOLATION HOSPITAL.													
FEVERS.			FEVERS.																	
7	8	9	10	11	12	13	1	2	3	4	5	6	7	8	9	10	11	12	13	
Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.			Small Pox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.			
				I																

Is compulsory in the District.

THAKEHAM
RURAL SANITARY DISTRICT.

STATISTICAL TABLES,

xxv. to xxxii.

THAKEHAM RURAL SANITARY DISTRICT.

TABLE 1.—Showing the Deaths at various groups of ages in the ten years, 1881-90.

Year.	At all Ages.	Under 1 Year.	1 to 5.	5 to 15.	15 to 25.	25 to 60.	60 and over.
1881.....	114	14	10	6	6	32	46
1882.....	103	9	12	4	4	22	52
1883.....	121	19	11	3	7	32	49
1884.....	126	17	12	9	5	31	52
1885.....	119	21	13	8	5	28	44
1886.....	118	18	9	2	6	32	51
1887.....	123	19	13	6	6	26	53
1888.....	106	17	8	3	4	24	50
1889.....	127	19	22	9	7	24	46
1890.....	101	12	4	3	5	26	51
Total	1158	165	114	53	55	277	494
In 1000 Deaths	1000	142	99	46	47	239	427

TABLE 2.—Showing the Deaths and Death-rate in each of the ten years, 1881-90, from Zymotic Diseases.

YEAR.	Small Pox.	Measles.	Scarlatina.	Diphtheria.	Whoop-cough.	Con. Fevers.			Diarrhea and Dysentery.	Rheumatic Fever.	Erysipelas.	Pyæmia.	Puerperal Fever.	TOTAL.	Rate per 1000 persons living.
						Typhus.	Enteric.	Other.							
1881	2	3	..	..	..	..	1	..	..	..	..	6	0·7
1882	..	1	1	2	..	..	1	..	..	1	..	..	..	6	0·7
1883	1	2	..	..	2	..	2	..	..	..	..	7	0·8
1884	1	1	3	1	1	..	..	..	3	..	2	12	1·4
1885	3	5	2	..	..	..	2	..	2	..	..	14	1·6
1886	1	..	2	..	6	..	1	..	2	..	1	..	3	16	1·9
1887	1	4	1	..	4	..	2	..	1	..	..	13	0·5
1888	1	..	2	..	..	..	3	..	..	..	1	7	0·8
1889	..	2	1	12	5	..	..	..	1	..	2	..	..	23	2·7
1890	..	1	..	..	..	..	1	..	1	..	..	..	..	3	0·3
Tl.	1	4	13	29	19	1	10	..	14	1	9	..	6	107	1·3

THAKEHAM RURAL SANITARY DISTRICT.

TABLE 3.—Showing the Total Deaths from Zymotic Diseases in each Parish in the ten years 1881-90.

PARISH.	Population in 1890.	Small Pox.	Measles.	Scarlatina.	Diphtheria.	Whooping Cough.	Continued Fever.			Diarrhoea and Dysentery.	Rheumatic Fever.	Erysipelas.	Pyæmia.	Puerperal Fever.	TOTAL.
							Typhus	Enteric or Typhoid.	Other or doubtful.						
North Stoke.....	100	...	...	...	...	1	...	...	...	1	...	...	...	...	1
Amberley.....	600	...	1	4	...	1	...	...	1	...	...	...	...	...	8
Rackham.....	160	...	...	...	...	2	...	...	1	...	...	...	...	...	3
Greatham.....	60	...	...	...	1	...	...	...	...	...	...	...	...	...	1
Hardham.....	100	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cold Waltham...	380	...	...	...	...	2	...	1	...	...	...	...	1	...	4
Wiggonholt.....	40	...	...	...	...	1	...	...	...	...	...	...	...	...	1
Pulborough.....	1810	...	...	3	9	4	...	3	1	...	2	...	1	...	23
W. Chiltington..	660	...	1	...	7	1	...	...	2	...	2	...	...	...	13
Parham.....	90	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Storrington.....	1300	...	1	2	6	1	...	3	2	...	3	...	2	...	21
Sullington.....	200	...	...	...	...	...	...	...	1	...	...	...	1	...	2
Thakeham.....	540	...	...	1	...	1	...	1	1	...	...	...	...	...	4
Warminghurst ..	90	...	...	...	...	1	...	...	1	...	...	...	...	...	2
Ashington.....	250	...	...	...	...	1	...	1	2	...	1	...	1	...	6
Wiston.....	310	...	...	1	...	...	...	...	...	...	...	...	...	...	1
Washington.....	840	...	1	...	4	2	...	...	2	...	1	...	...	...	11
Findon.....	720	...	...	2	2	1	...	1	...	...	...	...	...	...	6
Whole District	8250	1	4	13	29	19	1	10	—	14	1	—	6	107	

THAKEHAM RURAL SANITARY DISTRICT.

TABLE 4.—Showing the Deaths and Death-rate from all causes and from various causes in the ten years, 1881-90.

YEAR.	Deaths during the 10 years, 1881-90, from					Annual Death-rate per 100,000 living from					
	Population in middle of period.	All Diseases.	Zymotic Disease.	Phthisis.	Lung Disease.	Heart Disease.	All Diseases.	Zymotic Disease.	Phthisis.	Lung Disease.	Heart Disease.
In 1881	8290	114	6	17	14	8	1375	72	205	168	96
In 1882	8280	103	6	11	20	8	1243	72	132	241	96
In 1883	8280	121	7	15	20	9	1461	84	181	241	108
In 1884	8250	126	12	10	24	8	1527	145	121	290	96
In 1885	8250	119	14	10	27	10	1442	169	121	327	121
In 1886	8250	118	16	10	32	11	1430	194	121	388	133
In 1887	8250	123	13	14	18	12	1490	157	170	218	145
In 1888	8250	106	7	9	22	14	1284	85	109	266	170
In 1889	8250	127	23	12	24	10	1540	279	145	291	121
In 1890	8250	101	3	6	18	13	1202	36	73	218	158
Whole District	8250	1158	107	114	219	103	1400	130	138	265	124

(A)—Table of DEATHS during the Year 1890, in the Rural Sanitary District.

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a)	MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES.							(i)	1 Small Pox.	2 Scarlatina.
	At all ages. (b)	Under 1 year. (c)	1 and under 5. (d)	5 and under 15. (e)	15 and under 25. (f)	25 and under 60. (g)	60 and upwards. (h)			
Pulborough Parish.....	17	1	1	1	—	4	10	Under 5 5 upwards.		
Rest of Pulborough Sub-Dist.	30	5	2	—	2	5	16	Under 5 5 upwards.		
Storrington Parish.....	15	1	1	1	2	3	7	Under 5 5 upwards.		
Rest of Washington Sub-Dist.	28	2	—	1	1	12	12	Under 5 5 upwards.		
Thakeham Workhouse	10	3	—	—	—	1	6	Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
TOTALS	100	12	4	3	5	25	51	Under 5 5 upwards.		
The subjoined numbers have also to be taken										
Deaths occurring outside the District among persons belonging thereto.....	1	—	—	—	—	1	—	Under 5 5 upwards.		
Deaths occurring within the District among persons not belonging thereto.....	—	—	—	—	—	—	—	Under 5 5 upwards.		

