[Report of the Medical Officer of Health for Harrow-on-the-Hill].

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ANNUAL REPORT

OF

MEDICAL OFFICER OF HEALTH.

1919.

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Harrow-on-the-Hill Urban District Council.

Annual Report

OF THE

MEDICAL OFFICER OF HEALTH,

FOR THE YEAR 1919,

BY

DAVID SOMMERVILLE, M.Sc. M.D.

GENTLEMEN,

I have the honour to submit herewith the annual Report on the Public Health and Sanitary Conditions of the District for the year 1919. It is written under the instructions of the Ministry of Health and contains a record of the work of the Department as carried out under the Public Health Committee.

I take the opportunity of expressing my grateful appreciation of the support and assistance I have received from the chairman and members of the Public Health Committee of the Council during the year. I am glad also to have the opportunity of heartily acknowledging the work and loyal co-operation of every member of the staff of the Department.

I am, Gentlemen,

Your obedient Servant,

D. SOMMERVILLE.

VITAL STATISTICS.

Population :—The Registrar-General estimates the 'birth-rate and marriage rate population' (a figure including all the elements contributing to the birth and marriage rates) at 20,003. He estimates the 'death-rate population' a population excluding all non-civilian males serving at home or abroad) at 19,202.

The population in 1851 was 2,813; in 1901, 10,220, and in 1911, 17,074.

The area is 2,028 statute acres; and the rateable value £153,147.

Births :—There were registered during the year 277 births, viz., 132 males and 145 females.

The birth rate per thousand of population is therefore 13.8.

Last year this rate was 10.9, and in 1917 it was 14.9.

The birth rate for England and Wales for 1919 was 18.5, and for the 148 smaller towns 18.3.

Of the above 277 births 11 were illegitimate, viz., 5 males and 6 females.

Deaths :—The total number of deaths during the year was 168, viz., 87 males and 81 females. This gives a death rate of 8.7 per 1,000 of population. But this death rate is crude in that it takes no cognisance of the relative numbers of the sexes nor of the age distribution of the population. Yet this is necessary for purposes of comparison with other districts on account of the fact that the mortality among young children and old people is higher than amongst adults and also higher among males than females. A factor of correction has been calculated, viz., 1.0655. The corrected death rate is therefore 8.7 x 1.0655=9.2. The corresponding figure for 1918 was 10.3, and for 1917, 11.

The corrected death rate for England and Wales in 1919 was 13.8, and for the 148 smaller towns 12.6. The corresponding figure for England and Wales in 1918 was 17.6 and for the 148 smaller towns 16.1.

CAUSES OF DEATH (Civilians only) :—

All causes	Males 87	Females 81
Whooping cough		1
Diphtheria and Croup	5	4
Influenza	9	5
Erysipelas	1	
Pulmonary tuberculosis	7	7
Tuberculous meningitis	1	
Other tuberculous diseases		2
Cancer	7	11
Meningitis		1
Organic heart disease	3	9
Bronchitis	10	5
Pneumonia—all forms	4	3
Other respiratory diseases	2	2
Diarrhoea (under 2 years)	1	
Appendicitis	1	1
Nephritis	3	
Congenital debility	4	4
Violence apart from suicide	4	1
Other defined causes	25	25

INFANTILE DEATH RATE.

Of the 277 children born, 17 died under 1 year of age. The Infantile Mortality Rate is therefore 61.3 per 1,000 children born. In 1918 it was 32.2; and in 1917, 59.

The Infantile Death Rate for England and Wales for 1919 was 89, and for the 148 smaller towns 90.

