**[Report 1909] / Medical Officer of Health, Sidmouth U.D.C.**




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# The Health of Sidmouth

FOR 1909.

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THE

## Medical Officer's Annual Report

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SIDMOUTH:
E. CULVERWELL AND SONS, PRINTERS, FORE STREET.

# The Health of Sidmouth,

## 1909.

**To the Chairman and Members of the Sidmouth Urban District Council.**

GENTLEMEN,

I have the honour to furnish the Council and the Local Government Board and Devon County Council with my 39th Annual Report (41st year of office), embodying the Births, Sickness, and Deaths, that occurred in the Sidmouth Urban District under your charge during the year 1909, and the proceedings taken in relation thereto. As I have before remarked, I consider the primary duty of a Sanitary Authority is to protect the health of the people rather than to guard the ratepayers. As bearing on the question of health, I may be pardoned if, as heretofore, I preface my remarks with a few meteorological data, bearing on the district under the Council's charge, registered and kindly supplied to the M.O.H. by Miss C. M. Radford, of Sidmount.

CLIMATE OF SIDMOUTH FOR 1909.

| | | |
|---|---|---|
| Bright Sunshine ... ... ... | HRS. | 1758 |
| Highest Temperature in the Air ... | ... | 80·8 |
| Lowest Temperature in the Air ... | ... | 22 |
| Highest in the Sun ... ... | ... | 134 |
| (Black Bulb Thermometer in Vacuo.) | | |
| Lowest on the Grass ... ... | ... | 17·4 |
| Mean of daily Maxima ... ... | ... | 55·3 |
| Mean of daily Minima ... ... | ... | 42·9 |
| Mean of Year ... ... ... | ... | 49·1 |
| Mean 9 a.m. ... ... ... | ... | 49·8 |

The Thermometers verified at Kew. The maximum and minimum Thermometers are hung in a Kew stand, completely protected from sun and sky, and freely exposed to the air.

| | | |
|---|---|---|
| Rain received in a 5in. gauge 1 foot above the ground. | inches, | 32·15 |

Mean Humidity of the air at 9 a.m. ... 81·8

Thermometer stand 186 feet above sea level.

Latitude, 50°41" Longtitude, 3°14"30 W.

Mean Temperature 4° below average of last 20 years.

The record over so long a period conclusively proves the equable character of our climate, and, as I have repeatedly pointed out, satisfactorily accounts for its usual remarkable coolness in summer, and its mildness in winter, the extremes being about 18·10 degrees below Greenwich.

The rainfall for 1909 was 28·19. Last 20 years' average 30·32. Average rainfall given in *The Times* for London is 34·36. The extraordinary amount of rain in October, 1907, viz., 7·60 inches, was 4.74 above the average, and has only once been exceeded in the last 36 years, viz., in November, 1888, when there was 8.18; and only three other records above 7 inches, viz., October, 1891; October, 1875; and December, 1876. The red sandstone and gravelly soil of the district exert an important and healthy influence on the rainfall by securing the soil from all unhealthy retention of moisture.

| | | | | | |
|---|---|---|---|---|---|
| Mean Temperature | | 1899-1900 | Winter | was | 41.2 |
| ,, | ,, | 1900-1901 | ,, | ,, | 42·1 |
| ,, | ,, | 1901-1902 | ,, | ,, | 40·7 |
| ,, | ,, | 1902-1903 | ,, | ,, | 43·4 |
| ,, | ,, | 1903-1904 | ,, | ,, | 41·1 |
| ,, | ,, | 1904-1905 | ,, | ,, | 43 |
| ,, | ,, | 1905-1906 | ,, | ,, | 42·8 |
| ,, | ,, | 1906-1907 | ,, | ,, | 39·9 |
| ,, | ,, | 1907-1908 | ,, | ,, | 42·1 |
| ,, | ,, | 1908-1909 | ,, | ,, | 41·5 |

Mean Temperature of 10 years, *Winter* 41·8

Mean daily range (Winter) that is the difference between the *mean* maxima and minima for the last ten years, 9·6.

In the early morning and evening on the moors (fed by the air of the Atlantic, Dartmoor, and Exmoor) from one and one-and-half miles distant from the town, the summer coolness is remarkable. The fine air and the invigorating conditions there prevailing have brought to the district many permanent residents. Many elderly persons too, who in less favoured parts of England would be almost entirely

confined to the house throughout the winter months, are here enabled to enjoy the benefits of exercise in the open air during several hours of the day in fine weather. During the great summer heat of 1899, the mean temperature of the month of August at Sidmouth was 63·3, the highest registered during the previous 30 years, and, notwithstanding this, it was from 15 to 20 degrees cooler than London, and 5 degrees cooler than at any other Health Resort on the South Coast during the greater part of the month.

Sidmouth enjoys a notable immunity from fogs; is seldom visited by land fogs, and the sea fogs which gather over the English Channel seldom penetrate into Sid Vale, and, when they do, are speedily dissipated, and the town is effectually sheltered from the east and north winds by its hills, which attain the altitude of from 500 to 700 feet, within half-a-mile to two miles of the town. As March is generally considered an inclement month, it may be interesting to record that its mean temperature for the previous 36 years at Sidmouth was 42 degrees.

The area of the district is 1,600 acres, present inhabitated portion about one tenth. Population at 1891 census, 3,762; at census 1901, 4,201; showing an increase of 439. Of the 13 parishes in the Union, 3 only showed an increase, viz., Venn Ottery, 1; Feniton 3; and Sidmouth 439. A Quinquennium census instead of a Decennial would, I consider, be a matter of great convenience.