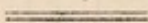
(B)—Table of POPULATION, BIRTHS, AND OF NEW CASES
of Health, during the year 1890, in the Rural Sanitary District

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a)	POPULATION AT ALL AGES.		Registered Births. (d)	Aged under 5 or over 5. (e)	NEW CASES COMING TO THE KN			
	Census 1881. (b)	Estimated to middle of 1890. (c)			1 Small Pox.	2 Scarlatina.	3 Diphtheria.	4 Membranous Group.
Pulborough Parish.....	1808	1810	55	Under 5 5 upwards.				
Rest of Pulborough Sub-District	2080	2100	49	Under 5 5 upwards.			1	
Storrington Parish.....	1351	1300	27	Under 5 5 upwards.			1	
Rest of Washington Sub-District	3046	3040	79	Under 5 5 upwards.		3 9	1 4	
Thakeham Workhouse	—	—	—	Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
TOTALS	8285	8250	210	Under 5 5 upwards.		3 9	1 6	

NUMBER OF NEW CASES REPORTED FROM THEIR HOMES IN THE SEVERAL LOCALITIES FOR TREATMENT IN EASTON HOSPITAL.											IN EACH LOCALITY.												
FEBRUARY											1	2	3	4	5	6	7	8	9	10	11	12	
1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12

EAST PRESTON

RURAL SANITARY DISTRICT.



STATISTICAL TABLES,

xxxiii. to xl.

EAST PRESTON RURAL SANITARY DISTRICT.

TABLE 1.—Showing the Deaths at various groups of ages in the ten years, 1881-90.

Year.	At all Ages.	Under 1 Year.	1 to 5.	5 to 15.	15 to 25.	25 to 60.	60 and over.
1881.....	128	22	5	13	7	28	53
1882.....	97	15	14	3	5	25	35
1883.....	130	21	11	5	4	34	55
1884.....	116	23	12	7	4	30	40
1885.....	132	19	11	7	8	30	57
1886.....	106	19	15	4	1	21	46
1887.....	114	10	5	10	11	24	54
1888.....	108	15	14	10	7	21	41
1889.....	116	20	8	4	6	29	49
1890.....	122	18	8	2	9	28	57
Total	1169	182	103	65	62	270	487
In 1000 Deaths	1000	156	88	56	53	231	416

TABLE 2.—Showing the Deaths and Death-rate in each of the ten years, 1881-90, from Zymotic Diseases.

YEAR.	Small Pox.	Measles.	Scarlatina.	Diphtheria.	Whoop-cough.	Con. Fevers.			Diarrhoea and Dysentery.	Rheumatic Fever.	Erysipelas.	Pyæmia.	Puerperal Fever.	TOTAL.	Rate per 1000 persons living.
						Typhus.	Enteric.	Other.							
1881	...	...	5	9	1	...	...	...	1	2	1	...	1	20	2.4
1882	...	...	...	1	5	...	1	...	...	...	...	...	...	7	0.8
1883	6	...	...	1	...	...	...	...	2	...	...	...	...	9	1.0
1884	2	2	...	4	...	...	...	...	2	...	1	...	...	11	1.3
1885	1	1	...	2	2	...	...	...	2	...	...	...	...	8	0.9
1886	...	...	2	2	4	...	...	...	6	...	...	...	...	14	1.6
1887	...	...	1	2	...	...	1	...	5	...	...	...	...	9	1.0
1888	...	...	2	4	9	...	...	...	1	...	...	...	1	17	1.9
1889	1	...	...	4	2	...	...	...	1	...	...	...	...	8	0.9
1890	...	...	...	1	2	...	...	...	3	...	...	...	...	6	0.6
Tl.	10	13	30	25			2		23	2	2		2	109	1.2

EAST PRESTON RURAL SANITARY DISTRICT.

TABLE 3.—Showing the Total Deaths from Zymotic Diseases in each Parish in the ten years 1881-90.

PARISH.	Population in 1890.	Small Pox.	Measles.	Scarlatina.	Diphtheria.	Whooping Cough.	Continued Fever.			Diarrhea and Dysentery.	Rheumatic Fever.	Erysipelas.	Pyæmia.	Puerperal Fever.	TOTAL.
							Typhus	Enteric or Typhoid.	Other or doubtful.						
Worthing Sub-District.	Broadwater .....	...	3	8	2	3	...	...	4	1	...	...	...	1	22
	Heene .....	...	...	1	...	...	...	...	...	...	...	...	...	...	1
	West Tarring	1060	...	...	...	3	...	...	4	...	...	...	...	...	8
	Clapham	240	...	...	...	1	...	...	1	...	...	...	...	...	3
	Durrington	180	...	...	1	...	...	...	...	...	...	...	...	...	1
	Goring	540	...	3	...	9	...	...	...	...	...	...	...	...	12
	Ferring	230	...	...	1	1	...	...	...	...	...	...	...	...	2
Littlehampton Sub-District.	Kingston	40	...	...	...	...	...	...	...	...	...	...	...	...	...
	East Preston	440	...	1	...	4	...	...	...	...	...	...	...	...	5
	Angmering	920	...	...	1	4	...	...	3	...	...	...	...	...	8
	Lymminster	1200	...	1	6	2	...	...	7	...	1	...	...	...	18
	Rustington	370	...	1	2	2	...	...	...	...	...	...	...	...	3
	Climping	280	...	1	3	...	...	...	...	...	...	...	...	...	4
	Ford	100	...	...	1	1	...	...	...	...	...	...	...	...	2
Arundel Sub-District.	Tortington	250	...	...	1	...	...	...	...	...	...	...	1	...	2
	Poling	180	...	...	...	1	...	...	1	...	1	...	...	...	3
	Patching	280	...	...	1	...	...	...	...	...	...	...	...	...	1
	Angmering N.	130	...	...	...	1	...	...	...	...	...	...	...	...	1
	Warningcamp	130	...	...	...	...	...	...	1	...	...	...	...	...	1
	Lymminster N.	420	...	1	3	...	2	...	1	...	...	...	...	...	7
	Burpham	290	...	...	1	1	1	...	...	1	...	...	...	...	2
Whole District	South Stoke	135	...	...	1	1	...	...	1	...	...	...	...	...	2
	Houghton	185	...	...	...	...	...	...	...	...	...	...	...	...	1
Whole District	8900	—	10	13	30	25	—	2	23	2	2	—	2	109	

EAST PRESTON RURAL SANITARY DISTRICT.

TABLE 4.—Showing the Deaths and Death-rate from all causes and from various causes in the ten years, 1881-90.

YEAR.	Deaths during the 10 years, 1881-90, from					Annual Death-rate per 100,000 living from					
	Population in middle of period.	All Diseases.	Zymotic Disease.	Phthisis.	Lung Disease.	Heart Disease.	All Diseases.	Zymotic Disease.	Phthisis.	Lung Disease.	Heart Disease.
In 1881	8080	128	20	12	15	15	1584	247	148	185	185
In 1882	8230	97	7	8	14	14	1178	85	97	170	170
In 1883	8330	130	9	9	13	14	1560	108	108	156	168
In 1884	8350	116	11	13	17	10	1389	131	155	203	119
In 1885	8530	132	8	12	25	9	1547	93	140	293	105
In 1886	8610	106	14	9	19	8	1231	162	104	220	93
In 1887	8740	114	9	9	14	17	1304	103	103	160	194
In 1888	8840	108	17	6	19	10	1221	192	68	215	113
In 1889	8900	116	8	13	14	10	1303	90	146	157	112
In 1890	8900	122	6	7	26	11	1371	67	79	292	125
Whole District	8570	1169	109	98	176	118	1369	128	115	205	138