The following table shows the Deaths of Infants under 1 year distributed over the five constituent districts of the town :—

Roxeth.		St. Mary's.		Greenhill.		St. Peter's.		St. George's.		Ttl.
M.	F.	M.	F.	M.	F.	M.	F;	M.	F.	
0	3	2	1	2	3	3	0	3	0	17
3		3		5		3		3		

Deaths at all ages during the year were distributed as follows :—

Roxeth.		St. Mary's.		Greenhill.		St. Peter's.		St. George's.		Ttl.
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
21	21	15	14	13	23	18	12	21	10	168
42		29		36		30		31		

GENERAL CHARACTERS OF HARROW

Harrow is about 10 miles from London, in the Diocese of the Metropolis, in the Hendon Union, in the Watford County Court District and in the Gore Petty-Sessional Division of the County of Middlesex. The hill, which is 400ft. high, is capped with Bagshot sand and lies on the London clay. The physical features resemble those of the neighbouring heights of Hampstead and Highgate.

The London clay, a water-tight stratum, attains a depth of a hundred feet or more : immediately underneath are situated the Reading beds averaging in thickness forty to fifty feet.

The upper layers of the clay as seen in road cuttings and openings made for the foundations of houses present considerable variety in composition and colour. Brown beds intermingle with others containing yellow sands. Dark smoke-coloured clay streaked with greensand, pyrites and pebbles lies underneath the superficial brown beds and occasionally outcrops through them. This prevalence of clay renders the district damp, a fact of some importance in connection with housing.

WATER.

The district is supplied with softened water by the Colne Valley Water Company from their works at Bushey.

An analysis made in April, 1919, showed that the water was satisfactory for drinking and for domestic purposes.

The supply is constant and was quite sufficient throughout the year.

DRAINAGE AND SEWERAGE.

The sewage of the greater portion (about two-thirds) of the Urban District is purified by chemical precipitation followed by land filtration at the Newton Sewage Farm on the Western border of Roxeth. The effluent was quite satisfactory throughout the year.

The sewage of the remainder of the District (about one-third) adjoining Wealdstone, is disposed of by the Wealdstone District Council to the satisfaction of all concerned. The effluents of these farms run into the Kenton and Yeading Brooks, tributaries of the Brent.

CLOSET ACCOMMODATION.

All the houses in the district are supplied with water closets. There are a dozen water closets without flushing cisterns.

There are no earth closets or privies in the district.

SCAVENGING.

House refuse is stored in covered and movable ash-bins. There are a few fixed receptacles. It is removed by the Council once a week. During the year 30 complaints of non-removal were received. Most of these complaints were made, however, in seasons of bad weather, snow storms, etc., when the workmen were hard pressed. During the year eleven house-holders were called upon to provide new ash bins.

There are 3 houses in remote parts of the district whose drains empty into cesspools. The cesspools are emptied by the occupier. No nuisance has been detected in connection with any of these during the year.

SANITARY INSPECTION OF DISTRICT.

The Sanitary inspector reports :

(a) number of inspections and reinspections during the year, 2,090; (b) number of statutory notices served 8, and informal notices 54; (c) result of service of notices as follows :

The eight statutory notices were all complied with except one dealing with a case of overcrowding.

GENERAL SYNOPSIS OF SANITARY WORK.

Premises inspected on complaint	126
Premises inspected re infectious diseases	158
Premises inspected in periodical inspections	176
Inspections in connection with contravention of bye-laws at houses let in lodgings (3 in district) ...	2
Inspection of common lodging house (only 1 in district)	4
Inspection of the 13 bakehouses (1 underground and little used)	46
Inspection of the 6 slaughterhouses (only one used during the year)	12
Inspection of the 5 cowsheds and 18 dairies	110
Inspection of the 5 offensive trades (all fried fish shops)	90
Inspection of the 8 factories	96
Inspection of the 100 registered workshops	128
Inspection of the 20 workplaces	39

Cases of dampness in houses—all remedied	31
Drains tested	11
Drains unstopped and repaired	19
Drain reconstructed	1
Rooms disinfected after infectious disease	360
Rooms disinfected after phthisis	38
Articles of clothing, etc., disinfected after infectious disease	3,241
Articles of clothing, etc., disinfected after phthisis ...	990
Rooms stripped and cleaned	5
Total number of inspections and re-inspections ...	2090

HOUSES LET IN LODGINGS.

The 3 houses let in lodgings are not in good hygienic condition. They have not separate sanitary accommodation and structurally they are unsuitabe for more than one tenant.