DWELLING HOUSES.

| Year. | Houses. | £8 and under Rateable Value. (*urgently required, diminished*) | Over £8. Rateable Value. |
|---|---|---|---|
| 1901 Census | 1030 | 580 | 450 |
| 1902 | 1041 | 384 | 657 |
| 1903 | 1051 | 373 | 678 |
| 1904 | 1081 | 373 | 708 |
| 1905 | 1138 | 371 | 765 |
| 1906 | 1166 | 371 | 795 |
| 1907 | 1182 | 362 | 819 |
| 1908 | 1214 | 361 | 853 |
| 1909 | 1236 | 366 | 870 |

Average number of persons per house, 4·1, giving a present estimated population of 5030.

BIRTHS.—The births during 1909 were—males, 47; females 37; total 84, equal 16·6 per 1000 population. In the decennial period 1899-1908 the average was 18 per 1000. The births—94—for 1904, were the highest during my tenure of office as Medical Officer of Health. The birth rate for England and Wales, 1909, was 25·6 per 1,000. Like so many other places—Health Resorts especially—the birth rate is a diminishing quantity, owing, apparently, to the migration of young persons to the large centres. On the other hand, this rate in great towns remains relatively high, especially in the dense manufacturing centres of the North, approaching and even attaining 40 per 1,000. The same disadvantageous contrast holds in London itself—in West End districts a rate approximating that of Devon—in the East, a high figure as in manufacturing places. Thus the chief additions to the nation, its future growth, is not from those living under the best conditions for physical development, but rather the reverse. Unhappily, no remedy is available for this.

DEATHS.—The deaths, *including* 13 non-residents, were:—males, 35; females, 27; total 62, or 12·2 per 1,000 population; *excluding* non-residents. 9·2 per 1,000. In the decennial period, 1897-1906, the average death rate was 15·5 *with* and 11·5 *excluding* non-residents.

The death rate for England and Wales in 1909 was 14·5 per 1,000.

| | | | |
|---|---|---|---|
| 4 | deaths took place | under | 1 year |
| 4 | „ | between | 1 and 5 years |
| 1 | „ | „ | 5 and 15 years |
| 1 | „ | „ | 15 and 25 years |
| 25 | „ | „ | 25 and 65 years |
| 27 | „ | „ | 65 and upwards |

Of the 27 deaths at 65 and upwards—

| | | | |
|---|---|---|---|
| 11 | were between | the ages of | 70 and 80 |
| 6 | „ | „ | 80 and 90 |

Two deaths of residents were registered iu Public Institutions beyond the district.

The infant mortality (four) for 1909 was equal to 46·3 per 1,000 births, being 63 *below* that of England and Wales (109).

One of the four deaths under one year was due to convulsions, and one to premature birth.

The average mortality per 1,000 births during the decennial period, 1899-1908, was 56. *Vide Appendix I.* I have repeatedly pointed out that a low infant mortality may be generally cousidered as important an index to good sanitation and healthfulness as a low zymotic death rate; especially may it be considered so when we bear in mind that at the present time the "bottle" has largely taken the place of the breast, and "suckling" well-nigh become "a lost art." And the report of the Committee on Physical Deterioration shows that for every death of a breast-fed infant there were, during a certain season and in a certain district, 15 *deaths* amongst those fed partly by hand and partly by the mother, and 22 *deaths* amongst those reared entirely on artificial foods. The absence of Mother's Milk and whole wheat-meal bread has I consider much to do with early decay of teeth.

Again we know that in the worst parts of our great cities only three out of every four children born, live for 12 months. We know also that, taking towns as a whole, the infantile mortality figures amount to from 130 to 150 or more; we know on the other hand that in certain counties, without any special effort being made, the figures are as low as 100, 95, 90, and, finally, it has been ascertained that in houses having more than five apartments in Croydon—without any special effort being made—as many as 945 per 1,000 infants born survive for twelve months.

The Zymotic (infectious) death rate for 1909 was nil. For the previous 12 years (1897-1908) it was *one death only.*

In the 12 years 1896-1907) forty-seven infectious cases only were notified, showing an annual average of 3·9, and but for an Epidemic of Scarletina in which 27 cases were notified, but which may be described as generally of the mildest possible nature, which commenced in October, and reached its highest point in December, our annual average of notifled infectious cases of all kinds would have been as stated for 12 years, 3·9 a record I consider especially when taking into account the increasing number of convalescing visitors annually patronising this important Health Resort.

DIARRHŒA.—Among the conditions that point to an unfavourable atmospheric state, and tend to promote and aggravate diarrhœa and choloraic ailments is a high temperature, with a moist, heavy and stagnant atmosphere. What evidence does Sidmouth afford on these points? The remarkable fact that two deaths only from real diarrhœa has been registered in the District during the past *twenty-eight* years.

The five preceding tables—Infant, Senile, Zymotic, Infectious Notifications, and Diarrhœa Mortality, are in the highest degree satisfactory, and should justly add to the reputation of Sidmouth as a Health Resort.

