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Contributors

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The Health of Sidmouth FOR 1906.

**The Medical Officer's Annual Report,
Presented at
the Meeting of the Urban District Council, on
February 22nd, 1907.**

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The Health of Sidmouth

1906.

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 36th Annual Report, embodying the Births, Sickness and Deaths that occurred in the Sidmouth Urban District under your charge, during the year 1906, 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. I feel great pleasure at the opportunity of congratulating the Council on the highly satisfactory nature of the report as regards Mortality, absence of Zymotic Disease, and the general health of the district during the period in question. 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 by Miss C Radford, of Sidmouth.

CLIMATE OF SIDMOUTH FOR 1906.

"Hours of bright sunshine, 1,900 hours, being 137 hours above the average of the last ten years, and 602 hours more than in Regent's Park.

Highest temperature in the air, 75·4.

Lowest temperature in the air, 27.

Highest in the sun 13·3.

Lowest on the grass, 20.

Mean of daily maxima, 56·4

Mean of daily minima, 44.

Mean of the year, 50·2.

The average mean of last 35 years, 48·9.

Mean Humidity in the air at 9 a.m., 81·9

The mean temperature of the air was little above the average.

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 mean daily range, *i.e.*, the difference between the highest temperature in the day and lowest at night, was for the last 27 years 8.4.

The rainfall for 1906 was 28.66. Last 20 years average 30.64. Average rainfall given in "The Times" for London (Brixton) is 34.39; that for 1903, 37.90; Botanic Gardens, 37.65. 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.

The mean temperature of 1894-1895 winter was 30.8			
"	"	1895-1896	" 41.8
"	"	1896-1897	" 41.6
"	"	1897-1898	" 41.8
"	"	1898-1899	" 41.5
"	"	1899-1900	" 47.7
"	"	1900-1901	" 41.5
"	"	1901-1902	" 41.7
"	"	1902-1903	" 43.4
"	"	1903-1904	" 42.5
"	"	1904-1905	" 41.7
"	"	1905-1906	" 40.8

Mean of 12 years, approximately, 40.9, including the very severe one of 30.8, of 1894-95.

In the early morning and evening on the moors (fed by the air of the Atlantic, Dartmoor and Exmoor) from one and one-and-a-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 10 to 20 degrees cooler than London, and five 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 last 36 years at Sidmouth was 42·6.

The area of the district is 1,600 acres, present inhabited 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 shewed an increase, viz: Venn Ottery 1, Feniton 3, Sidmouth 439.

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

Average number of persons per house 4.05.

The great reduction of houses (209) under the rateable value of £8, and increase (345) of houses over £8, during the past six years, renders it difficult for the working classes to obtain the class of dwellings so urgently needed, viz., of a *gross rental not exceeding* £10. Apparent as were the evidences of increasing overcrowding, and my inability to execute my duty as Medical Officer of Health, in condemning many present inhabited dwelling houses, as unfit for human habitation from the absence of others for the inmates to occupy if rejected. When I first brought the subject forward, the above figures coupled with a strongly-expressed petition to the Council at its 1904 November meeting, and signed by over 500—a *sixth* of our adult population—chiefly composed of our artizan and labouring classes, urging on the Council the erection of Working-class Dwellings painfully strengthen and strongly confirm my own opinion expressed at that meeting, viz., "That the erection of more houses for the Working Classes is a matter of extreme urgency towards improved sanitation and consequently safety to the public health." "Overcrowding" is still increasing, and new houses are still increasing, but unless they embrace the advantages intended in the petition referred to and strongly advocated by myself, viz., "Houses *not exceeding a gross rental* of £10, the desired object will not be obtained." Towards showing that such houses can be built at a profit, I have prepared a "Table *re* Working Class Dwellings" giving information on the subject, a copy of which I shall be pleased to present to members of the Council and others if applied for.