THE COMMON LODGING HOUSE.

It was noticeable at the last inspection that the usual clean condition of the premises had not been maintained.

BAKEHOUSES.—

It is to be hoped that with an accession of labour in the coming year the sanitary condition of the bulk of these will be considerably improved. Three informal notices referring to breaches of sanitary requirements were served with the result that the defects were remedied.

SLAUGHTER HOUSES.—

Only one of these was used and that infrequently during the year.

COWSHEDS AND DAIRIES.—

It is to be hoped that in the coming year considerable improvement will be made in the condition of these, more especially in the matter of cleanliness.

OFFENSIVE TRADES.

The only offensive trades in the district are fried fish shops (5) : No complaints were received concerning these, and on inspection the premises were always found clean.

FACTORIES.

There are 8 factories, viz., Greenhill laundry, School laundry, Kanok blades, Hack Saw, Leaborne Motor Works, Ham Factory, Gas Works, and the Electric Light station. The number of people employed in these is about 480. There are 100 workshops and 20 workplaces in the district. A record of inspections, notices, prosecutions, etc., of these three types of premises is set out in the following tables :—

FACTORIES, WORKSHOPS, WORKPLACES AND HOMEWORK.

1.—INSPECTION.

Including Inspections made by Sanitary Inspectors.

Premises.	Number of		
	Inspections.	Written Notices.	Prosecutions.
Factories ... ... (Including Factory Laundries)	96	7	Nil.
Workshops ... ... (Including Workshop Laundries)	128	12	Nil.
Workplaces ... ... (Other than Outworkers premises included in Part 3 of this Report)	39	3	Nil.
Total	263	22	

2.—DEFECTS FOUND.

Particulars.	Number of Defects.			Number of Prosecutions.
	Found.	Remedied.	Referred to H.M. Inspector.	
Nuisances under the Public Health Acts:—				
Want of Cleanliness	4	4	Nil.	Nil.
Want of Ventilation				
Overcrowding				
Other Nuisances	7	7	Nil	Nil.
Sanitary accommodation — insufficient ...				
Sanitary accommodation — unsuitable or defective ...	8	8	Nil.	Nil.
Sanitary accommodation — not separate for sexes				
Offences under the Factory and Workshop Act :—				
Illegal occupation of underground bakehouse (S. 101)...				
Breach of special sanitary requirements for bakehouses (ss. 97 to 100)	3	3	Nil.	Nil.
Other offences				
Total	22	22		

3.—HOME WORK.

NATURE OF WORK.	OUTWORKERS' LISTS, SECTION 107.						Notices served on Occupiers as to keeping or sending lists	Number of Inspections of Outworkers' premises.	OUTWORK IN INFECTED PREMISES, SECTION 109-110.	
	Lists received from Employers				Numbers of Addresses of Outworkers received from other Councils.	Numbers of Addresses of Outworkers forwarded to other Councils.			Instances	Orders made
	Twice in the year.		Once in the year.							
	Lists.	Outworkers. Workmen	Lists.	Outworkers. Workmen						
Wearing Apparel—										
(1) making, &c.	2	4	—	—	17	10	—	15	—	—
(2) cleaning and washing ...										
Furniture and Upholstering ...										
Leather Working										
Total	2	4	—	—	17	10	—	15	—	—

4.—REGISTERED WORKSHOPS.

Workshops on the Register (S. 131) at the end of the year.		Number.
Important classes of workshops, such as workshop bakehouses, may be enumerated here.	Bakehouses (retail)	13
	Wheelwrights, etc.	1
	Harness Maker	1
	Motor Repair Shops	2
	Milliners and Dressmakers	24
	Laundries	6
	Dentists	
	Cycle Makers	4
	Plumbers	1
	Tailors	11
	Printers	2
	Boot Repairing	7
	Job Masters	
	Tinsmith	1
	Workshops and Work places	20
	Coach Builders	
	Upholsterers	3
	Other Trades	4
Total number of workshops on Register		10

5.—OTHER MATTERS.

