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Contributors

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Urban District Council of Padiham.

REPORT

OF THE

Medical Officer of Health

on the Health of the

URBAN DISTRICT OF PADIHAM

For the Year 1908.

The Urban District Council of Padiham.

1908.

CHAIRMAN—T. HERBERT THOMPSON, Esq., J.P.

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MEDICAL OFFICER OF HEALTH.

N. R. DHARMAVIR,
F.R.C.S. (Edin.), L.R.C.P. (Edin.), D.P.H. (Camb.), &c.

The Urban District Council of Padiham.

TO THE CHAIRMAN AND MEMBERS OF THE URBAN DISTRICT COUNCIL
OF PADIHAM.

GENTLEMEN,

I have the honour to submit my Annual Report on the health of your district for the year ending December 31st.

The total number of deaths from all causes, and belonging to the district was 228, giving a death-rate of 16·36. The death-rate for the year 1907 was 15·81.

The births have increased from 340 in the year 1907 to 363 in the year under review, and the birth-rate from 24·54 to 26·05.

There was a decrease in the mortality of infants under one year, from 66 in 1907 to 60 in 1908. This decrease is seemingly insignificant, but when it is borne in mind that there were 23 more births, the fall in the number of infantile deaths is very gratifying. The infantile mortality rate is consequently reduced from 194·11 in 1907 to 165·28 in 1908.

The seven principal Zymotic diseases accounted for a death-rate of 1·36 against 1·29 of the previous year.

Measles was prevalent during the last four months of the year. Nearly one-fourth of the total number of scholars were attacked. There were 10 deaths from this disease.

I have compiled a table from information received from 21 Urban Districts and Boroughs with regard to the Population, Birth-rate, Death-rate, Zymotic Death-rate and Infantile Mortality Rate. This, I hope, will serve to give a very useful comparative view of the health of various towns.

I beg to draw your attention to the following :—

(1) PADIHAM URBAN DISTRICT COUNCIL ACT, 1908.—

This act passed and came into force. In it are clauses dealing with the improvement of streets. The Council may build their own Slaughter-house and prohibit slaughtering in abattoirs other than their own. There are also clauses of very great importance from the Public Health point of view, dealing with tuberculous cows and milk.

Any dairyman or farmer who supplies milk within the district shall notify cases of Tuberculosis of the Udder, isolate the tuberculous cows and shall not knowingly sell tuberculous milk in the district without incurring a penalty. The Medical Officer of Health has power to take samples of milk on sale in the district and inspect, in the company of a veterinary surgeon, dairies supplying milk to the district, whether in the district or not, and may take samples of milk from the tuberculous udder. The Council, on the reports of the Medical Officer and the veterinary surgeon, may make an order for the discontinuance of the sale of such tuberculous milk.

(2) THE PUBLIC HEALTH (TUBERCULOSIS) REGULATION, 1908—

On and after the 1st of January, 1909, the Medical Officer of a Poor Law Institution and the District Medical Officer, within 48 hours after the first recognition of the symptoms of Pulmonary Tuberculosis, shall notify the case to the Medical Officer of Health of the district. The Superintending Officer of a Poor Law Institution and the retiring officer shall notify any change of residence to the Medical Officer of Health of the district in which the changed residence is situated.

I take this opportunity of thanking Mr. J. W. Hocking, the Sanitary Inspector, Mr. John Gregson, the Surveyor, and Mr. R. T. Whitehead, for their able and ungrudging assistance in the discharge of my duties.

I am, Gentlemen,

Your obedient servant,

N. R. DHARMAVIR,

PUBLIC HEALTH DEPT.,

Medical Officer of Health.

PADIHAM, *March 1st*, 1909.

SUMMARY OF STATISTICS.

Area of District in acres	976
Total Population at Census of 1901	12205
Number of Inhabited Houses in 1901	2760
Average Number of Persons per House	4.4
Estimated Population in the middle of 1908 on the basis of the number of persons per house in 1901	13930
Density of Population .....(persons per acre)	14.27
Number of Inhabited Houses	3096
Number of Births registered	363
Birth Rate	26.05
Number of Deaths registered in the District	201
Death Rate	14.42
Number of Deaths registered in Public Institutions beyond the District	27
Total number of Deaths belonging to the District	228
" Corrected " Death Rate	16.36
Number of Deaths under 1 year	60
Infantile Mortality Rate	165.28
" Zymotic " Death Rate	1.36
Respiratory Death Rate	3.23
Phthisis Death Rate .....	.64
Death Rate from other forms of Tuberculosis .....	.43
" Malignant Disease " Death Rate .....	.64

REPORT.

TOPOGRAPHY.

Padiham is situated in the Calder Valley. To the North is Pendle Hill and to the South Hambledon Hill. It is traversed from east to west by the River Calder. The part of the town which is situated to the north of the river is hilly and at its highest point is 420 feet above the sea level. The greater part of the town to the south is much flatter and is 250 feet above the sea level at its lowest point, the mean altitude of the town being 335 feet.

SOIL.

The soil is clayey generally. In an excavation in the Stockbridge Ward, after passing through an admixture of sand and clay, 17 feet deep, pure clay was followed by marl.

WINDS.

The prevailing winds during the year were Westerly and South-Westerly.

RAINFALL IN INCHES.