The following extracts from the Statistical Report of the Devon County Council for 1907, will, I think, bear repeating:—

"Sidmouth, Urban—The population shows what must be considered a gratifying increase, considering the size of the town (see Table 5). In the decennial part of Table 1 it occupies the best position in the infantile mortality column, having a lower figure than any other district, whether Rural or Urban, and its Zymotic Rate is amongst the least. The birth rate has declined during 1901, being below that of the preceding year and the 10 years' average, and the death rate rather above the corresponding figures, discounted however, by the circumstances that more than half the mortality was in persons over 65 years. The infantile rate is small, and it is greatly to the credit of the district that not in one year of the intercensal ten has this once attained 130 per 1,000 births; even of the four deaths registered under 1 year of age, three died within six days of birth and these included twins. The notifications were only 1 diptheria, and 2 scarlet fever; the first of these constitutes the only zymotic fatality for many years. The figures, which must be agreeable reading for the inhabitants of the town, are all set forth in the Tables

Dr Pullin again comments on the immunity of the district from Phthisis, but adds that two visitors who arrived in a helpless state of the malady, are included in the loss assignable to it. An instructive history of a small-pox outbreak many years ago is quoted on page 31.

In the same Official Report for 1907, Sidmouth is thus alluded to:—"As usual, the statistics for this town are very good; it is one of the places that has a notable increase in the birth rate, yet, even this is very low, lower indeed, than the average of South Devon Towns. The general death-rate is about the mean, but the infantile mortality has fallen so considerably that it is about 25 per cent below the average, and is an improvement on every year, and the smallest in Table 1, except three much more insignificant populations."

The cause of Sickness and death appear in the accompanying Statistical Tables, presented to the Council and four other Official Authorities.

The Council, I hope, will pardon my again urging it to rigidly enforce, in the case of new houses, the condition that all bedrooms have fire-places, being as necessary for ventilation, as for warmth, oil stoves and lamps, as I have frequently pointed out, being dangerous substitutes for fires in the sick room, especially without some proper system of ventilation. I have experienced many instances in my practice of very critical effects from this source, and one in particular, where life was solely saved by opening every window and door in the house at midnight in a winter snowstorm, to overcome the effects of two petroleum stoves used, in a dangerous case of illness in a room without a fire place. Especially is the danger great in Influenza and all affections of the respiratory organs. This is easy to explain when we consider that the irritating and injurious results of petroleum combustion take the place of the life-supporting oxygen. The absence of *smoke and smell* is no proof of the absence of the ordinary irritating products of combustion. On the contrary, it is generally the reverse.

Infectious Diseases. Towards preventing the spread of infectious diseases, much may be done by home isolation and disinfection and liberal ventilation I have frequently succeeded by very simple isolation and very moderate use of disinfectants, in limiting it to a single patient in large establishments. To this principle, rigidly carried out, I attribute the fact that the five cases alluded to above as notified during the

year 1905, were followed by no fresh case in the same houses. Again, the moderate use of disinfectants in any sick room tend to lesson the severity of most diseases. The form of disinfectant used is a matter of the utmost consequence. A large number advertised as "disinfectants" and *non*-poisonous, are simply "*deodorants*"—destroy odour or smell—but exercise no germicidal power. A disinfectant to be efficient, must be *poisonous*. This fact cannot be too strongly borne in mind. There may be an instance or two where they are not very much so. Nevertheless, it is a good rule to suspect a disinfectant advertised as *non*-poisonous, as such, in 99 cases out of 100, is useless. Calvert's No. 5 Carbolic Acid, or Jeyes' Cyllin, may always be relied on if used as directed.

PHTHISIS. The number of deaths due to this important malady our national plague, as it has been called—was, in 1909 at Sidmouth, five. Three were non-residents who arrived in the hopeless stage of the disease.

Again and again I have taken occasion to draw attention to the pecular immunity of our resident population from Phthisis. To what this is due, is not easily explained, but the geological and meteorological conditions of the locality before alluded to, strongly point physiologically to the probable source of this important fact, and may tend to confirm the correctness of the opinion I have presumed so often to give, viz., that if the sufferers from phthisis and other tuberculous affections were sent here in the incipient or less advanced stage of the ailment instead of, as most frequently happens, in the last or hopeless stage permanent restoration to many, and incalculable relief to all would follow. The Autumn, Winter and Spring months at Sidmouth are the most favourable to the tuberculous invalid. As I have mentioned in former reports, a low death rate from this disease, or its recognised absence (as exists here) from any locality is of the utmost importance, seeing that over *one-sixth* of the mortality of the country is ascribed to it. The establishment in the County of a Sanitorium for the treatment of tubercular disease is urgently needed, and it is gratifying to know that this important matter is receiving the attention of the "Devon and

Cornwall Medical Association" and that a "Sites" Committee has been appointed and a spot chosen for its erection, Personally, I should strongly prefer a Sanitorium in "Blocks" with the view of separating the patients as much as possible.

The following are a few instructive figures showing the *Decline* in the mortality from Phthisis during recent years. In 1858, the loss of life was 2,565 per million—in every five year periods since it has fallen, and in that from 1886 to 1890 was 1,637—now it is 1330. In 1899 the number of deaths were 47,000 in England and Wales ; in 1900 with a growing population, only 40,000. The same in Devon ; for three years in succession a record has been established in its fatality. On the important authority of Sir H. Beevor, Bart., M.D., it is stated that from 1865 to 1897 the mortality from phthisis in boys from 10 to 15 years of age has sunk from 100 to 32. And this he assigns to better food rather than better sanitary measures. My own 60 years' local professional experience tends strongly to this conclusion. Sir H. Beevor further says "It is not a disease that requires isolation, and only under quite exceptional conditions does it appear to be infectious at all. The instruction of the young in the general principles of hygiene will prove more valuable eventually than isolation." Towards the latter object the Medical Profession is now powerfully urging on the Government to adopt measures in connection with the Education Act. Sir H. Beevor's above opinion completely negatives the idea that Phthisis should be made a *notified* disease. Personally, I have always been of this opinion, for, besides the terrible social and domestic interferences and discomfort it would occasion, the financial loss to lodging-houses and hotels by its being made a notifiable disease under official supervision, would be lamentable. The remedy, as aptly expressed by the Medical Officer of our County Council, "is not of the sanitary, but of the suppressive type." To suppress a disease by careful system of watching is not uprooting its cause, but rather straining after a pretended than a real victory.