Class.		Number.
Matters notified to H.M. Inspector of Factories :—		
Failure to affix Abstract of the Factory and Workshop Act (S. 133)		
Action taken in matters referred by H.M. Inspectors as remediable under the Public Health Acts, but not under the Factory and Workshop Act (s. 5)	Notified by H.M. Inspector	Nil.
	Reports (of action taken) sent to H.M. Inspector.	
Other		
Underground Bakehouses (S. 101) :—		
Certificates granted during the year		
In use at the end of the year		1

THE ELEMENTARY SCHOOLS.

The sanitary condition and water supply of the 4 elementary schools in the district were good throughout the year. No school was closed by reason of infectious diseases during the year.

FOOD.

Milk :—Milk is of all foods the most important in that it contains the whole of the chemical constituents of man's diet, viz., protein, carbohydate, fat and mineral salts; and these in forms most easy of digestion. It is the only proper food of very young children, and of adults when suffering from various diseases. It is a highly delicate compound; an excellent medium for the growth of bacteria, many of which rapidly decompose it; and a most efficient vehicle of certain infectious diseases. In England to-day the production of milk on the dairy farm, its transport to the towns, its distribution to the consumer, and its treatment in the home of the consumer prior to use, are all far from ideal, especially in the matter of cleanliness. In a word the bulk of the milk on the market is dirty and much of it old. It is only too frequently drawn from dirty cows by dirty hands into dirty vessels and finally taken into dirty homes where it is further contaminated. A milk churn or milk can may appear to the ordinary observer quite clean and yet contain bacteria which in a few hours, in warm weather, will wholly destroy the milk. Everybody should be interested in the problem of clean milk and insist on obtaining it. This is not a matter for the medical officer of health and public health committee only, but for every member of the community. The production and distribution of clean milk is a business requiring on the part of the workers some education in the life histories of certain germs and the constant application of this knowledge at every step in the work from the first appearance of the milk on the farm to its consumption in the home. And withal in the hands of the right kind of teacher I know of no more fascinating or absorbing subject for study.

Any boy or girl of average intelligence in the leaving class of the elementary school could follow, and follow with intense enjoyment, a simple demonstration of the action of certain types of bacteria on milk, the important rôle played by temperature, time, etc., etc. Education rather than legislation is the one thing needful in this matter. Only when the public understand the meaning of clean milk will they demand it, and only then will the milk dealer supply it.

The milk of Harrow is no worse than that of other districts.

It is quite possible to produce clean milk: the Americans have done it. A system of grading milk according to purity and cleanliness was instituted in January, 1912, in the City of New York. At that time 40 per cent. of the City's supply fell within the definition of the lowest grade C (milk for cooking purposes). In two years this grade had practically disappeared; and last year 15 per cent of the total supply was grade A, and 85 per cent. grade B. For grade C there was no longer any demand, as the people had learnt to appreciate the value of higher grades. The milk traders removed the contaminating conditions when they had to publish the fact that the milk they sold was in the lowest category. The removal of the contaminating conditions were well within the capacity of all producers and dealers and did not involve any increase in the cost of milk to the consumer.

The milk sold in English towns if offered in New York would be classed in Grade C.

The great value of milk as a food is a cogent reason for largely increasing its supply. The consumption in New York per head per day is nearly twice that in London. Again the poorer districts in New York use 40 per cent. more per head than do the wealthier districts.

The bulk of the milk supplied to Harrow comes from various districts outside, some of which are at considerable distances. The few dairy farms in the district were inspected many times during the year: the findings were much the same as in 1918. The Veterinary Inspector's reports show that no animal suffered from tuberculosis. Twenty samples were investigated by animal inoculation for detection of the tubercle bacillus and all were found negative.

A sample examined in August furnished 1000 B-coli (organism indicating faecal matter) per cubic centimetre, but no legal action was taken in the matter as in this country there are as yet no standards of cleanliness for milk.

No action was taken during the year under the Dairies, Cowsheds and Milkshops Orders of 1885 and 1889. We should have standards of cleanliness.