(A)—Table of DEATHS during the Year 1890, in the Rural Sanitary District

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a)	MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES.							(i)	I Small Pox.	2 Scarlatina.	3 Dysentery.
	At all ages. (b)	Under 1 year. (c)	1 and under 5. (d)	5 and under 15. (e)	15 and under 25. (f)	25 and under 60. (g)	60 and upwards. (h)				
Worthing Sub-District	45	9	2	—	3	15	16	Under 5 5 upwards.			
Littlehampton Sub-District ...	38	6	1	2	4	7	18	Under 5 5 upwards.			
Arundel Sub-District.....	23	3	4	—	2	5	9	Under 5 5 upwards.			
East Preston Workhouse	21	—	1	—	—	3	17	Under 5 5 upwards.			
								Under 5 5 upwards.			
								Under 5 5 upwards.			
								Under 5 5 upwards.			
								Under 5 5 upwards.			
								Under 5 5 upwards.			
								Under 5 5 upwards.			
								Under 5 5 upwards.			
								Under 5 5 upwards.			
TOTALS	127	18	8	2	9	30	60	Under 5 5 upwards.			
The subjoined numbers have also to be taken											
Deaths occurring outside the District among persons belonging thereto.....	2	—	—	—	—	—	2	Under 5 5 upwards.			
Deaths occurring within the District among persons not belonging thereto.....	7	—	1	—	—	2	5	Under 5 5 upwards.			

EAST PRESTON, classified according to Diseases, Ages, and Localities.

MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN
UNDER FIVE YEARS OF AGE.

Group.	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
	FEVERS.					Cholera.	Erysipelas.	Measles.	Whooping Cough.	Diarrhoea and Dysentery.	Rheumatic Fever.	Ague.	Phthisis.	Bronchitis, Pneumonia, Pleurisy.	Heart Disease.	Injuries.	All other Diseases.	TOTALS.
Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.														
									2	1				4	1		3	11
													3	10	2	2	17	34
										2				1			4	7
													2	6	7	2	14	31
														1			5	7
													1	2		2	11	16
														1				1
													1	2			17	20
									2	3				7	1		12	26
													7	20	9	6	59	101
at in judging of the above records of mortality.																		
															1		1	2
														1			6	7

(B)—Table of POPULATION, BIRTHS, AND OF NEW CASES of Health, during the year 1890, in the Rural Sanitary District

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a)	POPULATION AT ALL AGES.		Registered Births. (d)	Aged under 5 or over 5. (e)	NEW CASES COMING TO THE KNOWLEDGE OF THE REGISTRAR			
	Census 1881. (b)	Estimated to middle of 1890. (c)			1 Small Pox.	2 Scarlatina.	3 Diphtheria.	4 Membranous Croup.
Worthing Sub-District	2910	3550	80	Under 5 5 upwards.				
Littlehampton Sub-District	3753	3350	79	Under 5 5 upwards.		1		
Arundel Sub-District.....	1362	2000	45	Under 5 5 upwards.			1 4	
East Preston Workhouse	—	—	—	Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
TOTALS	8025	8900	204	Under 5 5 upwards.			1 4	

INFECTIOUS SICKNESS, coming to the knowledge of the Medical Officer
AT PRESTON; classified according to DISEASES, AGES and LOCALITIES.

DISEASES IN EACH LOCALITY, AGE OF THE MEDICAL OFFICER AT PRESTON.						NUMBER OF SUCH CASES REMOVED FROM THEIR HOMES IN THE SEVERAL LOCALITIES FOR TREATMENT IN ISOLATION HOSPITAL.													
7	8	9	10	11	12	13	1	2	3	4	5	6	7	8	9	10	11	12	13
FEVERS.						FEVERS.													
Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.			Small Pox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.		

MIDHURST RURAL SANITARY DISTRICT.

TABLE 3.—Showing the Total Deaths from Zymotic Diseases in each Parish in the ten years 1881-90.

PARISH.	Population in 1890.	Small Pox.	Measles.	Scarlatina.	Diphtheria.	Whooping Cough.	Continued Fever.			Dysentery.	Rheumatic Fever.	Erysipelas.	Pyæmia.	Puerperal Fever.	TOTAL.	
							Typhus	Enteric or Typhoid.	Other or doubtful.							
Midhurst Sub-District.	East Lavington ...	225	...	...	...	1	...	1	...	...	...	...	...	...	2
	West Lavington ...	150	...	...	...	...	...	...	...	...	...	...	...	...	2
	Tillington ...	900	...	4	1	...	...	...	2	...	1	...	...	...	9
	Lodsworth ...	710	...	...	1	...	...	...	...	...	...	...	...	...	5
	Selham ...	50	...	...	...	...	...	...	...	...	...	...	...	...	...
	Heyshott ...	460	...	...	7	...	...	...	4	...	1	...	...	...	14
	Grafham ...	415	...	...	...	3	...	...	...	1	1	...	...	...	5
	Cocking ...	600	...	1	...	1	...	...	2	...	1	...	...	...	6
	Midhurst ...	1850	...	1	...	2	...	...	...	3	2	...	...	...	10
	Woolbeding ...	365	...	...	2	1	...	...	...	...	...	...	...	...	4
	Easebourne ...	1550	...	1	1	3	...	...	5	...	1	...	...	...	17
	South Ambersham	125	...	...	...	...	...	...	...	...	...	...	...	...	...
	Fernhurst Sub-Dist.	North Ambersham	170	1	...	1	1	3
		Lurgashall ...	740	1	...	3	1	2	1	8
Fernhurst ...		1140	...	1	7	4	...	4	4	1	1	...	...	...	25
Linchmere ...		350	1	1	9	...	...	1	...	...	...	...	...	...	9
Linch ...		100	...	...	...	...	...	...	...	...	...	...	...	...	...
Harting Sub-District.	Stedham ...	545	1	1	1	1	...	...	1	...	...	...	...	...	7
	Iping ...	530	4	1	...	1	...	...	...	...	...	...	...	...	7
	Trotton ...	405	...	1	4	3	...	...	...	1	1	...	...	...	10
	Chithurst ...	340	...	...	...	4	...	...	...	...	...	...	...	...	4
	Terwick ...	190	...	...	...	2	...	...	...	...	...	...	...	...	2
	Rogate ...	990	...	1	...	2	...	...	2	1	...	...	...	...	7
	Harting ...	1280	...	1	2	1	...	...	1	...	1	...	...	...	15
	Elsted ...	210	...	...	...	2	...	...	...	...	1	...	...	...	3
	Treyford ...	150	...	1	...	...	...	...	...	...	...	...	...	...	1
	Didling ...	85	...	1	...	...	...	...	...	...	...	...	...	...	3
Bepton ...	275	1	...	2	...	1	...	...	...	...	...	...	...	4	
Whole District	14900	6	18	24	39	36	22	15	8	11	—	—	3	182		

MIDHURST RURAL SANITARY DISTRICT.

TABLE 4.—Showing the Deaths and Death-rate from all causes and from various causes in the ten years, 1881-90.