January	...	...	...	...	...	...	...	...	...	...	3.75
February	...	...	...	...	...	...	...	...	...	...	3.25
March	...	...	...	...	...	...	...	...	...	...	3.75
April	...	...	...	...	...	...	...	...	...	...	2.53
May	...	...	...	...	...	...	...	...	...	...	2.99
June	...	...	...	...	...	...	...	...	...	...	0.90
July	...	...	...	...	...	...	...	...	...	...	1.34
August	...	...	...	...	...	...	...	...	...	...	Gauge in repair
September 14th to 30th	...	...	...	...	...	...	...	...	...	...	2.20
October	...	...	...	...	...	...	...	...	...	...	1.85
November	...	...	...	...	...	...	...	...	...	...	3.70
December	...	...	...	...	...	...	...	...	...	...	2.66
											<hr/>
Total Rainfall for the Year										...	28.92

POPULATION.

The population as estimated for the middle of 1908 is 13930. The number of inhabited houses was 3096.

OCCUPATION.

The staple industry of the town is cotton spinning and weaving. 3348 operatives are employed in the mills, 1543 of them are male and 1805 female. They work 55 hours per week made up as follows:—Work from 6 to 8, 8-40 to 12-40 and 1-30 to 5-30, on five days a week; and on Saturdays, 6 to 8 and 8-30 to 11-30.

There are important iron foundries and wood works in the district, and print works and a large chemical works in the vicinity.

The following is the number of Workshops on the register :—

Confectioners	...	...	...	...	...	...	...	...	28
Milliners and Dressmakers	...	...	...	...	...	...	...	...	15
Tailors	...	...	...	...	...	...	...	...	6
Shoemakers and Cloggers	...	...	...	...	...	...	...	...	20
Plumbers	...	...	...	...	...	...	...	...	4
Blacksmiths	...	...	...	...	...	...	...	...	4
Painters and Decorators	...	...	...	...	...	...	...	...	6
Tripe Dressers	...	...	...	...	...	...	...	...	4
Brush Makers	...	...	...	...	...	...	...	...	2
Harness Makers	...	...	...	...	...	...	...	...	2
Coopers and Cabinet Makers	...	...	...	...	...	...	...	...	5
Other Trades	...	...	...	...	...	...	...	...	12

Total number of Workshops on Register 108

WATER SUPPLY.

The water is supplied from Churn Clough Reservoir which was opened on the 23rd March, 1892. Its gathering ground is situated on the south side of Pendle Hill, is 800 to 1500 feet above the Ordinance Datum, and has an area of 254 acres. Its composition is millstone grit and yoredale rock.

The capacity of the reservoir is 121,000,000 gallons.

In April, 1908, the Water Engineer, Mr. John Gregson, gives, in his annual report, the following important figures :—

POPULATION SUPPLIED WITH WATER.

Padiham	...	...	...	...	...	...	...	...	13,855
Burnley	...	...	...	...	...	...	...	...	2,465
Altham	...	...	...	...	...	...	...	...	158
Simonstone	...	...	...	...	...	...	...	...	142
Northtown	...	...	...	...	...	...	...	...	31
									<hr/>
									16,651

WATER STATISTICS.

Population supplied with water—16,651

Consumption per day on 20 gallons per head	...	333,020 gallons
Average consumption for trade purposes	.....	20,274 „
Compensation to Churn Clough Brook	.....	156,800 „
		<hr/>
Total daily consumption	.....	510,094 „

CHURN CLOUGH AREA.

Area of Churn Clough Gathering Ground	254 acres
Average Annual Rainfall in 7 years	38.02 inches
Total Rainfall on Gathering Ground per year.....	219,095,002 gallons
Available Rainfall on Gathering Ground per year after deducting $\frac{1}{3}$ for infiltration and evaporation	146,063,335 „
Capacity of Churn Clough Reservoir	121,000,000 „
Number of Days' Storage	237 days
„ „ Supply from Churn Clough Area	286 „

MILK SUPPLY.

Milk is a nutritive medium in which a great number of Pathogenic Micro-organisms grow and multiply. They may find easy access to it from the udder of a cow, the hands of milkers, the atmosphere polluted by germ-laden dust or effluvia, dirty milk kits, etc.

Infants, whose staple diet is milk, and even adults and old people may fall a prey to various diseases consequent upon the consumption of polluted milk. These diseases can be avoided by careful and cleanly milking and distribution, and by due regard to personal domestic hygiene.

I wish to make special reference to micro-organisms which infect milk in spite of personal and domestic cleanliness. These are the micro-organisms of Tuberculosis or "Consumption."

☐ Consumption is common to man and beast. When the udder of a cow is diseased with Tuberculosis, large colonies of the germs of this disease find their way into the milk at the time of milking. One diseased udder thus continues to pollute the whole milk of the dairy, with which the milk from it is mixed, until either the cow dies or is killed. The other cows may be infected and the diseased condition of the milk in this way perpetuated.

The bacillus of tubercle is very tenacious and can only be killed by boiling the milk. It is easy to understand that unboiled or insufficiently boiled milk is capable of causing considerable injury to the health and life of the milk consuming population.

The Padiham Urban District Council Act authorises the Medical Officer of Health to take samples of suspected milk, and makes it incumbent on a dairyman to notify and isolate cases of Tuberculosis in the cattle, and discontinue the sale of tuberculous milk by order of the Council.

It is to be hoped that this Act will prove of service in reducing the mortality by steadily encouraging the purity of milk.

LIGHTING.

The Council, through their Gas Department, has the control of the manufacture and sale of Coal Gas.

It is used for street-lighting and sold for private use for the purpose of lighting, heating and cooking.

The illuminating value of the gas is about 16·59 candles.

During the year ending March 31st, 1908, 385 Public Lamps were in use.