In a Newton Abbot recent report in connection with the "Housing of the Working Classes" which has been satisfactorily carried out in its Urban District, the merits of the *semi-detached* house are thus

tabulated :—(1) *There is a free circulation of air and direct access for the sun's rays on the three unattached sides of the house ; (2) a staircase sash window can be provided at the side without architectural difficulty ; (3) the back road, a space often littered and untidy, with its difficulty and expense of lighting and keeping in repair, can be dispensed with, the scavenger having access at the side ; (4) the drainage of each house can be brought to a front sewer without passing under the buildings ; (5) the monotony of a long row of similar dwellings is broken and all slum-like appearance avoided ; (6) the available open space exclusively belonging to the house is increased.*

As there now exists a means of obtaining loans, the payment of which will be spaced over 80 years instead of only 30 years as heretofore, it is obvious that the Council could let the cottages at a lower rental than suggested in my memorandum and I believe it would be safe to reduce the weekly rentals from 6d. to 8d. per week.

Our neighbours at Exeter have recently erected an important number of similarly required dwellings at Alphington, on very similar lines to the foregoing, which are anticipated to prove a great success both in a sanitary and financial sense.

The births during 1906 were males 44, females 47, total 91, against 86 last year, and equal 19·7 per 1,000 population. In the decennial period, 1897-1906, the average was 19·5 per 1,000. The births (94) for 1904, were the highest during my tenure of office (36 years) as Medical Officer of Health. The birth rate for England and Wales in 1906 was 27· 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, attaining 30 and even approaching 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.

The *Deaths*, including 2 accidents, and 17 visitors, who arrived with their fatal disease on them, were: males 28, females 42, total 70, or 15·2 per 1,000. Excluding visitors and non-residents—and accidents, 11·5 per 1,000. In the decennial period, 1897-1906, the average death rate was 15·5 per annum *with* visitors, and 11·5 *excluding* visitors.

The death rate for England and Wales in 1906, was 15·4 per 1,000.

4 deaths took place under 1 year			
1	"	"	between 1 and 5 years
1	"	"	" 5 and 15 years
5	"	"	" 15 and 25 years
24	"	"	" 25 and 65 years
35	"	"	" 65 and upwards

Of the 35 deaths at 65 and upwards:—

8 were between the ages of 70 and 80.			
13	"	"	" 80 and 90.
2	were over	"	90.
1	was aged 104.		

The infant mortality, 4 for the year 1906, was equal to 43·6 per 1,000 births, 94·4 *below* that of England and Wales, (138), and 59 below the Registrar General's Health District Rate (103).

The average infant mortality per 1,000 births during the decennial period, 1897-1906, was 48·3. I have repeatedly pointed out that a low infant mortality may be generally considered 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 in the present day 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.

Again we know that in the worst parts of our great cities only three out of every four children born live for twelve 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 12 months.

The Zymotic (infectious) death rate for 1906 was 4. For the previous 12 years (1894-1905) it was *one death* only. Thirteen cases of infectious disease were notified during the year—9 scarlet fever, 4 enteric—every possible precaution, in the form of isolation and disinfection was observed, and no second case occurred in the same house. Three were imported cases.

In the twelve years 1894-1905 the cases *notified* were 2, 3, 1, 0, 6, 1, 3, 3, 3, 1, 5, 5, total 34.

Diarrhœa—Among the conditions that point to an unfavourable atmospheric state, and tend to promote and aggravate diarrhœa and choleraic 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 Diarrhœa has been registered in the District during the past *twenty-six* 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 1902, 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 among the least. The birth rate has declined during 1901, being below that of the preceding year and the 10 year's 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 diphtheria, 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 stage 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. The provision of a proper Isolation Hospital is strongly advised, and it is further strongly urged that co-operation with adjacent districts in this matter be permitted if erected outside the District."