YEAR.	Deaths during the 10 years, 1881-90, from					Annual Death-rate per 100,000 living from					
	Population in middle of period.	All Diseases.	Zymotic Disease.	Phthisis.	Lung Disease.	Heart Disease.	All Diseases.	Zymotic Disease.	Phthisis.	Lung Disease.	Heart Disease.
In 1881	13987	205	19	14	33	20	1465	135	100	236	143
In 1882	14100	240	32	21	36	19	1702	227	149	255	134
In 1883	14210	188	16	20	25	23	1323	112	140	175	161
In 1884	14360	230	18	27	23	22	1601	125	188	160	153
In 1885	14500	233	25	20	33	21	1607	172	138	227	144
In 1886	14650	243	30	21	31	30	1658	204	143	211	204
In 1887	14700	219	10	22	41	16	1490	68	149	279	109
In 1888	14800	191	17	18	32	24	1290	115	121	216	162
In 1889	14900	157	8	14	20	19	1059	54	94	134	128
In 1890	14900	191	7	20	29	22	1282	47	134	194	148
Whole District	14575	2097	182	197	303	216	1448	126	136	209	149

(A)—Table of DEATHS during the Year 1890, in the Rural Sanitary District

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a)	MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES.							(i)	1 Small Pox.	2 Scarlatina.
	At all ages. (b)	Under 1 year. (c)	1 and under 5. (d)	5 and under 15. (e)	15 and under 25. (f)	25 and under 60. (g)	60 and upwards. (h)			
Midhurst Parish.....	24	6	2	1	—	7	8	Under 5 5 upwards.		
Rest of Midhurst Sub-District	60	6	5	—	4	11	34	Under 5 5 upwards.		
Fernhurst Sub-District	36	5	4	2	2	7	16	Under 5 5 upwards.		1
Harting Sub-District.....	59	13	3	3	—	14	26	Under 5 5 upwards.		
Easebourne Workhouse	12	—	—	—	—	2	10	Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
TOTALS	191	30	14	6	6	41	94	Under 5 5 upwards.		1
The subjoined numbers have also to be taken										
Deaths occurring outside the District among persons belonging thereto.....	—	—	—	—	—	—	—	Under 5 5 upwards.		
Deaths occurring within the District among persons not belonging thereto.....	—	—	—	—	—	—	—	Under 5 5 upwards.		

(B)—Table of POPULATION, BIRTHS, AND OF NEW CASES of Health, during the year 1890, in the Rural Sanitary District

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a)	POPULATION AT ALL AGES.		Registered Births. (d)	Aged under 5 or over 5. (e)	NEW CASES COMING TO THE KN			
	Census 1881. (b)	Estimated to middle of 1890. (c)			1 Small Pox.	2 Scarlatina.	3 Diphtheria.	4 Membranous Group.
Midhurst Parish.....	1615	1850	44	Under 5 5 upwards.		1		
Rest of Midhurst Sub-District...	4926	5550	119	Under 5 5 upwards.		1	2	
Fernhurst Sub-District	2435	2500	66	Under 5 5 upwards.		8 26		
Harting Sub-District.....	4957	5000	119	Under 5 5 upwards.				
Easebourne Workhouse	—	—	—	Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
TOTALS	13933	14900	348	Under 5 5 upwards.		8 28	2	

WESTBOURNE
RURAL SANITARY DISTRICT.

STATISTICAL TABLES,

xlix. to lvi.

WESTBOURNE RURAL SANITARY DISTRICT.

TABLE 1.—Showing the Deaths at various groups of ages in the ten years, 1881-90.

Year.	At all Ages.	Under 1 Year.	1 to 5.	5 to 15.	15 to 25.	25 to 60.	60 and over.
1881.....	91	13	5	3	2	19	49
1882.....	118	24	12	8	4	24	46
1883.....	120	21	12	7	7	26	47
1884.....	97	13	6	9	5	24	40
1885.....	125	20	7	6	5	26	61
1886.....	132	23	11	4	6	27	61
1887.....	108	25	7	1	9	25	41
1888.....	96	15	10	2	1	18	50
1889.....	89	14	8	3	3	20	41
1890.....	97	13	9	6	6	19	44
Total	1073	181	87	49	48	228	480
In 1000 Deaths	1000	169	81	46	45	212	447

TABLE 2.—Showing the Deaths and Death-rate in each of the ten years, 1881-90, from Zymotic Diseases.

YEAR.	Small Pox.	Measles.	Scarlatina.	Diphtheria.	Whoop-cough.	Con. Fevers.			Diarrhoea and Dysentery.	Rheumatic Fever.	Erysipelas.	Pyæmia.	Puerperal Fever.	TOTAL.	Rate per 1000 persons living.
						Typhus.	Enteric.	Other.							
1881	1	..	..	..	..	..	2	..	1	4	0.5	
1882	..	1	1	8	4	..	1	..	1	1	1	..	18	2.4	
1883	3	1	..	1	..	2	..	..	..	7	0.9	
1884	6	4	..	..	..	1	..	..	..	11	1.4	
1885	10	..	2	1	..	..	13	1.7	
1886	..	2	..	..	3	..	2	..	1	..	1	..	9	1.1
1887	2	..	1	..	..	..	3	0.4	
1888	..	4	..	1	..	..	1	..	..	1	..	..	7	0.9
1889	9	..	2	..	..	..	..	..	11	1.4	
1890	3	5	..	..	..	1	1	..	..	10	1.3	
Tl.	—	7	1	22	26	—	19	—	9	1	5	2	1	93	1.2

WESTBOURNE RURAL SANITARY DISTRICT.

TABLE 3.—Showing the Total Deaths from Zymotic Diseases in each Parish in the ten years 1881-90.

PARISH.	Population in 1890.	Small Pox.	Measles.	Scarlatina.	Diphtheria.	Whooping Cough.	Continued Fever.			Diarrhoea and Dysentery.	Rheumatic Fever.	Erysipelas.	Pyæmia.	Puerperal Fever.	TOTAL.
							Typhus	Enteric or Typhoid.	Other or doubtful.						
West Dean	745	...	...	...	...	7	...	1	...	2	1	2	...	...	13
East Marden	92	...	...	...	...	...	...	...	...	...	...	...	...	...	...
North Marden	40	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Up Marden	340	...	...	...	1	1	...	1	...	...	...	...	...	...	3
Stoughton	640	...	...	...	2	1	...	1	...	...	...	...	...	...	4
Compton.....	290	...	...	...	1	1	...	...	...	...	...	...	...	...	2
Racton	98	...	...	...	...	...	...	1	1	...	...	...	...	...	2
Funtington.....	1145	...	2	...	10	2	...	4	1	1	2	1	...	...	22
Bosham	1290	...	...	...	1	5	...	3	4	...	...	...	...	...	13
Chidham.....	270	...	...	1	...	2	...	1	...	...	...	...	...	...	4
West Thorney	130	...	...	...	...	...	...	...	1	...	...	...	...	...	1
Westbourne	2520	...	5	...	7	7	...	7	...	...	1	1	1	...	29
Whole District	7600	—	7	1	22	26	—	19	9	1	5	2	1	...	93

WESTBOURNE RURAL SANITARY DISTRICT.

TABLE 4.—Showing the Deaths and Death-rate from all causes and from various causes in the ten years, 1881-90.

YEAR.	Deaths during the 10 years, 1881-90, from					Annual Death-rate per 100,000 living from					
	Population in middle of period.	All Diseases.	Zymotic Disease.	Phtthisis.	Lung Disease.	Heart Disease.	All Diseases.	Zymotic Disease.	Phtthisis.	Lung Disease.	Heart Disease.
In 1881	7420	91	4	7	15	11	1226	54	94	202	148
In 1882	7450	118	18	11	18	13	1583	241	147	241	174
In 1883	7490	120	7	10	20	9	1602	93	134	268	120
In 1884	7500	97	11	14	19	6	1293	146	186	253	80
In 1885	7520	125	13	4	26	5	1662	172	53	345	66
In 1886	7550	132	9	10	35	10	1748	119	132	463	132
In 1887	7600	108	3	11	23	6	1421	40	144	302	79
In 1888	7600	96	7	11	22	7	1263	92	144	289	92
In 1889	7600	89	11	7	9	4	1171	145	92	118	53
In 1890	7600	97	10	13	17	10	1276	132	171	223	132
Whole District	7535	1073	93	98	204	81	1424	123	130	270	108

(A)—Table of DEATHS during the Year 1890, in the Rural Sanitary District.