From the point of view of the health of the consumers, it is very necessary that the quality of the gas be chemically tested in order to protect them from injury caused by the presence in it of sulphuretted hydrogen and excessive quantities of other gases which are not required for illuminating or heating purposes.

SANITARY ACCOMMODATION AND SCAVENGING.

The Sanitary Accommodation within the District consists of the following types :—

	<i>Year</i> 1906	<i>Year</i> 1907	<i>Year</i> 1908
Number of Clean Water Closets	203	230	247
„ „ Waste Water Closets (Tippers)	1320	1360	1429
„ „ Pail Closets	1543	1529	1516
„ „ Cesspools	4	3	3
„ „ Ashtubs (Wood)	2950	3000	2995
„ „ Ashbins (Galvanized) .....	...	168	298
„ „ Ashpits	4	4	3

There have been 13 Pail Closets converted into Water Closets during the year. Of the 3 Cesspools at present in existence 1 is in use in a mill, 1 in a house and 1 in a school. They are emptied at irregular intervals as required.

The Clean Water Closet is certainly a much more sanitary type than the Waste Water Closet or Tipper.

298 galvanized steel bins have been put into use and it is pleasing to note that both house-holders and business people are seeing the advantage of these receptacles compared with the wooden ones, and their adoption is still increasing.

Fish-dealers' refuse is removed five times per week, whilst Slaughter-house offal and Market garbage are removed as soon as they are produced. All the above refuse is carted to the Destructor Works and burnt.

Scavenging is carried on regularly and systematically.

TREATMENT OF SEWAGE.

The sewage of the town is treated on a sewage farm situated on the south side of the River Calder. It is 10 acres in area. Its subsoil is gravel. The system adopted is precipitation and land filtration. The sewage passes into six settling tanks, each 40 feet square, and then on to the land. The effluent is discharged into the river. The growing of crops is now discontinued.

QUALITY OF EFFLUENT.

The quality of effluent is far from being satisfactory, as the following analysis, taken from the Annual Report of Edward Halliwell, Esq., F.I.C., Chief Inspector, read before the Ribble Joint Committee, shows :—

ANALYSIS OF EFFLUENT.

Sample No.*	Taken.	Chlorides in terms of Chlorine.	Ammonia		Nitrates in terms of Nitrogen.	Oxygen Absorbed.		After Incubation.		
			Free.	Alb.		In three minutes.	In four hours.	Oxygen abs'rb'd three inutes	Nitrates in terms of Nitrogen	Odour.
	1908									
W 2443	Feb. 3rd	3.4	1.23	.14	Nil.	.50	1.40	.72		H ₂ S
W 2491	March 10th	3.0	.44	.07	.128	.14	1.68	.16	.13	No H ₂ S
W 2538	April 7th	3.4	1.09	.09	0	.30	1.02	.74		H ₂ S
W 2603	June 1st	4.6	1.74	.142	0	.48	1.22	.90		H ₂ S
W 2645	July 1st	4.8	1.58	.25	Nil.	.68	1.84	1.74		H ₂ S
W 2671	July 29th	4.8	1.52	.15	Nil.	.54	1.32	1.14		H ₂ S
W 2747	Sept. 30th	4.4	1.64	.21	Nil.	.68	1.74	1.86		H ₂ S
W 2774	October 22nd	5.2	1.73	.16	0	.42	1.18	.80		H ₂ S
W 2834	Dec. 9th	3.0	.70	.086	0	.34	.94	.44		H ₂ S

EDWARD HALLIWELL, F.I.C.

Out of the nine samples there was only one which was free from the odour of sulphuretted hydrogen, a gas which when emitted after incubation invariably owes its presence to putrescent excretory matter. The "albuminoid-ammonia" figure is rather high in the majority of samples. I understand the subject of the improvement of the effluent is engaging your attention.

SLAUGHTER-HOUSES.

NO. ON REGISTER, 10.

These premises have been periodically visited. The buildings in general are old and not provided with the best sanitary conditions. In some cases the premises are in close proximity to dwellings, and the mere sight of animals ready for slaughter is repugnant to many people.

Concentration and consequently better supervision and inspection of the meat are the chief grounds in favour of a Public Slaughter-house, which the Council has now power to build.

BAKE HOUSES.

No. on Register, Retail	24
„ „ Wholesale	4

These premises have received 51 visits from the Sanitary Inspector, whilst sanitary requirements, such as lime-washing and repairs to drains, have been complied with when necessary.

BIRTHS AND BIRTH-RATE.

There were 363 births during the year, giving a birth-rate of 26.05 per thousand population. The number of births and the birth-rate per thousand population during the previous year were 340 and 24.54 respectively. The average number of births for the previous ten years was 336, and the average birth-rate 25.69. Out of the total 363, 345 were legitimate and 18 illegitimate, giving a ratio of 19 legitimate and 1 illegitimate birth.

A table showing the number of births and the birth-rates for the last ten years, and the mean number of births and birth-rate will be found on page 23.

DEATHS AND DEATH-RATE.

The number of deaths registered in the district was 201, giving a death-rate of 14.42 per thousand population. 27 deaths of residents occurred in public institutions outside the district, making a total of 228 deaths. This gives a "corrected death-rate" of 16.36.

94 deaths or 41.2 per cent. of the total occurred under five years.

14 or about 6 per cent. between the ages of 5 and 25 years.

78 or 34.2 per cent. between the ages of 25 and 65 years.

42 or 18 per cent. above the age of 65 years.

120 or 52 per cent. above the age of 25 years.