Under the Milk (Mothers' and Children's) Order, 1918, a sub-committee of the Public Health Committee enquires into the circumstances of applicants for milk either free or at a

reduced price, and recommends accordingly. These necessitous people are for the most part discovered in the first instances at the Infant Welfare Centre or by the Health Visitors on their rounds. Some are recommended by medical practitioners. During the year 3 mothers and 13 children were assisted with free milk, and 21 mothers and 72 children with milk at reduced price.

No of mothers receiving free grants of milk ...	3
No. of children receiving free grants of milk ...	13
No. of mothers receiving milk at reduced price...	21
No. of children receiving milk at reduced price	72

The milk of a good dairy herd contains more than 3 per cent. of fat. It has been stated with apparently good reason that a carefully selected well fed and carefully kept herd will produce in the average for the year more than 4 per cent. fat. The present fat standard of 3 per cent. should therefore be raised.

Under the Dairies, Cowsheds and Milkshops Orders no registration took place during the year and no name was removed from the register.

The inspection of cowsheds has reference to cubic capacity, paving of shed and yard, litter, storage and removal of dung, water supply, drainage, lighting, general sanitation and method of milking. During the war the extreme shortage of labour made it well nigh impossible for dairy-farmers to keep their cowsheds and premises even moderately clean. From numerous visits which I made to the dairy-farms in the district I believe that the dairy men did their best to observe the regulations. Now that the war is over and the shortage of labour likely to be soon removed we shall look to them to raise the standard of cleanliness both in animals and premises much above the level at which it stood during the later days of the war.

Inspection of meat :—This begins at the slaughterhouse and takes note of the healthy or other condition of the animal to be slaughtered, as also the hygienic state of the slaughterhouse and its surroundings. After the animal is killed the carcase and all its parts are carefully examined with a view to detecting disease or any condition in the meat which would render it unfit for food. Should such condition be discovered; the meat is condemned, seized, and submitted to a magistrate, who orders its destruction. The butchers of

the district for the most part voluntarily notify diseased meat so that few cases reach the magistrate.

During the year there was no case to be brought before a magistrate.

The slaughter houses have been regularly inspected. The premises are comparatively small and not well situated. They have, however, been kept clean and the paving and drainage in fairly good repair.

General inspection of foods, fruits, vegetables and other commodities has been carried out as also the premises in which preparation of food takes place. No complaints were received in respect of any of these.

Meal :—Two samples of meal used for feeding pigs and suspected of having caused poisoning were analysed. The report showed that in neither case was there anything found organic or inorganic capable of causing poisoning.

Raisins :—Two samples of raisins were investigated : no adulterants were found nor decomposition in either case.

All foods should be stored and exposed for sale in premises that are scrupulously clean. Dust, flies, gases of decomposition, etc., should be rigorously excluded. The covering by glass and otherwise of meats, butter, cheese, etc., should now be required of all vendors of these foods. The greengrocer also and fruiterer who expose their wares to the filthy dust of the street should be required to mend their ways. Once the consumer demands and fails to be satisfied with anything other than clean foods the supply will follow.

INFECTIOUS DISEASES.

There were notified during the year 240 cases of Infectious disease. Examination of the accompanying table will show that three diseases accounted for 185 of these, viz.,* diphtheria 97, scarlet fever 45, and tuberculosis 43. The corresponding figures for last year were diphtheria 29, scarlet fever 9, and tuberculosis 28.

It will be noticed that the table shows the numbers occurring in the five parishes and at certain age periods, also the number of cases removed to hospital (50 per cent. of total cases; 73 per cent. of diphtheria, and 95 per cent. of scarlet fever).

NOTIFIABLE DISEASES.