The same local and geological and meteorological conditions previously referred to, possibly explain to a great degree the marked beneficial effect of the

Sidmouth climate on affections of the lungs, liver, and kidneys, neuralgia and rheumatism, and diseases of children, the rareness and mildness of epidemics, the total absence of endemics and many serious and painful ailments—typhus, calculus, and ague, for example.

Many asthmatics derive benefit from the climate, not only of the more protected, but also of the more elevated situations. Children and the subjects of asthma do particularly well here, many of them immediateiy losing their tendency to the complaint while residing or at School in the place.

Cancer. The number (3) of deaths from this disease was above the average of former years. As the Council are aware, investigation of this class of disease is proceeding most vigorously in different parts of the world, especially in our own metropolis, and there is every reason to hope that light will be thrown upon the disease, which will lead to its most successful treatment. At present there is, unhappily, no cure for cancer. The important point is, I consider, to discover the cause and the cure will follow. The result of my long local experience, 60 years, does not favour the idea of the disease being hereditary, or its having increased during that period, certainly not in this locality. That it has become a more recognised disease there can be no doubt, which may in some way in some degree account for its apparent increase.

Small Pox and Vaccination. As the question on these subjects are looked upon by the Medical Profession, and especially the Association of Public Vaccination of England and Wales, as one of the greatest importance in the present day, I hope I shall be excused repeating my previous remarks on them. It will be satisfactory to the Council to know that the vaccination of this district has always received special approval of the Local Government Board Inspectors, and from my official knowledge as Public Vaccinator, since the introduction of the Public Vaccination Act. I am able to state that a case of *arrear* of a Sidmonth child has been an exception to the rule. Vaccination has always been well respected

and since the passing of the first Vaccination Act there were (I believe I am correct in saying) only *eight* conscientious objectors in Sidmouth, Sidbury, and Salcombe-Regis before the introduction of Exemption Certificates. If the assigned causes for Exemption Certificates were more rigidly enquired into, very few, it is generally believed by Public Vaccinators, would be granted and much public danger in the future be prevented. The late introduction of Exemption Certificates is considered by Public Vaccinators to be proving *a most grievous mistake*. There certainly would not be any "conscientious objectors," or the necessity for a "Conscience Clause" in the nineteenth century had the present generation witnessed the cruel effect of the loathsome and fatal disease, small pox, before the Divine Blessing vouchsafed to man, by Jenner's wonderful discovery of Vaccination in 1798, unfolding the beneficient provisions of Nature for the mitigation of her most baneful pestilence.

In an important neighbouring Health Resort with 175 births in the year, 57 only were vaccinated, 79 conscientious objections received, 30% only of the children born being vaccinated. I much regret not being able to give the Statistics of Sidmouth on the subject.

In connection with Section II. of the Act (usually known as the Conscience Clause) it would seem, in order to give completeness to a national system of small-pox protection, that a clause of some sort should be introduced in reference to *unvaccinated* children entering on school life. As the Admiralty Surgeon and Agent of this district for over 55 years, I am able to say that no man, woman or child *unvaccinated* is allowed to reside in H.M. Coastguard Buildings. Then why should a child be allowed to attend a public school in the unprotected state? After much careful attention to the point of age for primary vaccination, I am forced to the conclusion that the alteration in the period of three to six months was a most serious mistake. In the first place, my long experience as a Public Vaccinator, convinces me that the sooner the operation is done—say from two to four weeks after birth—the better. The infant takes less notice of it,

and the clothing is well adapted to its progress, and the parent is, admittedly, spared much anxiety and trouble to the arm, and, lastly, the operation is more likely to prove successful and at the same time less painful. Further, hereditary skin affections are much more likely to follow primary vaccination after three months than before. Further, the number of scarifications to which the vaccine lymph is applied is a point of the utmost importance towards a successful result. *Not less than four should be considered sufficient*, as the following extracts and Appendix 2 clearly show. One or two scarifications please the mother, but lessen future protection to the child. At very important professional desire, I beg to repeat abstracts from my Annual Report of 1901, as follows:—

"Small-pox.—The few facts in connection with a threatened epidemic that visited Sidmouth in the year 1882—imported from Sheffield, *via* Honiton, by a girl aged 14—limited to five cases, are a volume in themselves as bearing on Vaccination and Small-pox Protection, and I annex them as reported by me to the Urban District Council at the time, as follows:—

"In this short history we have every link supplied to justify with remarkable exactness the recognised etiology of the disease in its infection, incubation, and progress, and equally as to the value of Vaccination. For instance, take the position of those living in the house of the deceased, and the girl in an adjoining house, and Elizabeth Churchill living in Western town. Lewis Sellek, aged 19, the lodger, who with four perfect marks of infantile vaccination, escaped altogether.* Lily Pile, aged 21, with four *good* marks, escaped with a single pock. Daisy Pile, *aged* 13, with *two good* and *two indifferent* marks had ten or a dozen pock, leaving no scars, and took little or no notice of her illness, being out of doors each day.

"Frank Pile, aged 22, *unvaccinated*, and living in the house, died of the disease on the eighth day, from as confluent a form of the disease as I ever saw, my

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*Although sleeping with the undermentioned Frank Pile during the incubation period of the attack, and who succumbed to it.

experience extending to between 300 and 400 cases during an epidemic that followed the severe Cholera epidemic at Portsmouth in 1849, in which I was engaged under the (then) Government Board of Health.