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a)	MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES.							(i)	1	2
	At all ages. (b)	Under 1 year. (c)	1 and under 5. (d)	5 and under 15. (e)	15 and under 25. (f)	25 and under 60. (g)	60 and upwards. (h)		Small Pox.	Scarlatina.
Funtington Parish.....	13	—	2	—	—	2	9	Under 5 5 upwards.		
Bosham Parish	10	1	—	—	—	3	6	Under 5 5 upwards.		
Westbourne Parish	31	5	4	4	3	6	9	Under 5 5 upwards.		
Rest of District.....	29	7	3	2	3	8	6	Under 5 5 upwards.		
Westbourne Workhouse	14	—	—	—	—	—	14	Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
TOTALS	97	13	9	6	6	19	44	Under 5 5 upwards.		
The subjoined numbers have also to be taken										
Deaths occurring outside the District among persons belonging thereto.....	—	—	—	—	—	—	—	Under 5 5 upwards.		
Deaths occurring within the District among persons not belonging thereto.....	—	—	—	—	—	—	—	Under 5 5 upwards.		

(B)—Table of POPULATION, BIRTHS, AND OF NEW CASES of Health, during the year 1890, in the Rural Sanitary District

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a)	POPULATION AT ALL AGES.		Registered Births. (d)	Aged under 5 or over 5. (e)	NEW CASES COMING TO THE KN			
	Census 1881. (b)	Estimated to middle of 1890. (c)			1 Small Pox.	2 Scarlatina.	3 Diphtheria.	4 Membranous Group.
Funtington Parish.....	1108	1145	20	Under 5 5 upwards.		1		
Bosham Parish	1255	1290	50	Under 5 5 upwards.		2	3	
Westbourne Parish	2450	2520	70	Under 5 5 upwards.			1 1	
Rest of District.....	2607	2645	67	Under 5 5 upwards.			1 3	
Westbourne Workhouse	—	—	—	Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
TOTALS	7420	7600	207	Under 5 5 upwards.			2 7	

INFECTIOUS SICKNESS, coming to the knowledge of the Medical Officer STBOURNE ; classified according to DISEASES, AGES and LOCALITIES.

AGE OF THE MEDICAL OFFICER IN EACH LOCALITY, HEALTH.							NUMBER OF SUCH CASES REMOVED FROM THEIR HOMES IN THE SEVERAL LOCALITIES FOR TREATMENT IN ISOLATION HOSPITAL.													
7	8	9	10	11	12	13	1	2	3	4	5	6	7	8	9	10	11	12	13	
FEVERS.			Cholera.	Erysipelas.			Small Pox.	Scarlatina.	Diphtheria.	Membranous Croup.	FEVERS.						Cholera.	Erysipelas.		
Continued.	Relapsing.	Puerperal.									Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.					

Compulsory in the District.

WORTHING
URBAN SANITARY DISTRICT.

=====
STATISTICAL TABLES,

lvii. to lxiv.

WORTHING URBAN SANITARY DISTRICT.

TABLE I.—Showing the Deaths at various groups of ages in the ten years, 1881-90.

Year.	At all Ages.	Under 1 Year.	1 to 5.	5 to 15.	15 to 25.	25 to 60.	60 and over.
1881.....	170	28	15	8	7	49	63
1882.....	160	34	14	3	7	41	61
1883.....	164	33	22	4	8	51	46
1884.....	205	43	13	12	6	61	70
1885.....	178	29	20	7	8	44	70
1886.....	228	54	43	10	5	57	59
1887.....	231	33	18	13	16	57	94
1888.....	220	30	28	10	6	64	82
1889.....	179	28	15	7	10	50	69
1890.....	218	46	18	4	18	51	81
Total	1953	358	206	78	91	525	695
In 1000 Deaths	1000	184	105	40	46	269	356

WORTHING URBAN SANITARY DISTRICT.

TABLE 2.—Showing the Deaths and Death-rate in each of the ten years, 1881-90, from Zymotic Diseases.

YEAR.	Small Pox.	Measles.	Scarlatina.	Diphtheria.	Whoop-cough.	Con. Fevers.			Diarrhoea and Dysentery.	Rheumatic Fever.	Erysipelas.	Pyæmia.	Puerperal Fever.	TOTAL.	Rate per 1000 persons living.
						Typhus.	Enteric.	Other.							
1881	4	1	...	...	1	...	2	2	...	...	...	10	0'0
1882	1	1	7	...	1	...	7	...	...	...	1	18	1'5
1883	...	8	...	...	1	...	2	...	1	3	...	...	...	15	1'2
1884	2	1	...	...	2	...	9	...	2	...	...	16	1'2
1885	...	5	...	5	...	...	3	...	2	...	...	...	...	15	1'1
1886	...	4	1	1	33	...	1	...	15	...	...	...	...	55	4'1
1887	1	5	...	...	1	...	4	...	...	1	...	12	0'9
1888	3	3	11	...	...	...	...	...	1	...	...	18	1'3
1889	1	1	...	2	...	...	1	...	...	...	5	0'3
1890	...	3	3	1	1	...	2	...	3	1	2	...	...	16	1'0
Tl.	—	20	15	19	54	—	15	—	43	7	5	1	1	180	1'3

WORTHING URBAN SANITARY DISTRICT.

TABLE 3.—Showing the Deaths and Death-rate from all causes and from various causes in the ten years, 1881-90.

YEAR.	Population in middle of period.	Deaths during the 10 years 1881-90, from						Annual Death-rate per 100,000 living, from			
		All Diseases.	Zymotic Diseases.	Phthisis.	Lung Disease.	Heart Disease.	All Diseases.	Zymotic Disease.	Phthisis.	Lung Disease.	Heart Disease.
In 1881	11100	170	10	11	23	20	1531	90	99	207	180
In 1882	11550	160	18	17	21	19	1385	155	147	181	164
In 1883	12180	164	15	23	19	15	1346	123	188	156	123
In 1884	12650	205	16	22	31	26	1620	126	173	245	200
In 1885	13040	178	15	14	21	18	1365	115	107	161	138
In 1886	13200	228	55	21	31	18	1727	416	160	234	136
In 1887	13350	231	12	23	45	33	1730	90	172	337	247
In 1888	13800	220	18	22	30	32	1594	130	159	217	232
In 1889	14200	179	5	26	15	20	1260	35	183	105	141
In 1890	14650	218	16	19	28	34	1488	109	130	191	232
Total		1953	180	198	264	235	1505	135	152	203	179
In 1881	.....	150	10	9	22	20	1351	90	81	198	180
In 1882	.....	142	18	15	16	16	1229	155	130	138	138
In 1883	.....	151	14	21	18	12	1239	115	172	147	97
In 1884	.....	177	13	19	29	21	1400	102	150	229	166
In 1885	.....	161	14	14	20	17	1234	107	107	153	130
In 1886	.....	210	55	17	30	16	1599	416	129	227	121
In 1887	.....	206	11	20	42	26	1543	82	150	314	195
In 1888	.....	187	17	14	27	23	1355	123	101	195	166
In 1889	.....	145	3	13	12	17	1021	21	91	84	120
In 1890	.....	181	12	14	25	26	1235	82	96	171	177
Total	.....	1710	167	156	241	104	1320	120	121	186	149

Including Visitors.

Excluding Visitors.