It may be seen from the above table that the death-roll is heaviest in the early and the late periods of life. No less than 41 per cent. dying under 5 years and 52 per cent. above 25 years.

INFANTILE MORTALITY.

Out of the total number of deaths, viz. 228, 60 or 26.3 per cent. (more than one-fourth) occurred among children under one year.

During 1907 there were 66 deaths and the mean number of infantile deaths for the previous ten years was 68.

The Infantile Mortality Rate works out to 165.28 per 1,000 births. It was 194.11 in 1907, and the mean Infantile Mortality Rate for the previous ten years was 188.05. It is the lowest for the last ten years with the exception of the years 1905 and 1906 when it was 131.11 and 160.43 respectively.

The chief causes of Infantile Mortality were as follows:—

Measles	4
Diarrhoea	4
Enteritis, Gastro-Enteritis, etc.	4
Gastritis	2
Premature Birth	7
Congenital Defects	3
Atrophy, Debility, Marasmus, etc.	10
Tuberculous Meningitis	1
Tuberculous Peritonitis	1
Erysipelas	1
Meningitis (Simple)	3
Convulsions	2
Bronchitis	13
Suffocation, Overlying	1
Other Causes	4
	—
	60

In my last year's report I enumerated the causes that account for the appalling death-rate among infants.

It requires no great stretch of imagination to understand that a town, with a persistently high Infantile Mortality, must suffer a preventible loss of human life as compared with a town with an equally persistent low Infantile Mortality.

Your district with its persistently high Infantile Mortality loses a large number of infants every year as a result of the unnatural, though unavoidable, system of Nursing-out which is prevalent here.

A child is a delicate and highly sensitive organism ; and in the absence of mother's milk is dependent for its nourishment and growth on milk whose purity is not often guaranteed, and which may be polluted at its source by Tuberculosis, or at the time of milking, distribution or bottling by some pathogenic organisms ; or on an innumerable host of patent infants' foods, each

pretending to be better than the other to the great bewilderment of the anxious mother ; or on physiologically incompatible articles of food, which have a traditional repute among women who follow the occupation of nursing infants.

Reference was made in my report last year to the usefulness of the Notification of Births' Act which has its special advantages in districts where the nursing-out system is prevalent. This Act was for several months before you for consideration, but I regret to say that you did not see your way to adopt it.

I am pleased to note that the offer of supplying humanised milk from the Council Office at a moderate charge, has been utilized by a few parents and it is to be hoped that its use will continue to increase.

NOTIFIABLE INFECTIOUS DISEASES.

The total number of cases of notifiable infectious diseases was 61. The following were the diseases notified :—

	1906	1907	1908
Diphtheria, including Membranous Croup	8	12	18
Erysipelas	17	15	11
Scarlet Fever	79	138	26
Enteric Fever	4	3	3
Continued Fever	0	2	1
Puerperal Fever	0	1	2
	<hr/> 108	<hr/> 171	<hr/> 61

SCARLET FEVER.

There were 26 cases of Scarlet Fever, of which, 17 were removed to the Burnley District Sanatorium. There was one death from this disease which occurred in the Sanatorium. This gives a case mortality of 3.84 per 100 attacks.

The following table shows the number of Scarlet Fever cases from 1901 to 1908 :—

<i>Year.</i>	<i>Cases.</i>
1901... ..	39
1902... ..	105
1903... ..	12
1904... ..	11
1905... ..	69
1906... ..	79
1907... ..	138
1908... ..	26

DIPHTHERIA AND MEMBRANOUS CROUP.

There were 18 cases of Diphtheria of whom 5 were sent to the Sanatorium. There were three deaths, giving a case mortality of 16.6 per cent.

In the year 1907 there were 12 cases of this disease with three deaths, and consequently a case mortality of 25 per cent.

ERYSIPELAS.

Eleven cases were reported, three of which proved fatal.

ENTERIC FEVER.

There were three cases of Enteric and one of Continued Fever, none of which proved fatal. In 1907 there were 3 cases of Enteric Fever, of whom one died and 4 of Continued Fever without a fatal result.

PUERPERAL FEVER.

There were two cases of this disease notified, one proving fatal.

MEASLES.

The epidemic of Measles commenced in September and continued during the remaining three months. The attacks were usually severe but uncomplicated. The epidemic seemed to commence in the North-western part of the town, first confining itself to Bankhouse and Claybank Wards and then becoming general.

The following is a copy of a letter addressed on Dec. 9th to the Local Government Board, together with the special report on the epidemic of Measles, showing the reasons for recommending the closure of certain schools and the action taken by the Health Committee.

TOWN HALL, PADIHAM,

December 9th, 1908.

SIR,

EPIDEMIC OF MEASLES.

In compliance with the Art. 18 of the General Order of the Local Government Board of March 23rd, 1891, I beg to enclose a copy of my report on the Epidemic of Measles, advising the closure of certain schools in the above District.

The Health Committee of the above Council at a meeting held on Oct. 30th, 1908, resolved "that the necessary order be made to close the Infants' Department of Padiham Green C.E. School from Nov. 2nd to the 13th, both days inclusive, and that the necessary order be made to close the Infants' Department of S. Matthew C.E. School, Padiham, from Nov. 2nd to Nov. 6th, both days inclusive." It was also resolved "that the Schools in respect of which no resolution has been passed be not closed for the present."

In accordance with instructions, I reported the state of the epidemic in St. John the Baptist School (Infants' Department) at meeting held on Nov. 6th when, owing to the fact that the epidemic was increasing rapidly and that there were already three cases of Measles among the Hapton scholars of this school, it was resolved "that the necessary order be made to close the Infants' Department of Padiham St. John the Baptist R.C. School from the 9th to the 13th instant, both days inclusive."