"Kate Hayward, aged 13, in an adjoining house, with *only two good marks*, had from *three to four dozen pocks*, leaving no scar, was confined to her bed for eight or ten days.

"Eiizabeth Churchill, living in Western-town, aged 41, *unvaccinated*, had a critical attack, confining her to her bed five weeks, and convalesced greatly marked,"

The lesson taught by the above experience seems made clear that in order to ensure completeness to a National system of Small-pox Protection, a new Compulsory Vaccination Law be established, enforcing the vaccination, not only of all children in infancy, but also re-vaccination of all children in the 10th or 12th year of life.

At the annual meeting of the Association of Public Vaccinators of England and Wales, recently held at the Hotel Cecil, Sir James Crichton Browne said there was in the whole range of nosology no more horrible disease than small-pox, loathsome in its symptoms, deadly in its incidence, and disastrous in its consequences. Public vaccinators were doing their best to bring back those halycon days when small-pox was unknown in England. Through the efforts of vaccinators, according to late returns, in 1905 the scourge only succeeded in picking out four human beings for destruction out of every million living in this country. That was a magnificent result and one due chiefly to vaccination. Leaflets should be scattered broadcast showing the fallacies, the falsehoods, the fads, and the follies, of those who oppose vaccination.

Lastly, in connection with Vaccination, I consider one or two facts merit recording, namely:—In my 60 years' practice as a private and public vaccinator, I have not experienced a single case *insusceptible to vaccination*, and rarely a failure of one scarification out of four, which latter I always make, in accordance

with the valuable experience of Jenner and our Royal National Small-pox Hospital.—*Vide Appendix* 2.

Passing on from the Medical section, I beg to refer to the measures and proceedings taken in relation to the public health generally, and many remarks in former reports will be repeated in the present report.

Bye-Laws.—The revised code of bye-laws that came into force in the beginning of 1898, continue to prove of increased value, not only in strengthening the authority of the Council, but by materially aiding the efforts of the Sanitary officials The bye-laws and the adoption of the Acts by the Council, which are now in force, *efficiently carried out, together with the systematic inspection of the district*, should bring the Sanitary officials in touch with every suspected sanitary nuisance, and remove all cause for sanitary complaint. The resolution that was passed by the Council, on my recommendation, that builders, masons, and others, should be officially informed that no new or repaired drain was to be closed in before inspected and tested by the Sanitary Inspector, has proved of much value.

Isolation Hospital. With the present great privilege we possess, and have had since '05, of sending our infectious cases to to the Exeter Sanitorium with its eighty beds, and the Committee of which have under consideration a scheme for important additions, and where every kindness and attention is shewn the patients and who by its ambulance being sent can be quickly and easily removed, and, further, if we have no occasion to send patients we are free of expense, and with our record—I consider—annual average of notified cases for recent 12 years, 1896-07, of 3 9, and, further, that each of the local M.O.H. remain in office, I consider it in every sense unnecessary and unreasonable, Sidmouth being compelled to be included in the 6 districts proposed to establish an Isolation Hospital eastward, where the area of the district is upwards of 23,000 acres greater than the Exeter Sanitorium district, and there is every probability of the Hospital being more distant with high hills to be encountered, making patients' removal more tedious and prolonged, and last, though not least, whether we have occasion or not to send patients, the heavy expense of purchas-

ing the land, building, furnishing and maintaining the Hospital at something like from £400 to £500 a year for 30 years, and, after that, at £350 to £400 per bed, and the local M.O.H. to be dispensed with.

WATER SUPPLY. A good water supply is the primary necessity to sanitation. In this respect, Sidmouth is highly favoured, possessing, as it does, a natural supply, abundant in quantity, and of the *highest perfection in quality*. The remarkable *softness* is a point of therapeutic value. It is derived from the greensand strata overlaying the red sandstone on Peak and Pinn hills, distant one and six miles from the town respectively, the sources and springs being at an altitude from 500 to 700 feet above the sea level. A very important point in connection with the sources of supply is the fact that the *water sheds are completely free frow human habitation*. The Sidmouth Water Company's supply, which is the water principally in use, is full 200,000 gallons per day, or 50 gallons per head of the population. Remembering the distress and loss of life at Maidstone, Paisley, and other places during reeent years, it will be satisfactory to the inhabitants of the district to be informed that at careful inspections of the intakes and sources of supply made by the Sanitary Officials of the Council, both were found to be thoroughly safeguarded and protected from any possible contamination. The mode of intake at Pinn hill, at an altitude of 500 feet, is an interesting and excellent one being from the springs direct, without the intervention of a reservoir, thus preserving the natural purity and æration of the water. The amount of æration is so great that it generally represents a marked *opacity* by the presence of minute air bubbles when drawn, but rapidly becoming clear and brilliant.