In the same official report for 1903, Sidmouth is thus alluded to:—

Sidmouth, Urban.—This town, always in a prominent position in Table 1, this year occupies the premier place, not for the first time. The birth rate has fallen to a figure far below that of 1902, and below the decennial average. Happily the death rate has moved in the same direction; in a district of this sort with (see census of 1901) a small infantile and a large senile population, this rate is mostly dependent on the mortality amongst the aged, which this year is very high (Table 4). The infantile rate

is extremely satisfactory and the best but one in Table 1; indeed, Sidmouth occupies the best position in one or other of the columns of that table with notable frequency. Again the death rate from the ordinary zymotics was *nil*. The notifications were only 3 in number, viz., 2 scarletina and 1 typhoid, none of local origin. Dr Pullin devotes a paragraph to the immunity from phthisis, and adds that of the 7 cases he tabulates, 4 were visitors in a hopeless condition on arrival. The most noteworthy page in the report refers to the Housing question, and on this the Medical Officer of Health is very complete; a strongly expressed petition on the subject signed by 500 adults, was presented to the Council desiring the erection of dwellings having a gross rental not over £10. This is looked upon as an urgent matter, as overcrowding is increasing and under present conditions it is impossible to condemn those houses that are unfit for habitation. This important subject seems to be engaging a good deal of local attention and various schemes and suggestions are under discussion; it is not improbable that this progressive town may be a pioneer in the removal of some of the difficulties encountered."

In the same official report for 1904 Sidmouth is thus alluded to—Sidmouth Urban.—"This District occupies, as usual, a high position in nearly every column, and in Table 1 is only surpassed by the much smaller town of Budleigh Salterton."

The cause of Sickness and Deaths appear in annexed Statistical Tables. On the general analysis of the causes of death, we find them connected with the three following groups of diseases:—General 12; Constitutional, 25; Local (various organs), 33.

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 fireplaces, 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. Especially is this the case 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 even 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 three cases alluded to above as notified during the year 1905, were followed by no fresh case in same house. Again the moderate use of disinfectants in any sick room tends to lessen 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 pure Carbolic acid may always be relied on if used as directed.

Phthisis.—Nine deaths were due to this disease; six were visitors who arrived in the hopeless stage of the disease.

Again and again I have taken occasion to draw attention to the peculiar immunity of our resident population from Phthisis. To what this is due, is not so 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 age of the ailment instead of, as it 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 Sanatorium 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 spot chosen for its erection. Personally, I should strongly prefer a Sanatorium in "Blocks." The Devon County Council is also engaged in the question of providing an Isolation Hospital for Phthisis.

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 1866 to 1890 was 1637—*f* 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 excellent 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. He also says: "Tubercle is not *highly contagious*." My own 57 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 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 a 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 kidney, neuralgia and rheumatism, and diseases of children, the rareness and mildness of epidemics, and total absence of endemics and many serious and painful ailments—typhus, calculus, and ague, for example.

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

Cancer.—The number (4) of deaths from this disease was about the average of former years, two were visitors. As the Council are aware, investigation of this class of disease is proceeding most vigorously in different parts of the world, 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 result of my long local experience does not favour the idea of the disease being hereditary, or its having increased during the past half

century, certainly not in this locality. That it has become a more recognised disease there can be no doubt, which may in some degree account for its apparent increase.

Small-pox.—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 from the introduction of the Public Vaccination Act, I am able to state that a case of *arrear* of a Sidmouth child is an exception to the rule. Vaccination has always been well respected, and since the passing of the new Vaccination Act there have been (I believe I am correct in saying) only *eight* conscientious objectors in Sidmouth, Sidbury, and Salcombe-Regis. 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 prevented. There certainly would not have been 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 before Jenner's wonderful discovery of Vaccination in 1798, and unfolding the beneficent provisions of Nature for the mitigation of her most baneful pestilence.

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, 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 recent 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 favourable 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 will show. One or two scarifications please the mother, but lessen future protection to the child. At professional desire I beg to repeat Abstracts from my annual report of 1901 as follows:—

“Small-pox.—The few facts in connection with an 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.

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

"Frank Pile, aged 22, *unvaccinated*, and living in the house, died of the disease on the 8th day, from as confluent a form of the disease as I ever saw, my 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 pock*, leaving no scar, was confined to her bed for eight or ten days.

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

Passing from the ridiculous to the sublime,—so to speak,—from little Sidmouth, to the result of 25 years years of Re-vaccination in Germany—we find a triumphant success placed before the world year by year, as follows:—

Small-pox deaths per million of population.