Further, on Nov. 9th the epidemic having not abated, two members of the Health Committee ordered the closure of St. Matthew's School (Infant Department) for another week.

I am, Sir,

Your obedient servant,

The Secretary,

N. R. DHARMAVIR,

The Local Government Board,
Whitehall,
London.

Medical Officer of Health.

COPY OF REPORT ON THE EPIDEMIC OF MEASLES.

TO THE MEMBERS OF THE HEALTH COMMITTEE OF THE URBAN DISTRICT
COUNCIL OF PADIHAM.

GENTLEMEN,

EPIDEMIC OF MEASLES.

In my report for the quarter ending September 30th, 1908, I pointed out that an epidemic of Measles had commenced in the Township of Padiham. The disease seemed to be chiefly confined to the Northern part of the town, and the scholars attending the St. Leonard C.E. and Wesley Schools were in consequence the principal sufferers.

Scholars showing symptoms of Measles, and those actually attacked or belonging to the infected households, were rigidly excluded from the schools for varying periods according to the circumstances of each case, the usual period of exclusion being three weeks.

I did not consider it advisable to close the above Schools for the purpose of staying the epidemic, as the intercommunication of infected scholars with others is liable to become more free and thus to produce a general epidemic.

The epidemic, however, has since increased and all the schools in the District are more or less infected. The incidence of the disease is chiefly severe in the Infants' Departments. The following table will show the condition of the epidemic in the Infants' Departments of each school, commencing with the week ending September 25th.

<i>Name of School.</i>	<i>Average Attendance for the month ending</i>		<i>Average Attendance week ending—</i>			
	<i>Sep. 25th.</i>	<i>Sep. 23rd</i>	<i>Oct. 2nd</i>	<i>Oct. 9th</i>	<i>Oct. 16th</i>	<i>Oct. 25th</i>
St. Leonard C.E.	103.....	106.1	107	98.8	87.4	75.5
Wesley	102.....	89	86	79	89	91
St. Matthew C.E.	130.....		134.7	121.7	119.9	104.5
Cross Bank Council	86.....	85	82.3	82.1	85.4	84
Padiham Green C.E.....	89.....		63	53	34	26
St. John the Baptist ...	101.....	91	91	91	98	86

I beg to recommend the closure of the Infants' Departments of St. Matthew C.E., St. John the Baptist and Padiham Green C.E. Schools, for a fortnight on the following grounds:—

1. PADIHAM GREEN C.E. SCHOOL (INFANTS' DEPARTMENT).—

(1) Out of the actual number of scholars on the books (91), those actually attacked with Measles numbered 53, thus giving a percentage of sufferers 58. Further, it may be seen from the above table that the epidemic is rapidly increasing and the attendance is consequently growing too small for any educational benefit.

(2) Convalescent children who have returned to school after about three weeks' absence on account of measles, are generally languid and dull. Some of them have sore eyes. The closure of the school in my opinion, will prove conducive to the general health of the scholars.

2. ST. JOHN THE BAPTIST SCHOOL (INFANTS' DEPARTMENT).—

This school draws about half the number of its scholars from Hapton, a town situated to the South of Padiham, and which forms part of the Burnley Rural District. There are no cases of Measles among the Hapton scholars in this school, nor as far as I know, is there a case in the schools of Hapton. By closing this school we may prevent an epidemic in the Township of Hapton, there being no opportunity of intercommunication between the scholars of Hapton and Padiham, except through this school. There is a possibility of staying the epidemic which seems to be increasing, for the reason that the scholars here, unlike those of other schools have little opportunity of communication outside the school.

3. ST. MATTHEW C.E. (INFANTS' DEPARTMENT).—

The reasons of my recommendation for the closure of this school are the same as in the case of Padiham Green C.E. School. The number of scholars attacked being 80 out of a total of 161, giving a percentage of those attacked 49.6.

I am, Gentlemen,

Your obedient servant,

Public Health Dept.,

Town Hall, Padiham,

October 29th, 1908.

N. R. DHARMAVIR,

Medical Officer of Health.

Out of the average number of scholars on the rolls for the last four months of the year, viz. 2272, no less than 550 were attacked in the epidemic, giving an attack-rate of 24.2 per cent. or about $\frac{1}{4}$ of the total number of scholars.

Out of the 550 attacked, 300 belonged to Infants' and 250 to Mixed Departments.

Measles is generally regarded as a disease which, sooner or later, must necessarily attack every child. If one child is suffering from it other children in the family are known to have been thrown by the mother into the same bed with him, in order to get through the nursing of all of them together. This process of self-imposed sickness is devised to economise labour and trouble which the individual nursing and isolating of several children at various periods would entail.

Various expressions e.g. "It is *only* measles" are commonly used in order to belittle the gravity of the disease. This idea affords most serious obstruction to the efforts of the Sanitary Department in limiting and checking the disease.

I may point out that Measles is an extremely dangerous epidemic disease. The mortality is affected by various factors, and is sometimes very high. It is generally low, but has been known to cause 20 to 30 deaths among every 100 cases of the disease. The after-effects are sometimes very serious to health and life. Chronic inflammation of the eye-lids causes the eyelashes to be brittle and stunted in growth. The lids may become inverted, or everted. The inflammation of the eyes may cause opacity, or even blindness. Offensive running from the ears of children very often results, and may last a life time or may cause deafness and even prove fatal by causing cerebral abscesses. Enlarged tonsils and glands in the neck are not infrequent sequels.