With regard to the proof of its purity, (*vide Analysis in Appendix* 3) the Water Company is responsible for the production of a satisfactory analysis to the Council, and the Council is responsible for a periodical inspection of the sources of supply by its Sanitary Officials, which has been satisfactorily arranged and the Water Company have a quantative analysis made twice yearly, and a qualitative one is made by the M.O.H. whenever wished. To those dependant on *wells* for drinking water, the use of a reliable filter is

of the highest importance. To secure the water *germ free*, the ordinary filters are generally of little use, indeed are mostly germ producers and distributors. It appears to be agreed by many of the highest sanitary and scientific authorities, and by its use in the French Army for many years, and in the most unhealthy climes that the Pasteur-Chamberlain filter, as manufactured in this country by Messrs. J. Defries and Sons, is one that can be relied upon for removing specific infective material from drinking water. From my own practical experience of its use, during a long period, I can fully endorse the foregoing opinions. This particular kind of filter was placed by order of the Medical Department of H.M. Navy on board H.M.S. Ophir, for use during the Duke of Cornwall's Colonial tour, and the order was repeated in connection with the Prince of Wales' Indian Tour. In connection with this subject of purity, I may mention having in my possession, a carefully preserved specimen of a portion of a *lead* pipe in constant use in a house service of Sidmouth Water for a period of sixty years—1831 to 1901. Its internal surface being absolutely perfect and free of the slightest chemical change, conclusively proving the absence in the water of those deleterious constituents so frequently met with, which affect this chemically sensitive metal and also—what is of vast more importance—the human body by its effect on certain organs; kidney, glands and liver for instance.

Milk Supply. Acting under the adoption of the Council of the "Cowsheds and Milkshops order," arrangements have been made with the Council's Sanitary Inspector, to continue the careful inspection of all Dairies. I should strongly recommend that a periodical return of the results of such visits be made to the Council. All wells have been closed, and every dairy is supplied with the Sidmouth Company's water. I am pleased to add that the owners of the Dairies do their best to assist the Council's officials.

In many cases the dairy is made a "larder," which should be, and by the "Cowsheds and Milkshops Order *is*, prohibited. The keeping of meat, cooked or uncooked, particularly the latter, with milk—and especially fresh milk from the Cow—is fraught with

danger, especially when an epidemic prevails, aud a Sanitary Inspector cannot too forcibly impress this fact on purveyors of milk.

SEWERAGE. In reference to Sewerage, I would strongly urge careful attention being given to the Sewer Automatic Flushing Tanks and a periodical report made to the Council of their efficient working or otherwise, their efficiency being a matter of great sanitary importance, as was evidenced by the painful results of the severe storm of June, 1906, in the lower parts of the town, And again, as recently as December last, after a heavy downpour, similar painful results were experiencnd in the same parts of the town, and Temple Street, strongly pointing, I consider, to failure of action of the Flushing tanks. Particularly do I consider this an important matter, seeing the increased attention given to the formation of storm water sewers, which, however necessary, it is most important to remember, deprives the main sewers of water, and where their gradients are small as in the town itself, the increased use of flushing tanks, and particularly the 1,000 gallon one at Lower Woolbrook which flushes the main sewer that receives the house drainage of one-fourth of our population. Proper attention to the existing flushing tanks was strongly recommended to be continued in connection with the completion of the new system of sewerage in 1897 from plans suppiied by the late Mr Jas Mansergh, Westminster, at a cost of £10,000. Important also is attention to, and frequent emptying of, the large sand tanks in the roadways, the size—in my opinion, a very questionable improvement—embracing danger of a nuisance if neglected. The more general use of improved Sand Tank Gratings would be a very important addition to the roads.

SCAVENGING is scarcely second in importance to pure water and an effective system of sewerage. In connection with the district scavenging, I am pleased to be able to mention all ash-pits in the town are abolished. which implies *daily* attention to this important matter. But a site for the ultimate deposit of town refuse has been for years a serious trouble to the Council, and never more so than during the past

two years, and it has now become a matter of urgent necessity that a suitable site should be obtained if possible. If successful, I venture to suggest that the refuse be carefully picked over and the usable portion for manure, etc., sold *frequently* even at a loss, or the adoption of a destructor, an important expense, *must come*, as the only remedy for this highly insanitary grievance.

In the matter of street cleaning there is great improvement, but I regret to be obliged to say that the back streets, courts and approaches still show room for improvement. They should be as clean and orderly as main streets, more so in a sanitary point of view. It has been truly said that nothing can be more agreeable to the senses, more to the honour of the inhabitants or conducive to their health than a *clean town*; nor does anything impress a stranger sooner with a disrespectful idea of any people than its opposite. I strongly recommend that covered receptacles be used for depositing house refuse in the streets when waiting removal by the scavenger, which should be done as speedily as possible, and especially at Holmdale is needed and would be greatly valued by the householders.

THE FOOD AND DRUGS' ACT. I desire to emphasise all I have said in my previous reports on this subject, viz:—This Act has not been called into operation in this district. It is difficult to know what is and what is not an *adulteration* of food. The number of articles of food necessaries of life of daily consumption, to which substitutes and drugs, most of them injurious, if not pernicious are added, and the practice daily increasing, and the law practically powerless to prevent, is beyond belief. The number of these to procure, pure and simple as nature has provided them for us, are daily getting less and less, and at present *may be counted on a few fingers*. Bread the "staff of life," may be quoted as a special example being well nigh useless as an article of food. It should consist of whole *wheat-meal*, the chief nutriment being contained in the husk and coarser part of the grain which gives the flour a rather brown appearance. The whiter the bread the less nourishment it contains. Foreign nations realise this and the public generally

are also beginning to endorse it Again, wheat being the only grain known to contain the mineral adapted to the formation and preservation of the enamel of the teeth, the supply of whole wheat-meal bread to the working classes and children especially, is most essential. It is within my own knowledge that 60 or 70 years ago "brown bread" of wheat-meal made and baked at home was the chief food of hard workers and children of many above the wage-earning classes, and decaying teeth at any early age were certainly the exception to the rule in those days. The admixture of drugs and other substances foreign to the food itself, should be strictly prohibited, and the genuineness of the article guaranteed. A recent special notice issued by the Chief Constable of Devon at the request of the Devon County Council, writing under the suggestion of the Local Government Board, making added preservatives to milk or its products illegal, is calculated to be a most important health protection if faithfully carried out. The attention of Sanitary Authorities cannot be too forcibly drawn to it, the effects of the principal so-called preservatives being to seriously effect and possibly permanently derange the function of the stomach, liver or kidney, especially of the infant and invalid. A "New Food Adulteration Act" of a stringent character, such as the principal Foreign Powers have recently adopted, has become a pressing necessity In the interest of the public health, and especially so to the *infant and invalid*, and it is earnestly to be hoped that the serious attention of Parliament will be given in the framing of the new promised Act to prevent such foreign admixtures.