Notifiable Diseases	Number of Cases Notified.								Total Cases notified in each locality, e.g. Parish.					No. of Cases removed to Hospital from each locality.					Total No. of Cases removed to Hospital.
	At all Ages.	At Ages—Years.																	
		Under 1.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 45.	45 and under 65.	65 and over.	Roxeth.	St. Mary.	Gre'nhill.	St. Peter.	St. Geo.	Roxeth.	St Mary.	Gre'nhill.	St. Peter.	St. Geo,	
Diphtheria (including Membranous Croup) ...	97		15	58	18	5	1		65	10	10	8	4	46	7	6	8	4	71
Erysipelas	11			1		4	6		2		4	3	2						
Scarlet Fever	45		8	28	3	4	2		11	8	4	16	6	11	8	2	16	6	43
Poliomyelitis	2		1	1							2								
Pulmonary Tuberculosis	39			3	9	20	6	1	10	4	12	4	9						
Other forms of Tuberculosis	4			1	1	1		1	1	1	2	1							
German Measles... ...	8		1	4	2	1				3	2	2	1						
Measles	14		7	3	3	1			3	2	4	4	1						
Influenzal Pneumonia ...	10		1		3	6			4	1	2	2	1	2		2			4
Malaria	10				1	9			2	1	2	3	2						
	240		33	99	40	51	15	2	98	29	44	43	26	59	15	10	24	10	118

Diphtheria assumed somewhat epidemic proportions during the autumn which continued into the winter.

In the first half of the year 14 cases occurred, spread over the neighbourhoods of the Bessborough Estate, Pinner Road, Greenhill and Roxeth. The bulk of the cases occurred in the second half of the year, and the greater number of these in Roxeth. The origin of the first infection in 22 cases which appeared in a private school, could not be traced: no evidence was forthcoming that the primary infection was contracted in Harrow.

As is well known diphtheria is carried mostly by direct contact and occasionally by milk supplies.

I satisfied myself that no milk supply operated in this epidemic. The disease spread principally by contact.

Individual classes of the Roxeth Elementary Schools in which cases occurred were at first examined and swabbed, and later the entire schools. What part the schools played in the spread of infection is most difficult to estimate. I am inclined to the view that the greater number of infections took place in the children's homes. In one house in Stanley Road (in which road 13 cases occurred), two families lived in 4 rooms and produced amongst them 5 cases, viz., 3 primary cases in one family, in six weeks a secondary case in the other family, and 4 weeks later a secondary case in the first family. It may be argued that the last two cases obtained their infection outside: this is possible, but from study of a number of cases in houses similarly situated, I think not probable. A like tale of infection is to be told almost exactly of 3 houses in Valentine Road, each containing 4 rooms and accommodating two families, in all of which I was able definitely to exclude school influence in the spread of infection. And so of various other houses. Some of these houses are overcrowded containing 9, 10, 12 or more inmates; some dirty. Overcrowding is a most effective factor in spreading infection; so also the irregular and untidy habits of families who keep a dirty house.

On going in and out amongst these people I have been struck by the irresponsible manner in which many parents treat the injunction "not on any account to mingle with others until free from infection." Within half an hour of visiting and advising an infected family I have found a member of this family in a neighbouring house, with the result to be expected, viz., a new case in the latter house. They transgress not with a wish to do wrong but from sheer inability to appreciate the importance of the position. Hope of reform lies

here in education, and that of the young; most of the elders are hopeless. Domiciliary and institutional instruction as well as treatment is an integral part of this portion of preventive medicine; and to the teacher who in the phrase of Ruskin "cares very much " there is some reward; he will perceive that there is nothing more beautiful in English social life than the charity of these people to one another in times of distress.

The following paragraph is taken from my Report to the Health Committee in the month of November :