There are other still more serious consequences, but it may safely be pointed out that the above-mentioned diseases, with their disastrous consequences are, in a great number of cases, traceable to Measles.

It is consequently very important to watch the progress of a case of Measles with special reference to the eyes, ears and other organs which are liable to be affected.

The Administration of the Education (Administrative Provisions) Act of 1907, to which reference was made in my last year's report, in the course of time will, I fear, disclose hitherto unrevealed statistics of very serious after-effects of this disease.

It is well to bear in mind that a child runs comparatively little risk of death if the attack could be postponed for the first four years of life. Most of the deaths from Measles take place under 3 or 4 years and after 5 years of age the mortality is enormously diminished. Out of the 10 deaths which occurred during the whole epidemic, 4 occurred among children under 1 year and 6 between the ages of one and four years.

DIARRHŒA, ENTERITIS, ETC.

Ten deaths or one-sixth the total number of infantile deaths, occurred from this disease under one year and two between 1 and 5 years of age.

PHTHISIS AND OTHER TUBERCULOUS DISEASES.

There were 9 deaths from Phthisis and 6 from other Tuberculous Diseases against 9 and 7 in 1907.

The Phthisis Mortality is .64 per thousand, the same as last year. In 1906 it was 1.40 per 1000. The death-rate from other Tuberculous Diseases is .43 per 1000.

The death-rate from all Tuberculous Diseases (including Phthisis) is 1.07 per 1000 as compared with 1.15 in 1907.

DISEASES OF THE RESPIRATORY ORGANS.

Out of the total number of deaths from diseases of Respiratory Organs, there were 39 from Bronchitis and Broncho-Pneumonia, 13 being those of children under 1 year. Age distribution of these diseases was as follows :—

Under 1 year	...	...	...	...	...	...	...	...	13
1 and under 5 years	...	...	...	...	...	...	...	...	8
5 „ „ 15 „	...	...	...	...	...	...	...	...	1
15 „ „ 25 „	...	...	...	...	...	...	...	...	0
25 „ „ 65 „	...	...	...	...	...	...	...	...	6
65 and upwards	...	...	...	...	...	...	...	...	11

Nine died from Pneumonia, 2 from Pleurisy and 5 from other Respiratory Diseases.

CANCER (MALIGNANT DISEASE).

There were 9 deaths from this disease, with a death-rate of .64 per 1000. All these deaths occurred above 25 years of age. The death-rate from Cancer was .72 in 1907.

FACTORIES, WORKSHOPS, WORKPLACES AND HOMEWORK.
1.—INSPECTION.

INSPECTIONS MADE BY SANITARY INSPECTOR.

PREMISES. (1)	Number of		
	INSPECTIONS. (2)	WRITTEN NOTICES. (3)	PROSECUTIONS. (4)
FACTORIES (Including Factory Laundries)	96	9	..
WORKSHOPS (Including Workshop Laundries)	144	12	..
WORKPLACES	63	6	..
TOTAL	303	27	..

2.—DEFECTS FOUND IN FACTORIES, WORKSHOPS AND WORKPLACES.

Particulars. (1)	Number of Defects.			
	Found. (2)	Remedied. (3)	Referred to H.M. Inspector. (4)	Number of Prosecutions (5)
<i>Nuisances under the Public Health Acts :—</i>				
Want of Cleanliness	18	18	..	..
Want of Ventilation	1	1	..	..
Overcrowding	8	6	..	..
Want of drainage of Floors	1	1	..	..
Other Nuisances	2	..	..	..
Sanitary Accommodation	2	..	..	..
Insufficient	2	..	..	..
Unsuitable or Defective	..	..	..	..
Not separate for Sexes	..	..	..	..
<i>Offences under the Factory and Workshop Act :—</i>				
Illegal occupation of Underground Bakehouse .. .. .	..	..	..	..
Breach of special sanitary requirements for Bakehouses	..	..	..	..
Other Offences .. .. .	..	..	..	..
TOTAL	32	26	..	..

VITAL STATISTICS

COMPARATIVE TABLE GIVING POPULATION, BIRTH-RATE, GENERAL OF 23 URBAN DISTRICTS AND

<i>Name of Town.</i>	<i>Population</i>	<i>Birth Rate</i>	<i>Death Rate</i>	<i>Zymotic Death Rate</i>	<i>Infantile Mortality</i>
ACCRINGTON	46,000	22.	14.39	1.82	137.35
ATHERTON	18,900	28.49	13.12	3.07	131.23
BACUP	24,600	21.83	15.27	0.69	106
BIRKDALE	20,250	15.5	10.6	0.7	112
BURNLEY	105,100	28.2	17.9	3.06	211
BRIERFIELD	8,400	22.85	14.28		151.04
CHORLEY	30,500	27.18	14.99	1.11	139
CLITHEROE	13,000	22.9	12.7	0.53	120
COLNE	26,190	23.32	12.21	1.90	144.02
DARWEN	42,266	21.17	13.01	0.76	120
GREAT HARWOOD	13,500	22.2	12.66	.84	130
HASLINGDEN	19,116	20.08	14.22	0.78	135.41
HINDLEY	26,343	30.5	17.6	1.9	158
HORWICH	16,214	26.2	12.9	1.23	147
LITTLEBOROUGH	11,578	20.60	12.69	0.86	83.68
LYTHAM	10,094	13.4	12.1	0.3	73.5
MORECAMBE	14,274	14.4	10.5	0.28	106.8
OSWALDTWISTLE	15,000	25.26	14.66	1.26	134.56
PADIHAM	13,930	26.05	16.36	1.36	165.28
RISHTON	7,500	20.4	13.2	2.4	150.3
RAMSBOTTOM	16,200	19.87	12.7	1.00	121.1
SWINTON	14,077	37.3	16.3	2.4	148
ST. ANNES-ON-THE-SEA...	10,562	14.4	10.5	0.28	106.8

TABLE I.