THE FACTORY AND WORKSHOPS ACT. The provisions in connection with this Act, in the Sidmouth Urban District have been in all instances, satisfactorily carried out, and are alike a credit to the owners and the district. Arrangements have been made that a correct Register be kept and reported on.

SLAUGHTER HOUSES. These, when inspected, have on the whole being found very satisfactory. Many are in densely populated and contracted localities, and may become at times dangerous, highly objectionable and impossible of improvement, and, I con-

sider, urgently call for some special steps in the direction of a public Abbatoir at a convenient distance for the trade from the town.

PUBLIC CONVENIENCES. Two or three such necessaries of a strictly public character are greatly needed in the town, the absence of which may develop insanitary an state of things, and great annoyance to numerous ratepayers. Supplying them need not involve any great expense.

SWINE AND POULTRY. With regard to the former, I am pleased to refer to them near dwellings as a nuisance of the past, but with regard to poultry-keeping near dwellings, I regret to say that complaints of an insanitary character, and a nuisance from their noise to invalids, are frequently brought to my notice. Recently two or three painful instances have occurred, which demanded the Sanitary Inspector's attention.

THE HAM & THE EASTERN END OF THE ESPLANADE. In my report of 1901, I referred to this desirable spot as being in a "very incomplete condition." I feel much pleasure in now referring to the first-named, the Ham, as apparently complete, and available for the use its esteemed donor, Mr. J. G. G. Radford, intended, as he informed me, viz: a *Recreation Ground*, which would enable the youth of the town to enjoy the sea air and exercise, so essential to their age and home environments, without inconvenience to the public as formerly, in consequence of the highways and byeways being their only playground near their homes. In reference to its completeness, I must except the absence of any protection from accidents by drowning on its river border, where several narrow escapes have occurred, and one very sad *fatal* case occurred last year, and again very recently, another was miraculously averted by a noble act of courage and self sacrifice on the part of Mr W. A. Barnard, which was pleasingly recognised, I am glad to state, by the Royal Humane Society. The erection of a light fencing on the top of the slope of the field at the west of the river wall from the weir to the Alma Bridge, with a few suitable trees planted

between the wall and the fencing if there was sufficient earth left in the soil when the meadow was raised, would be a pleasing improvement and a valuable protection against the *present* danger. The erection of cottages on its West side which has taken place, cannot but be considered a great improvement to the appearance of the spot.

After recent experience at the East end of the Esplanade, of what a single rough tide at this spot will do by removal of shingle unless something is done, is evident. I have recently suggested that the river wall be extended from the Alma Bridge to Dunning's Pier and the boats on the adjacent beach be raised and placed in the Ham or near when necessary. With regard to a much needed improvemens in front of the Lifeboat house, the cost of which, with the help of the Council, the Lifeboat Institution, and the Admiralty who I have written on the subject, would be trifling, and effect an important improvement by doing away with the long complained of disgracefully unsightly deposit of insanitary rubbish at this launching spot of the Lifeboat and admit of the sea wall being completed as formerly, a 'slip' built outside the wall which is considered could very easily be done for launching the Lifeboat.

Lastly. From the complaints by the frequenters of the Eastern shore, particularly numerous pebble collectors, and from my own observations and reliable information, it is evident that the necessity still exists for extending the sewer outfall to the point, or very near it, originally recommended by the late celebrated engineer, Mr James Mansergh, and which is the only remedy to prevent these continual complaints of unpleasant smells in the vicinity of the outfall and great discolouration on the shore and sea beyond, and remove an existing sanitary blot. Again, in connection with the opening of the penstock, it may be said that the tank is *overflowing at least* 9 *or* 10 *hours out of* 12 *of every tide* that the penstock is closed, when the contents of the tank is supposed to be retained.

In Conclusion. Your Medical Officer desires to testify to the zealous and intelligent performance of

his duties of your Sanitary Inspector, (Mr St. Leger Whitford) whose prompt and ready co-operation on all occasions, particularly of emergency, has largely contributed to any successful endeavour of your Medical Officer, and benefit to the ratepayers.

Further as I have before felt pleasure in stating that the result of your Medical Officer's long experience as a Sanitary Officer, convinces him year by year of the recognition by the public of the importance of sanitary measures and an aroused energy towards their accomplishment. However laudable the intentions and endeavours of the Council may be to support and strengthen this feeling in matters affecting the public health and welfare of the district under its charge, it cannot be too strongly insisted on that the essence of all sanitary work is the "individual house," and the unit of sanitary success "individual co-operation." Without home attention to the one and ready assistance of the other, the wisest intentions and best endeavours of the Council and its Officials must be jeopardised.

I have the honour to remain, gentlemen,

Your obedient Servant,

THOS. H. S. PULLIN, M.D., F.R.C.S., (Edin.), M R.C.S., L.S.A.,

Fellow of Royal Institute of Public Health, Member of Sanitary Institute of Great Britain, Member of the Society Francaise de Hygiene.