PRUSSIA.

Before 1874 (1866-74)—620, 432, 188, 194, 175, 2,432, 2,624, 357, 95.

After 1874 (1857-85)—36, 31, 3, 7, 13, 26, 36, 36, 20, 14, 14.

(1886-98)—5, 5, 3, 5, 1, 1, 3, 4, 3, 0·8, 0·2, 0·2, 0·4.

GERMAN EMPIRE (average population 52,000,000).

(1886-99)—4, 3·5, 2·3, 4·1, 1·2, 1·0, 2·1, 3·1, 1·7, 0·5, 0·2, 0·1, 0·3, 0·5.

Compare AUSTRIA without compulsory vaccination.

1887-99—440, 640, 520, 250, 290, 260, 250, 110, 47, 35.

Compare ENGLAND with a law of compulsory vaccination in infancy only.

1887-98—18, 36, 0·8, 0·6, 14·7, 49·3, 27·3, 7·3, 17·6, 0·8, 8·1.

Notice the irregularity owing to severe (localised) epidemics.

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.

Lastly, in connection with Vaccination, I consider one or two facts merit recording, namely: In my 57 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.

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.—The present building in the Alexandria-road was hastily erected in the year 1882, to meet a sudden outbreak of Small pox at Honiton which extended to Sidmouth as reported above. The progress of the disease was satisfactorily checked

and the building was not used. During the past two or three years, its use as an Infectious Hospital has been negated by Dwelling Houses being built in close proximity to it, and a few months since the Urban Council entered into a contract with the Exeter Sanatorium for the reception of Sidmouth infectious cases, and with the Health Department of the Corporation for the disinfection of bedding and clothing at their steam disinfecting works when necessary. So far, so good, but the erection of a suitable building for the purpose, within the area over which the Council exercises control, and embracing the necessary requirements for the disinfection of bedding and clothing would be an additional important sanitary convenience and safeguard to our Health Resort.

The area from which patients should be received into such a Hospital, is, I consider, a matter of the utmost importance to Sidmouth, and, in my opinion, should be strictly limited to the *area over which the Council exercises control*. First, as promise has been given of early attention by Parliament to *compulsory* provision of Isolation Hospitals for *rural* districts, and secondly the inclusion of *outside* parishes would largely jeopardise a continuance of the favourable "Mortality and Notification of Diseases Tables," which our Urban District has so long enjoyed, and which is so essential to the reputation of a Health Resort so extensively patronised as Sidmouth continues to be.

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 1 and 6 miles from the town respectively, the sources and springs being at a altitude from 500 to 700 feet above the sea level. A very important point in connection with the sources of the supply is the fact that the *water sheds are completely free from human habitation*. The Sidmouth Water Company's supply, which is the water principally in use, is fully 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 recent 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 600 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 first drawn, but rapidly becoming clear and brilliant.

With regard to the proof of its purity, (vide Analysis in Appendix) 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. Both are faithfully and satisfactorily fulfilled. 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 the only 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 the 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' present 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 the 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 alike 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 within the district, supplying milk to town. 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 Company’s water.

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, and a Sanitary Inspector cannot too forcibly impress this fact on purveyors of milk.

Sewerage.—In connection with our Sewerage System, the recent extension of the main sewer, together with the Water Company’s supply, to the highest portion of the North hamlet of Woolbrook is proving of great sanitary importance, and domestic comfort to the locality. As Medical Officer of Health it has received my strongest support, and to the liberal offer of Col. J. E. H. Balfour (Lord of the Manor), to pay £250 towards its cost, is doubtless due its early accomplishment.

In reference to Sewerage I would urge careful attention being given to the Sewer 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 last, in the lower parts of the town. Not much less so, 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.

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 ashpits in the town are abolished, which implies *daily* attention to this important matter. The deposit of ashpits and street refuse were for years a trouble and a nuisance, and the removal of the refuse heap from its late site to a spot further north, and further from dwellings, has abated a long, justly complained of nuisance and trouble to the Council. The complaints from the owner of the site and surrounding tenants, from the unnecessary large accumulation of refuse that was allowed to take place has ceased.