(A)—Table of DEATHS during the Year 1890, in the Urban Sanitary Di

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a)	MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES.							(i)	1 Small Pox.	2 Scarlatina.
	At all ages. (b)	Under 1 year. (c)	1 and under 5. (d)	5 and under 15. (e)	15 and under 25. (f)	25 and under 60. (g)	60 and upwards. (h)			
Worthing Urban Sanitary District	204	46	18	4	17	45	74	Under 5 5 upwards.		
Worthing Infirmary.....	9	—	—	—	1	4	4	Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
TOTALS	213	46	18	4	18	49	78	Under 5 5 upwards.		
The subjoined numbers have also to be taken										
Deaths occurring outside the District among persons belonging thereto.....	5	—	—	—	—	2	3	Under 5 5 upwards.		
Deaths occurring within the District among persons not belonging thereto.....	37	—	1	1	5	12	18	Under 5 5 upwards.		

WORTHING, classified according to Diseases, Ages, and Localities.

MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN UNDER FIVE YEARS OF AGE.

5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
FEVERS.					Cholera.	Erysipelas.	Measles.	Whooping Cough.	Diarrhoea and Dysentery.	Rheumatic Fever.	Ague.	Phthisis.	Bronchitis, Pneumonia, Pleurisy.	Heart Disease.	Injuries.	All other Diseases.	TOTALS.
Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.													
							3	1	3				11			43	64
	2					2				1		18	16	31	1	68	140
												1		3	2	3	9
							3	1	3				11			43	64
	2					2				1		19	16	34	3	71	149
nt in judging of the above records of mortality.																	
													1			4	5
							1										1
1						1					5		3	8	1	16	36

(B)—Table of POPULATION, BIRTHS, AND OF NEW CASES of Health, during the year 1890, in the Urban Sanitary District

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a)	POPULATION AT ALL AGES.		Registered Births. (d)	Aged under 5 or over 5. (e)	NEW CASES COMING TO THE DISTRICT			
	Census 1881. (b)	Estimated to middle of 1890. (c)			1 Small Pox.	2 Scarlatina.	3 Diphtheria.	4 Membranous
Worthing Urban Sanitary District	10976	14650	338	Under 5 5 upwards.		10 24	1 4	
Worthing Infirmary.....	—	—	—	Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
TOTALS	10976	14650	338	Under 5 5 upwards.		24 4	1 4	

TABLE showing the number of cases of each of the following diseases, and the number of deaths, in the Urban Sanitary District of Littlehampton, during the year 1881.

DISEASE	1881	1880	1879	1878	1877	1876	1875	1874	1873	1872	1871	1870	1869	1868	1867	1866	1865	1864	1863	1862	1861	
Smallpox																						
Scarlet fever																						
Diphtheria																						
Whooping cough																						
Measles																						
Erysipelas																						
Scarlatina																						
Typhoid fever																						
Enteric fever																						
Cholera																						
Typhus																						
Relapsing fever																						
Malaria																						
Intermittent fever																						
Remittent fever																						
Malaria																						
Cholera																						
Typhoid fever																						
Enteric fever																						
Cholera																						
Typhus																						
Relapsing fever																						
Malaria																						
Intermittent fever																						
Remittent fever																						
Malaria																						
Cholera																						
Typhoid fever																						
Enteric fever																						
Cholera																						
Typhus																						
Relapsing fever																						
Malaria																						
Intermittent fever																						
Remittent fever																						
Malaria																						

LITTLEHAMPTON
URBAN SANITARY DISTRICT.

STATISTICAL TABLES,

lxv. to lxxii.

LITTLEHAMPTON URBAN SANITARY DISTRICT.

TABLE I.—Showing the Deaths at various groups of ages in the ten years, 1881-90.

Year.	At all Ages.	Under 1 Year.	1 to 5.	5 to 15.	15 to 25.	25 to 60.	60 and over.
1881.....	58	11	4	—	3	16	24
1882.....	74	16	11	2	3	18	24
1883.....	55	11	2	2	1	15	24
1884.....	44	3	—	2	5	14	20
1885.....	47	4	7	1	2	16	17
1886.....	50	10	7	2	1	10	20
1887.....	59	8	3	2	5	14	27
1888.....	58	10	7	3	3	12	23
1889.....	65	6	6	3	3	16	31
1890.....	38	4	2	1	5	10	16
Total	548	83	49	18	31	141	226
In 1000 Deaths	1000	151	90	33	57	257	412

LITTLEHAMPTON URBAN SANITARY DISTRICT.

TABLE 2.—Showing the Deaths and Death-rate in each of the ten years, 1881-90, from Zymotic Diseases.

YEAR.	Small Pox.	Measles.	Scarlatina.	Diphtheria.	Whoop-cough.	Con. Fevers.			Diarrhoea and Dysentery.	Rheumatic Fever.	Erysipelas.	Pyæmia.	Puerperal Fever.	TOTAL.	Rate per 1000 persons living.
						Typhus.	Enteric.	Other.							
1881	...	1	...	...	...	...	...	...	...	...	...	...	...	1	0.2
1882	...	2	...	...	3	...	1	...	...	...	...	...	...	6	1.5
1883	2	...	...	...	...	2	0.5
1884	1	...	...	...	1	...	1	...	...	3	0.7
1885	...	1	...	1	...	...	...	3	1	...	1	...	...	7	1.7
1886	1	2	...	...	4	...	...	...	3	1	...	...	...	11	2.6
1887	...	1	...	...	1	...	...	...	1	...	...	...	...	3	0.7
1888	3	...	...	...	2	...	...	...	...	5	1.1
1889	...	1	...	1	...	...	...	...	1	...	1	...	...	4	0.9
1890	0.0
Tl.	1	8	—	2	12	—	1	3	11	1	3	—	—	42	1.0

LITTLEHAMPTON URBAN SANITARY DISTRICT.

TABLE 3.—Showing the Deaths and Death-rate from all causes and from various causes in the ten years, 1881-90.

YEAR.	Population in middle of period.	Deaths during the 10 years 1881-90, from						Annual Death-rate per 100,000 living, from			
		All Diseases.	Zymotic Diseases.	Phthisis.	Lung Disease.	Heart Disease.	All Diseases.	Zymotic Disease.	Phthisis.	Lung Disease.	Heart Disease.
In 1881	3930	58	1	7	6	8	1475	25	178	152	204
In 1882	3980	74	6	5	16	4	1859	150	125	400	100
In 1883	4000	55	2	5	9	3	1375	50	125	225	75
In 1884	4000	44	3	5	5	5	1100	75	125	125	125
In 1885	4100	47	7	4	4	7	1146	170	97	97	170
In 1886	4150	50	11	3	11	1	1205	265	72	265	24
In 1887	4180	59	3	5	7	6	1411	71	119	167	143
In 1888	4200	58	5	7	14	6	1381	119	166	333	143
In 1889	4250	65	4	7	9	8	1529	94	165	212	188
In 1890	4300	38	—	7	6	6	884	—	163	140	140
Total		548	42	55	87	54	1336	102	133	212	131
In 1881	.....	55	1	7	6	8	1400	25	178	152	204
In 1882	.....	66	4	4	15	3	1658	100	100	375	75
In 1883	.....	54	2	5	9	3	1350	50	125	225	75
In 1884	.....	41	2	5	5	4	1025	50	125	125	100
In 1885	.....	46	7	4	4	7	1121	170	97	97	170
In 1886	.....	48	11	3	11	1	1156	265	72	265	24
In 1887	.....	51	—	5	6	4	1220	—	119	143	95
In 1888	.....	55	4	7	14	6	1309	95	166	333	143
In 1889	.....	59	3	6	9	6	1388	70	141	212	141
In 1890	.....	37	—	7	6	6	860	—	163	140	140
Total		512	34	53	85	48	1249	83	129	207	117

(A)—Table of DEATHS during the Year 1890, in the Urban Sanitary Di

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a)	MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES.							(i)	1	2
	At all ages. (b)	Under 1 year. (c)	1 and under 5. (d)	5 and under 15. (e)	15 and under 25. (f)	25 and under 60. (g)	60 and upwards. (h)		Small Pox.	Scarlatina.
Littlehampton Urban Sanitary District	37	4	2	1	5	10	15	Under 5 5 upwards.		3
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
TOTALS	37	4	2	1	5	10	15	Under 5 5 upwards.		
The subjoined numbers have also to be taken										
Deaths occurring outside the District among persons belonging thereto.....	1	—	—	—	—	—	1	Under 5 5 upwards.		
Deaths occurring within the District among persons not belonging thereto.....	1	—	—	—	—	1	—	Under 5 5 upwards.		