APPENDIX I.

## VITAL STATISTICS OF WHOLE DISTRICT DURING 1909 AND PREVIOUS YEARS.

| Year. | Population estimated to Middle of each Year. | Births. | | Total Deaths Registered In the District. | | | | Total Deaths in Public Institutions in the District. | Deaths of Non-Residents registered in the District. | Deaths of Residents registered in Public Institutions beyond the District. | Nett Deaths at all ages belonging to the District. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Under 1 Year of Age. | | At all Ages. | | | | | | |
| | | Number | *Rate. | Number. | Rate per 1,000 Births registered. | Number. | *Rate. | | | | Number. | Rate * |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 1899 | 4000 | 61 | 15·2 | 4 | 65 | 64 | 16 | 0 | 16 | ... | 48 | 12·4 |
| 1900 | 4000 | 68 | 17 | 3 | 44 | 68 | 17 | 3 | 12 | ... | 56 | 14·0 |
| 1901 | 4200 | 69 | 16·4 | 4 | 59 | 74 | 17·6 | 2 | 12 | ... | 62 | 14·7 |
| 1902 | 4200 | 89 | 21·1 | 7 | 78 6 | 82 | 19·5 | 3 | 3 | ... | 79 | 18 8 |
| 1903 | 4350 | 72 | 16·6 | 4 | 55·5 | 63 | 14·5 | 4 | 0 | ... | 63 | 14·5 |
| 1904 | 4520 | 94 | 20 8 | 3 | 32 | 63 | 14 | 3 | 1 | ... | 62 | 13·7 |
| 1905 | 4520 | 86 | 19 0 | 4 | 46·5 | 63 | 14 | 4 | 1 | ... | 62 | 13·7 |
| 1906 | 4600 | 91 | 19·8 | 4 | 43·6 | 70 | 15·2 | 7 | 6 | ... | 64 | 13·9 |
| 1907 | 4750 | 85 | 17 9 | 4 | 47 1 | 82 | 17·3 | 1 | 1 | . . | 81 | 17.0 |
| 1908 | 5000 | 86 | 17·2 | 4 | 46·5 | 57 | 11·4 | 2 | 1 | ... | 56 | 11·2 |
| Averages for years 1899-1908 | 4414 | 80 | 18 | 4 | 51 | 68 | 15 | 3 | 5 | ... | 63 | 14 |
| 1909 | 5030 | 84 | 16·6 | 4 | 47·6 | 62 | 12·3 | 2 | 1 | 2 | 61 | 12·1 |

*Rates in Colums 4, 8, and 13, calculated per 1,000 of estimated population.

At Census of 1901—Total Population at all ages, 5,030. Number of inhabitated houses 1,030. Average number of persons per house, 4·1. In 1909, number of inhabited houses, 1,236. Average number of persons per house, 4·1.

Area of District in acres (exclusive of area covered by water) 1,600.

## APPENDIX II.

Statistical evidence of the different degrees in which persons vaccinated in different ways will be safe against Death by Smallpox if they should happen afterwards to contract the disease.

The Table is founded on information given to the Medical Officer of the Local Government Board by Mr Marson, Surgeon, of London Smallpox Hospital, as the result of his observations made during 25 years in nearly 6,000 cases of post vaccinal Smallpox.

| | Cases of Smallpox, classified according to the vaccination marks borne by each Patient respectively. | Number of deaths per cent. in each class respectively. |
|---|---|---|
| 1 | Stated to have been vaccinated, but having no cicatrix ... ... ... ... | 21¾ |
| 2 | Having one vaccine cicatrix* ... ... | 7½ |
| 3 | Having two vaccine cicatrices† ... ... | 4⅛ |
| 4 | Having three vaccine cicatrices ... ... | 1¾ |
| 5 | Having four or more vaccine cicatrices ... | ¾ |
| | Unvaccinated ... ... | 35½ |

*Among cases in which the one cicatrix was well marked, the death rate was 4¼. Among cases in which it was badly marked the death rate was 12.

†Among cases in which the new cicatrices were well marked, the death rate was 2¾. Among cases in which they were badly marked, it was 7¼.

APPENDIX III.

## Analysis of Water.

Sidmouth Water Company's Supply.

By Professor Attfield and Dr. D. H. Attfield

One gallon contains the following number of grains and decimal parts of a grain of the respective substances;—

| | |
|---|---|
| Total suspended solid matter, dried at 250° F. ... ... | nil |
| Total dissolved solid matter, dried at 250° F. ... ... | 5·8 |
| Ammoniacal matter, yielding ten per cent. of nitrogen (equal to ammonia per million 0·08) ... ... ... | 0·046 |
| Albumoid organic matter yielding ten per cent. of nitrogen (equal to ammonia per million 0·04) ... ... ... | 0·023 |
| Nitrates ... ... ... ... ... ... ... | absent |
| Nitrates containing seventeen per cent. of Nitrogen (equal to grains of Nitrogen per gallon 0115 ... ... ... | 0·69 |
| Chlorides, containing sixty per cent. of chlorine (equal to grains of chlorine per gallon 1 6. ... ... ... | 2·66 |
| Hardness, reckoned as chalk grains or "degrees" removed by ebullition ... ... ... ... ... ... ... | 2·0 |
| Unaffected by ebullition ... ... ... ... ... | 1·7 |
| Total Hardness ... ... ... ... .. ... | 3·7 |
| Lead or Copper ... ... ... ... ... ... ... | absent |
| Physical examination, clear, odourless, palatable, Oxygen absorbed in three hours ... ... ... ... ... | 0·01 |