In the matter of street cleaning there is great room for improvement, I regret to be obliged to say. The back streets, courts and approaches to premises for example do not apparently receive the necessary attention, and complaints are frequent. They should be as clean and orderly as the 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.

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 necessities of life of daily consumption, including the well-known “staff of life” which may be quoted as a special example, being well nigh useless

as an article of *food*—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*. 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 affect 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 Act promised to be brought this Session 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 during the past year.

Slaughter Houses.—These, when inspected, have on the whole been found satisfactory. Many are in densely populated and contracted localities, and become at times dangerous, highly objectionable and impossible of improvement, and I consider urgently call for some special steps in the direction of a public Abattoir at a convenient distance for the trade from the town.

Public Conveniences.—Two or three such necessities of a strictly public character are greatly needed in the town, the absence of which is developing a very insanitary 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, and urgently call for official interference.

The Ham and 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 originally principally intended, 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 four or five narrow escapes have already occurred. The erection of a light fencing on the top of the slope of the field to the west of the wall from the weir to the Aima bridge, with a few suitable trees planted between the wall and the fencing, 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 excavation, unless "rough timbering" as suggested in my last Annual Report, or some other protection is provided for future deposit of earth at this spot, the safety of the Drill Hall and adjoining buildings must be seriously jeopardised. With regard to a much needed improvement in front of the Lifeboat House, the Admiralty I have reason to think would contribute to a "Lifeboat Slip" of a permanent character in front of the Lifeboat House, the cost of which, with the help of the Council, and the Lifeboat Institution, and Admiralty, would be trifling, and effect an important improvement by doing away with the long complained of unsightly deposit of insanitary rubbish at this spot, and at the same time would admit of the extension of the Esplanade to Dunning's Pier, or about 160ft. further east of it, if the present river wall was carried from the Alma Bridge, straight southward, to high water mark, and thence to Dunning's Pier, as suggested by me in a plan submitted to the Council in Feb. '96. This would also provide an important shelter for our fishermen's boats in the winter and in storm emergencies.

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 discoloration 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 hours out of the 12 of every tide* that the penstock is closed, when the contents of the tank is supposed to be retained.

In conclusion, 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 im-

portance 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 Société Française de Hygiène

APPENDIX.

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
Albuminoid organic matter yielding ten per cent. of nitrogen (equal to ammonia per million 0.04) ...	0.023
Nitrites	absent
Nitrates containing seventeen per cent. of nitrogen (equal to grains of nitrogen per gallon 0.115) ...	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

TABLE I.

VITAL STATISTICS OF WHOLE DISTRICT DURING 1906 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 Public Institutions in the District.	Deaths of Residents registered in Public Institutions beyond the District.	Deaths of all ages belonging to the District.	
		Number.	*Rate.	Under 1 Year of Age.		At all Ages.					Number.	*Rate.
				Number.	Rate per 1,000 Births registered.	Number.	*Rate.					
1896	4000	72	18	3	43	54	16	4	12	42	13	
1897	4000	68	17	4	47	47	11.7	1	8	39	9.75	
1898	4000	74	18.5	6	78	58	14.5	1	11	47	11.7	
1899	4000	61	15.5	4	73	64	16	..	16	48	13.10	
1900	4000	68	17	3	48	68	15.25	3	12	56	12.25	
1901	4200	69	16.4	4	57.97	74	17.61	2	12	62	14.76	
1902	4290	89	21.11	7	78.65	82	19.62	3	3	79	17.31	
1903	4350	72	16.5	4	55.5	63	14.9	4	..	63	14	
1904	4520	94	20.9	3	32	63	14	3	1	62	13.8	
1905	4520	86	19.1	4	46.5	63	14	4	1	62	13.7	
Averages for years 1896-1905	4175	75.3	18.1	4.2	55.9	63.6	15.1	2.5	7.6	56	13.1	
1906	4600	91	19.8	4	43.6	70	15.3	7	6	53	11.5	

*Rates in Columns 4, 8, and 13 calculated per 1000 of estimated population.