"The spread of diphtheria is favoured by overcrowding, faulty ventilation, dirty and damp houses. Children under 15 are most susceptible. When a child gets sore throat and fever it should be placed in a room by itself and a physician called. Delay breeds danger. The attack may occur two to four days after exposure, sometimes only twelve hours. School children should be taught not to use each others things—books, pencils, etc. Immediate isolation of the patient followed by disinfection of his surroundings are of the greatest importance. Some children are specially susceptible to diphtheria and acquire it where others less suceptible escape. In identifying diphtheria in the throat or nose the bacteriological test is of subsidiary value where the clinical features are at all distinctive; and a negative result from a swab is of very little value indeed, unless confirmed by one or preferably two subsequent examinations, if possible on successive days. In suspicious cases the physician should not therefore wait but inject antitoxin early. Prophylactic doses of antitoxin for contacts is good practice. In very toxic cases intra-venous injection of antitoxin is desirable. If the throat secretions of diphtheria convalescents be bacteriologically examined daily during the third and fourth weeks of their attack in more cases than not the results will prove contradictory. The bacillus may not be recoverable for a day or two, perhaps more, to reappear the day following. In half a dozen cases observed in a large fever hospital in London in which the clinical and post mortem evidences were conclusive of diphtheria repeated bacteriological examination by an expert entirely failed to reveal the presence of the diptheria bacillus. Virulent diphtheria bacilli may often be found in the throat and quite harmless to their host, and only occasionally a source of infection to others. Patients who have had diphtheria should remain in hospital as long as an inflammatory condition of the throat exists."

The following is from my Report to the Public Health Committee for December :—

Of the 45 cases of diphtheria, notified since my last report in November, 22 occurred in a private school for girls. I visited the school and was informed that the first sore throat occurred in a maid who had recently visited some friends in an adjoining district. I communicated at once with the Medical Officer of Health of that district who replied that no case of diphtheria had been notified from the address given.

It is not clear whether the maid infected pupils or a pupil infected her.

I communicated with the Medical Officers of Health of the various districts throughout the British Isles from which affected pupils came, and in no case was there any history of diphtheria connected with their home during the year. I ascertained that the milk supply of the school is beyond suspicion; also that no charwoman or casual worker had been engaged from Harrow. I was assured that no person in the house had visited any home in Harrow in which a case of diphtheria had been.

The mode of introduction of the first case is therefore not apparent. I consider it probable that the sudden fall in temperature which occurred previous to this outbreak, and which was accompanied in many districts by a crop of tonsillitis and other forms of sore throat lighted up dormant diphtheria bacilli in one of the early cases. If this be admitted the intimate contact of school life explains the occurrence of the remaining cases."

The most careful treatment of an epidemic does not affect its prevalence; no matter what panaceas we cry up or down—no matter how many scapegoats we drive into the wilderness, one year will produce more cases than another. Of the conditions social or other which combine to standardise an infection which must continue to take toll of human life until in the course of time a new equilibrium is established, we have no exact knowledge.

Scarlet Fever :—Harrow, in common with London and many other localities in England and Wales, had a larger incidence of scarlet fever in 1919 than in the preceding year. But the figure for the district in 1918 was exceedingly low. In 1916 it was 32, and in 1913 it was 89. At no time during the year 1919 did it assume epidemic form.

I cannot speak too highly of the whole-hearted assistance given me by the head teachers of the Roxeth Hill and Welldon Park Schools in my routine work of dealing with these infections in the pupils of their Schools; and most

of the cases of diphtheria and scarlet fever in school children occurred in these two schools.

Tuberculosis :—The notifications in this disease showed an increase over those of last year : the figures for all forms of the malady are 45 for 1919 and 28 for 1918. The homes of the notified persons were visited and instructions left with the patients and their relatives concerning the hygienic management of the cases.

Measles :—Only 14 cases of measles and 8 of German measles were notified during the year as against 398 of measles and 7 of German measles last year.

Influenzal pneumonia :—Ten cases in all. Harrow suffered lightly from this disease in comparison with many other districts.

Polio-myelitis :—Two cases : one in an infant and one in a girl of twelve. The massage department of the Child Welfare Centre has done good work for the infant in that no permanent paralysis has occurred. The other case (a slight one), has also escaped permanent paralysis.

Malaria :—Ten cases were notified. All these were visited and instructed in the matters of continuing quinine treatment in prophylactic doses, and the use of the mosquito curtain. No case of marlaria acquired in England was amongst these.

There were 44 cases of whooping cough notified by the Schools during the year.

There was no case during the year of small pox, cerebro-spinal meningitis, puerperal fever, continued fever, relapsing fever, typhus fever or enteric.

THE ISOLATION HOSPITAL.