DEATH-RATE, ZYMOTIC DEATH-RATE, AND INFANTILE MORTALITY
BOROUGH, WITH GENERAL REMARKS.

General Remarks.

Municipal Borough. Lies in a deep valley surrounded by hills. Industries mainly calico-printing, Turkey-red, iron-founding, with coal-mining in neighbourhood, and chemical works. Pop. (1901) 43,095 of whom 7,000 employed in cotton-manufacturing.

A mining and manufacturing township of Lancashire.

Municipal Borough and manufacturing town on the Spodden rivulet. Cotton-spinning, slipper-making, and powerloom weaving are the staple industries; also dye-works, brass and iron foundries, vast stone quarries. Coal mines in the neighbourhood.

Coast township near Southport.

Situated in a narrow vale on the banks of the Brun near its influx to the Calder, Great seat of cotton manufacture. Calico-printing works, iron and brass foundries, machine shops, breweries, tanneries, rope-works and collieries.

Chief industry cotton-manufacturing.

Thriving manufactures of cotton-yarn, muslins, fancy goods, calicoes, gingham and railway wagons. Bleach-fields, print-works, coal mines and stone quarries in the vicinity.

Municipal Borough on R. Ribble. Lies on a low eminence of carboniferous limestone at the base of Pendle Hill. Cotton and paper mills and extensive lime quarries.

Situated on a high ridge near the source of the Calder. Manufactures cotton, calicoes and mousselines-de-laine. Slate and lime.

On River Darwen. Staple manufacture cotton, paper-making and paper-staining. Coal mines and quarries in the vicinity.

Chief industry cotton manufacturing.

Municipal Borough. Cotton, silk and woollen manufactures. Also iron-works, coal mines, stone and slate quarries.

Numerous coal-mines in the vicinity. Cotton manufacture staple industry.

Staple industry cotton and paper manufactures. and locomotive engine building.

Staple industry flannels and calicoes. Also cotton mills, foundries, iron-works, machine-works, etc.

Watering-place on the north shore of the Ribble estuary.

Watering-place.

Industries the same as Accrington.

Cotton-manufacturing town.

West Riding Yorks. Staple industry bottles, iron, etc. Coal-mines in the vicinity.

Watering-place.

VITAL STATISTICS
of the Whole District during 1908 and Previous Years.

TABLE II.
PADIHAM URBAN DISTRICT COUNCIL.

YEAR.	Population estimated to Middle of each Year.	BIRTHS.		TOTAL DEATHS REGISTERED IN THE DISTRICT.				Deaths of Residents registered in Public Institutions beyond the District.	NETT DEATHS AT ALL AGES BELONGING TO THE DISTRICT.	
		Number.	Rate.	Under 1 Year of Age.		At all Ages.			Number.	Rate.
				Number.	Rate per 1000 Births Registered.	Number.	Rate.			
1	2	3	4	5	6	7	8	9	10	11
*1898	13700	329	24.01	57	173.25	204	14.89			
*189	13700	366	26.71	84	229.50	170	19.70			
*1900	14000	337	24.70	64	189.91	218	15.57			
1901	12205	341	27.93	75	219.94	249	20.40			
1902	12205	339	26.95	65	191.74	195	15.97			
1903	12383	34	27.86	58	168.11	189	15.26	2	191	15.34
1904	12472	315	25.25	70	222.22	208	16.67	2	210	16.83
1905	13000	305	23.45	40	131.11	181	13.84	1	182	14.00
1906	13500	314	25.55	55	160.43	210	15.55	1	211	15.62
1907	13850	310	24.54	66	194.11	191	13.79	28	219	15.81
Aver- ages for years 1898 1907	13101	336	25.69	63	188.03	211	16.16	Aver- ages for 5 yrs. 1903- 1907		6 202 15.52
1908	13930	363	26.05	60	165.28	201	14.42	27	228	16.36

* Population much over-estimated during these years.

VITAL STATISTICS OF THE WHOLE DISTRICT
in 1908 and previous years.

TABLE III.

PADIHAM URBAN DISTRICT.

YEAR.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.
	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>
* 1898 ...	13700	329	204	57
* 1899 ...	13700	366	270	84
* 1900 ...	14000	337	218	64
1901 ...	12205	341	249	75
1902 ...	12205	339	195	65
1903 ...	12383	345	189	58
1904 ...	12472	315	210	70
1905 ...	13000	305	181	40
1906 ...	13500	345	210	55
1897 ...	13850	340	219	66
Averages of Years 1898 to 1907.	13101	336	214	63
1908 ...	13930	363	228	60

* Population much over-estimated during these years.

VITAL STATISTICS.—TABLE IV.

CASES OF INFECTIOUS DISEASE NOTIFIED DURING
THE YEAR 1907.

PADIHAM URBAN DISTRICT.

NOTIFIABLE DISEASE.	CASES 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 ... ..	...	...	...	...	...	...	...
Cho'era ... ..	...	...	...	...	...	...	...
Diphtheria, including Membranous Croup	18	...	9	8	...	1	...
Erysipelas	11	1	...	1	...	9	...
Scarlet Fever	26	1	12	8	4	1	...
Typhus Fever ... ..	...	...	...	...	...	...	...
Enteric Fever... ..	3	...	...	1	1	1	...
Relapsing Fever ... ..	...	...	...	...	...	...	...
Continued Fever	1	...	...	...	1	...	...
Puerperal Fever	2	...	...	...	2	...	...
Plague ... ..	...	...	...	...	...	...	...
Total	61	2	21	18	7	13	...