At Census of 1901. Total population at all ages, 4201. Number of inhabited houses, 1041. Average number of persons per house, 4.07. Acreage, 1600.

TABLE III.

**CASES OF INFECTIOUS DISEASE NOTIFIED DURING
THE YEAR 1906.**

NOTIFIABLE DISEASE.	CASES NOTIFIED IN WHOLE DISTRICT.						
	At all Ages.	At Ages—Years.					
		Under 1.	1 to 5.	5 to 15	15 to 25	25 to 65	65 and upwards
Small-pox .. ..	..	..	..	..	..	..	..
Cholera .. ..	..	..	..	..	..	..	..
Diphtheria .. ..	..	..	..	..	..	..	..
Membranous croup ..	..	..	..	..	..	..	..
Erysipelas .. ..	..	..	..	..	..	..	..
Scarlet fever	9	..	2	6	1	..	..
Typhus fever .. ..	..	..	..	..	..	..	..
Enteric fever	4	..	..	2	..	2	..
Relapsing fever .. ..	..	..	..	..	..	..	..
Continued fever .. ..	..	..	..	..	..	..	..
Puerperal fever .. ..	..	..	..	..	..	..	..
Plague .. ..	..	..	..	..	..	..	..
Totals	13	..	2	8	1	2	..

TABLE IV.

CAUSES OF, AND AGES AT, DEATH DURING THE
YEAR 1906.

CAUSES OF DEATH.	DEATHS AT THE SUBJOINED AGES OF "RESIDENTS" WHETHER OCCURRING IN OR BEYOND THE DISTRICT.							Total Deaths in Public Institu- tions in the District
	All ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and up- wards.	
1	2	3	4	5	6	7	8	16
Small-pox .. ..	..	..	..	..	..	..	..	..
Measles .. ..	..	..	..	..	..	..	..	..
Scarlet fever .. ..	..	..	..	..	..	..	..	..
Whooping-cough	1	1	..	..	..	..	..	..
Diphtheria and membranous croup .. ..	..	..	..	..	..	..	..	..
Croup .. ..	..	..	..	..	..	..	..	..
Fever { Typhus .. ..	..	..	..	..	..	..	..	..
Enteric	3	..	..	1	..	2	..	..
Other continued	..	..	..	..	..	..	..	..
Epidemic Influenza .. ..	..	..	..	..	..	..	..	..
Cholera .. ..	..	..	..	..	..	..	..	..
Plague .. ..	..	..	..	..	..	..	..	..
Diarrhoea .. ..	..	..	..	..	..	..	..	..
Enteritis .. ..	..	..	..	..	..	..	..	..
Puerperal fever .. ..	..	..	..	..	..	..	..	..
Erysipelas .. ..	..	..	..	..	..	..	..	..
Other septic diseases .. ..	..	..	..	..	..	..	..	..
Phthisis, (Pulmonary Tuberculosis)	9	..	..	..	2	7	..	..
Other tubercular di- seases .. ..	..	..	..	..	..	..	..	..
Cancer, malignant di- sease	4	..	..	..	..	1	3	..
Bronchitis	6	1	..	..	..	2	3	1
Pneumonia .. ..	..	..	..	..	..	..	..	..
Pleurisy	2	..	..	..	..	2	..	..
Other diseases of res- piratory organs	1	..	..	..	..	..	1	..
Alcoholism .. ..	..	..	..	..	..	..	..	..
Cirrhosis of Liver } .. ..	..	..	..	..	..	..	..	..
Venereal diseases .. ..	..	..	..	..	..	..	..	..
Premature birth .. ..	..	..	..	..	..	..	..	..
Diseases and accidents of parturition	1	..	..	..	..	1	..	..
Heart diseases	6	..	..	..	2	2	2	1
Accidents	2	..	..	..	..	1	1	1
Suicides .. ..	..	..	..	..	..	..	..	..
All other causes	35	2	..	1	1	6	25	4
All causes.	70	4	..	2	5	24	35	7