(B)—Table of POPULATION, BIRTHS, AND OF NEW CASES of Health, during the year 1890, in the Urban Sanitary District

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a)	POPULATION AT ALL AGES.		Registered Births. (d')	Aged under 5 or over 5. (e)	NEW CASES COMING TO THE DISTRICT			
	Census 1881. (b)	Estimated to middle of 1890. (c)			1 Small Pox.	2 Scarlatina.	3 Diphtheria.	4 Membranous Croup.
Littlehampton Urban Sanitary District	3926	4300	89	Under 5 5 upwards.		2	4	
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
TOTALS	3926	4300	89	Under 5 5 upwards.		2	4	

INFECTIOUS SICKNESS, coming to the knowledge of the Medical Officer
 BRIGHTON; classified according to DISEASES, AGES and LOCALITIES.

AGES IN EACH LOCALITY, OF THE MEDICAL OFFICER TH.							NUMBER OF SUCH CASES REMOVED FROM THEIR HOMES IN THE SEVERAL LOCALITIES FOR TREATMENT IN ISOLATION HOSPITAL.															
7	8	9	10	11	12	13	1	2	3	4	FEVERS.								10	11	12	13
FEVERS.			Cholera.	Erysipelas.			Small Pox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Enteric or Typhoid.	FEVERS.			Cholera.	Erysipelas.					
Continued.	Relapsing.	Puerperal.											Continued.	Relapsing.	Puerperal.							

...sory in the District.

xxii.

THOUS BICKNES, containing the knowledge of the Medical Officer
 BRANTON, according to the Sanitary and Localities

WEST WORTHING	
URBAN SANITARY DISTRICT.	
====	
STATISTICAL TABLES,	
lxxiii. to lxxx.	
1	2
3	4
5	6
7	8
9	10
11	12
13	14
15	16
17	18
19	20
21	22
23	24
25	26
27	28
29	30
31	32
33	34
35	36
37	38
39	40
41	42
43	44
45	46
47	48
49	50
51	52
53	54
55	56
57	58
59	60
61	62
63	64
65	66
67	68
69	70
71	72
73	74
75	76
77	78
79	80
81	82
83	84
85	86
87	88
89	90
91	92
93	94
95	96
97	98
99	100

WEST WORTHING URBAN SANITARY DISTRICT.

TABLE I.—Showing the Deaths at various groups of ages in the ten years, 1881-90.

Year.	At all Ages.	Under 1 Year.	1 to 5.	5 to 15.	15 to 25.	25 to 60.	60 and over.
1881.....	5	1	..	..	..	1	3
1882.....	10	2	..	2	1	..	5
1883.....	12	2	1	1	..	7	1
1884.....	9	1	1	..	..	5	2
1885.....	8	1	..	1	..	3	3
1886.....	15	1	4	2	..	3	5
1887.....	12	1	1	..	..	6	4
1888.....	15	..	1	1	..	8	5
1889.....	15	4	..	1	..	4	6
1890.....	16	3	..	3	..	4	6
Total	117	16	8	11	1	41	40
In 1000 Deaths	1000	137	68	94	9	350	342

WEST WORTHING URBAN SANITARY DISTRICT.

TABLE 2.—Showing the Deaths and Death-rate in each of the ten years, 1881-90, from Zymotic Diseases.

YEAR.	Small Pox.	Measles.	Scarlatina.	Diphtheria.	Whoop-cough.	Con. Fevers.			Diarrhoea and Dysentery.	Rheumatic Fever.	Erysipelas.	Pyæmia.	Puerperal Fever.	TOTAL.	Rate per 1000 persons living.
						Typhus.	Enteric.	Other.							
1881	0'0
1882	..	2	..	..	..	..	..	..	..	..	..	..	..	2	2'6
1883	2	..	..	..	..	..	..	2	2'3
1884	1	..	..	..	..	..	..	..	..	1	1'0
1885	0'0
1886	..	1	..	..	..	..	..	..	3	..	..	..	..	4	3'3
1887	1	..	..	..	1	0'7
1888	0'0
1889	1	..	..	..	..	1	0'6
1890	0'0
Tl.	—	3	—	—	1	—	2	—	4	1	—	—	—	11	1'0

WEST WORTHING URBAN SANITARY DISTRICT.

TABLE 3.—Showing the Deaths and Death-rate from all causes and from various causes in the ten years, 1881-90.

YEAR.	Deaths during the 10 years, 1881-90, from					Annual Death-rate per 100,000 living from				
	All Diseases.	Zymotic Disease.	Phthisis.	Lung Disease.	Heart Disease.	All Diseases.	Zymotic Disease.	Phthisis.	Lung Disease.	Heart Disease.
In 1881	5	...	...	...	1	714	...	...	...	143
In 1882	10	2	...	1	1	1316	263	...	131	131
In 1883	12	2	2	...	2	1411	235	235	...	235
In 1884	9	1	1	...	3	900	100	100	...	300
In 1885	8	...	...	...	1	727	...	...	...	91
In 1886	15	4	1	2	2	1250	333	83	166	166
In 1887	12	1	2	...	3	923	77	154	...	231
In 1888	15	...	2	1	3	1000	...	133	66	200
In 1889	15	1	2	1	1	937	62	125	62	62
In 1890	16	...	1	1	3	1000	...	62	62	187
Whole District	117	11	11	6	20	1018	107	89	49	175

(A)—Table of DEATHS during the Year 1890, in the Urban Sanitary District.

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a)	MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES.							(i)	1 Small Pox.	2 Scarlatina.
	At all ages. (b)	Under 1 year. (c)	1 and under 5. (d)	5 and under 15. (e)	15 and under 25. (f)	25 and under 60. (g)	60 and upwards. (h)			
West Worthing Urban Sanitary District	16	3	—	3	—	4	6	Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
TOTALS	16	3	—	3	—	4	6	Under 5 5 upwards.		
The subjoined numbers have also to be taken into account.										
Deaths occurring outside the District among persons belonging thereto.....	—	—	—	—	—	—	—	Under 5 5 upwards.		
Deaths occurring within the District among persons not belonging thereto.....	—	—	—	—	—	—	—	Under 5 5 upwards.		

(B)—Table of POPULATION, BIRTHS, AND OF NEW CASES of Health, during the year 1890, in the Urban Sanitary District

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a)	POPULATION AT ALL AGES.		Registered Births. (d)	Aged under 5 or over 5. (e)	NEW CASES COMING TO THE			
	Census 1881. (b)	Estimated to middle of 1890. (c)			1 Small Pox.	2 Scarlatina.	3 Diphtheria.	4 Membranous
West Worthing Urban Sanitary District	689	1600	26	Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
TOTALS	689	1600	26	Under 5 5 upwards.				