VITAL STATISTICS.--TABLE V.
CAUSES OF, AND AGES AT, DEATH DURING YEAR 1908,
PADIHAM URBAN DISTRICT.

CAUSES OF DEATH.	Deaths at the subjoined ages of "Residents" whether occurring in or beyond 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 upwards.
Smallpox	2	3	4	5	6	7	8
Measles	10	4	6	...	...	...	...
Scarlet Fever	1	...	1	...	...	...	...
Whooping Cough	3	...	2	...	...	1	...
Diphtheria and Membranous Croup	2	...	2	...	...	...	...
Croup .....	...	...	...	...	...	...	...
Typhus Fever .....	...	...	...	...	...	...	...
Enteric Fever .....	...	...	...	...	...	...	...
Other continued Fevers	1	...	...	...	...	...	1
Epidemic Influenza .....	...	...	...	...	...	...	...
Cholera .....	...	...	...	...	...	...	...
Plague	6	5	1	...	...	...	...
Diarrhoea	6	5	1	...	...	...	...
Enteritis	1	1	...	...	1	...	...
Puerperal Fever	3	1	...	...	...	2	...
Erysipelas .....	...	...	...	...	...	...	...
Other Septic Diseases	9	...	1	...	2	6	...
Phthisis (Pulmonary Tuberculosis)	6	2	1	1	...	1	1
Other Tubercular Diseases	9	13	8	1	...	6	11
Cancer (Malignant Disease)	39	13	1	...	...	7	1
Bronchitis	9	...	1	...	1	1	...
Pneumonia	2	...	...	...	...	...	...
Pleurisy	5	1	...	...	...	2	...
Other Diseases of Respiratory Organs	1	...	...	...	...	1	...
Alcoholism - Cirrhosis of Liver .....	...	...	...	...	...	...	...
Veneral Diseases	7	7	...	...	...	...	...
Premature Birth	3	2	...	...	...	...	...
Diseases and Accidents of Parturition	21	...	...	...	2	16	3
Heart Diseases	6	1	2	1	1	...	1
Accidents .....	...	...	...	...	...	...	...
Suicides .....	...	...	...	...	...	...	...
Chicken Pox .....	...	...	...	...	...	...	...
All other causes	78	19	8	2	1	27	21
All causes	928	60	34	5	9	78	42

VITAL STATISTICS.—TABLE VI.

INFANTILE MORTALITY DURING THE YEAR 1908.—Deaths from stated Causes in Weeks and Months under One Year of Age.

PADIHAM URBAN DISTRICT.

CAUSE OF DEATH.	Under 1 Wk.	1-2 Weeks	2-3 Weeks	3-4 Weeks	Total under 1 Month	1-2 Months	2-3 Months	3-4 Months	4-5 Months	5-6 Months	6-7 Months	7-8 Months	8-9 Months	9-10 Months	10-11 Months	11-12 Months	Total Deaths under One Year
All Causes—	10	3	4	...	17	12	8	8	2	2	2	1	1	5	...	1	59
Certified	1
Uncertified	1
i. Common Infectious Diseases—
Small-pox
Chicken-pox
Measles	1	...	...	...	...	...	...	1	...	...	1	4
Scarlet Fever
Diphtheria: Membranous Croup
Whooping Cough
ii. Diarrhoeal Diseases—
Diarrhoea, all forms	1	...	1	2	...	1	...	...	...	...	...	...	...	...	4
Enteritis, Muco-enteritis. Gastro-enteritis	2	1	1	1	1	...	1	...	...	...	...	4
Gastritis, Gastro-intestinal Catarrh	2
iii. Wasting Diseases—	6	...	1	...	7	...	...	...	...	...	...	...	...	...	...	...	7
Premature Birth	2	...	1	...	3	...	...	...	...	...	...	...	...	...	...	...	3
Congenital Defects
Injury at Birth
Want of Breast milk, Starvation
Atrophy, Debility, Marasmus	1	1	...	2	3	2	3	...	...	1	...	...	...	...	...	10
iv. Tuberculous Diseases—
Tuberculous Meningitis	1	...	...	1
Tuberculous Peritonitis: Tubes	1	...	...	...	...	...	...	1
Mesenterica
Other Tuberculous Diseases
v. Other Causes—
Erysipelas	1	...	...	...	...	...	...	...	...	...	1
Syphilis
Rickets	1	...	...	...	...	...	...	...	...	...
Meningitis (not Tuberculous)	1	...	...	...	...	...	1	...	...	...	...	3
Convulsions	1	...	...	...	...	1	3	2	1	...	2	...	...	2	...	...	3
Bronchitis	1	...	...	...	...	...	...	...	...	...	...	11
Laryngitis	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Pneumonia	1	...	...	...	...	...	...	...	...	...	1
Suffocation, overlying
Other Causes	1	1	...	...	2	1	...	...	...	...	...	...	...	1	...	...	4
Total	10	3	4	...	17	12	8	8	3	2	2	1	1	5	...	1	60

Births in the Year { Legitimate ... 345
Deaths from all causes, at all ages... 318

Deaths in the Year { Legitimate Infants... 57
" " Illegitimate " 3

Population Estimated to middle of 1908, 13,930.