DISEASE	NUMBER OF SUCH CASES REMOVED FROM THEIR RESPECTIVE LOCALITIES FOR TREATMENT IN THE GENERAL HOSPITAL											
	1	2	3	4	5	6	7	8	9	10	11	12
Dysentery												
Diphtheria												
Scarlatina												
Erysipelas												
Measles												
Croup												
Croup												
Whooping Cough												
Scarlatina												
Diphtheria												
Scarlatina												
Diphtheria												

ARUNDEL
URBAN SANITARY DISTRICT.

==

STATISTICAL TABLES,

lxxvi. to lxxxviii.

ARUNDEL URBAN SANITARY DISTRICT.

TABLE 2.—Showing the Deaths at various groups of ages in the eight years, 1883-90.

Year.	At all Ages.	Under 1 Year.	1 to 5.	5 to 15.	15 to 25.	25 to 60.	60 and over.
1883.....	45	6	8	3	3	10	18
1884.....	40	9	5	3	2	10	11
1885.....	37	3	4	1	5	9	15
1886.....	42	6	3	3	4	14	12
1887.....	77	8	7	3	3	28	28
1888.....	56	1	13	6	4	16	16
1889.....	47	9	...	1	4	11	22
1890.....	70	18	8	3	6	6	19
Total	414	60	48	20	31	114	141
In 1000 Deaths	1000	145	116	48	75	275	341

ARUNDEL URBAN SANITARY DISTRICT.

TABLE 2.—Showing the Deaths and Death-rate in each of the eight years, 1883-90, from Zymotic Diseases.

YEAR.	Small Pox.	Measles.	Scarlatina.	Diphtheria.	Whoop-cough.	Con. Fevers.			Diarrhoea and Dysentery.	Rheumatic Fever.	Erysipelas.	Pyæmia.	Puerperal Fever.	TOTAL.	Rate per 1000 persons living.
						Typhus.	Enteric.	Other.							
1883	...	1	...	...	...	...	...	...	...	...	...	...	...	1	0.3
1884	1	1	...	...	...	2	...	...	...	...	4	1.4
1885	1	...	...	...	...	1	0.3
1886	2	...	...	...	...	1	1	...	...	...	4	1.4
1887	2	...	...	...	...	...	...	...	...	...	...	2	0.7
1888	13	2	...	...	...	...	...	...	1	...	1	17	6.1
1889	1	1	...	...	1	...	...	...	...	...	3	1.0
1890	...	1	1	2	...	...	11	...	2	...	...	...	...	17	6.1
Tl.	—	2	16	8	2	—	11	1	6	1	1	—	1	49	2.2

ARUNDEL URBAN SANITARY DISTRICT.

TABLE 3.—Showing the Deaths and Death-rate from all causes and from various causes in the eight years, 1883-90.

YEAR.	Deaths during the 8 years, 1883-90, from					Annual Death-rate per 100,000 living from				
	All Diseases.	Zymotic Disease.	Phthisis.	Lung Disease.	Heart Disease.	All Diseases.	Zymotic Disease.	Phthisis.	Lung Disease.	Heart Disease.
In 1883	45	1	6	8	2	1636	36	218	291	72
In 1884	40	4	8	7	5	1454	145	291	254	182
In 1885	37	1	8	5	6	1345	36	291	182	218
In 1886	42	4	5	9	5	1527	145	182	327	182
In 1887	77	2	13	9	11	2800	72	472	327	400
In 1888	56	17	7	5	4	2036	618	254	181	145
In 1889	47	3	4	6	5	1709	109	145	218	182
In 1890	70	17	3	8	7	2545	618	109	291	254
Total	414	49	54	57	45	1882	223	245	260	206

(A)—Table of DEATHS during the Year 1890, in the Urban Sanitary Di

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a)	MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES.							(i)	I Small Pox.	2 Scarlatina.
	At all ages. (b)	Under 1 year. (c)	1 and under 5. (d)	5 and under 15. (e)	15 and under 25. (f)	25 and under 60. (g)	60 and upwards. (h)			
Arundel Urban Sanitary District	69	18	8	3	6	16	18	Under 5 5 upwards.		1
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
								Under 5 5 upwards.		
TOTALS	69	18	8	3	6	16	18	Under 5 5 upwards.		1
The subjoined numbers have also to be taken										
Deaths occurring outside the District among persons belonging thereto.....	1	—	—	—	—	—	1	Under 5 5 upwards.		
Deaths occurring within the District among persons not belonging thereto.....	—	—	—	—	—	—	—	Under 5 5 upwards.		

(B)—Table of POPULATION, BIRTHS, AND OF NEW CASES of Health, during the year 1890, in the Urban Sanitary District

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a)	POPULATION AT ALL AGES.		Registered Births. (d)	Aged under 5 or over 5. (e)	NEW CASES COMING TO THE K			
	Census 1881. (b)	Estimated to middle of 1890. (c)			1 Small Pox.	2 Scarlatina.	3 Diphtheria.	4 Membranous Croup.
Arundel Urban Sanitary District	2748	2750	79	Under 5 5 upwards.		1 2	2	
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
				Under 5 5 upwards.				
TOTALS	2748	2750	79	Under 5 5 upwards.		1 2	2	

CONTAGIOUS SICKNESS, coming to the knowledge of the Medical Officer
UNDEL; classified according to DISEASES, AGES and LOCALITIES.

DISEASE IN EACH LOCALITY, NAME OF THE MEDICAL OFFICER LOCALITY.						NUMBER OF SUCH CASES REMOVED FROM THEIR HOMES IN THE SEVERAL LOCALITIES FOR TREATMENT IN ISOLATION HOSPITAL.														
7	8	9	10	11	12	13	1	2	3	4	5	6	7	8	9	10	11	12	13	
FEVERS.						FEVERS.														
Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.			Small Pox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.			
			I																	

...compulsory in the District.

LXXXI

THE MEDICAL OFFICE

CLASSIFIED ACCORDING TO DISEASES, AGES AND LOCALITIES

THE MEDICAL OFFICE											
CLASSIFIED ACCORDING TO DISEASES, AGES AND LOCALITIES											
NUMBER OF EACH CASE TAKEN FROM THEIR											
HOME OR THE SEVERAL INSTITUTIONS FOR TREATMENT											
IN SEVERAL INSTITUTIONS											
AGE											
LOCALITY											
DISEASE											
TREATMENT											
RESULTS											
REMARKS											
SIGNATURE											
DATE											
1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32	33	34	35	36
37	38	39	40	41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70	71	72
73	74	75	76	77	78	79	80	81	82	83	84
85	86	87	88	89	90	91	92	93	94	95	96
97	98	99	100	101	102	103	104	105	106	107	108
109	110	111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130	131	132
133	134	135	136	137	138	139	140	141	142	143	144
145	146	147	148	149	150	151	152	153	154	155	156
157	158	159	160	161	162	163	164	165	166	167	168
169	170	171	172	173	174	175	176	177	178	179	180
181	182	183	184	185	186	187	188	189	190	191	192
193	194	195	196	197	198	199	200	201	202	203	204
205	206	207	208	209	210	211	212	213	214	215	216
217	218	219	220	221	222	223	224	225	226	227	228
229	230	231	232	233	234	235	236	237	238	239	240
241	242	243	244	245	246	247	248	249	250	251	252
253	254	255	256	257	258	259	260	261	262	263	264
265	266	267	268	269	270	271	272	273	274	275	276
277	278	279	280	281	282	283	284	285	286	287	288
289	290	291	292	293	294	295	296	297	298	299	300