The hospital can accommodate 30 patients. It was hard pressed during the diphtheria outbreak more especially as a fairly large number of scarlet fever cases occurred at the same time. The erection of another block in the near future should be borne in mind especially in view of the fact that bad cases of pneumonia and measles require hospital treatment.

There is also urgent need for the enlargement of the administration block in the matter of more bedrooms, a common room for the nurses, and better accommodation for food, linen, etc.

The total number of cases admitted during the year was 118, viz., 71 diphtheria, 43, scarlet fever, and 4 pneumonia.

Small pox :—Harrow is one of the local authorties who maintain a conjoint small pox hospital at South Mimms.

Bacteriological and chemical analyses :—

The following specimens were sent for investigation :

Throat swabs for the diphtheria bacillus ...	482
Sputa for tubercle bacillus	18
Blood for malarial parasite	8
Waters for chemical and bacteriological analysis	1
Food stuffs for decomposition, etc.	4

At present the Lister Institute, Chelsea Bridge, London, S.W.1., carries out this work.

MATERNITY AND CHILD WELFARE.

This is the most important of all the departments of public health work in that its endeavours to prevent disease are already active in the ante-natal days of the child : It accordingly demands the strongest support.

This work, in Harrow, has grown steadily from its inception nearly five years ago. The Maternity and Baby Clinics have been transferred from the Wesleyan Schools to Homeleigh, 8, College Road. The dental clinic has also been transferred from St. Anne's Schools to the same building. At the end of the year collected under one roof are to be found the Harrow Baby Clinic (Municipal Centre), and the following co-ordinated activities radiating from it :

Dental Clinic (Joint for Harrow and Wealdstone and Elementary Schools), 8, College Road. Saturdays, Dental treatment for mothers, clinic and school chldren; dentures for mothers. Miss Goodman, L.D.S.

Throat, Nose and Ear Clinic (Joint for Harrow and Wealdstone). Fridays, Dr. Eleanor Lowry.

Eye Clinic (Joint for Harrow and Wealdstone). Fridays, Dr. Amy Shepard.

Ante-natal Clinic (Joint for Harrow and Wealdstone). Tuesdays, 4.30. Dr. Agatha Doherty.

Minor Ailments Clinic (Joint for Harrow Wealdstone). Wednesdays (fortnightly), Dr. Agatha Doherty.

Massage Clinic (Joint for Harrow and Wealdstone). Thrice weekly. Miss Townsend.

The Maternity Hostel, 10, College Road (next door to above), for maternity in-patients, sent from the ante-natal clinic and medical practitioners. Dr. Agatha Doherty visits weekly.

This scheme organised by Dr. Tychaykovsky and her executive committee, with the exception of the *Baby Clinic*, which is entirely municipal, is supported partly by local and government grants and partly by voluntary subscriptions.

The formation of a Maternity and Child Welfare Clinic

(municipal) for Roxeth, is under consideration by the Council, and it is hoped that this will be opened early in the new year.

Health Visitors :—The Council is fortunate in having the part-time services of three well qualified Health Visitors, members of the staff of the local Nursing Association. In addition it employs the whole-time services of a Maternity Nurse.

With the exception of the supervision of midwives, a duty of the Middlesex County Council, the Harrow Maternity and Child Welfare centre meets the requirements of all the elements of the complete scheme formulated by the L.G.B. in 1914 for the preservation of maternal and infantile health, viz.,

Ante-Natal :	(a)	Ante-Natal clinic for expectant mothers.
	(b)	The home visiting of expectant mothers.
	(c)	A maternity hospital in which complicated cases of pregnancy can receive treatment.
Natal :	(a)	Such assistance as may be needed to ensure the mother having skilled and prompt attendance during confinement at home.
	(b)	Confinement of cases of contracted pelvis, etc., at a hospital.
Post-natal :	(a)	Treatment of complications arising after parturition in mother and infant.
	(b)	The provision of systematic advice and treatment for infants at a Baby Clinic.
	(c)	Continuance of such clinic so as to be available for children up to school age.
	(d)	The systematic home visitation of infants and children below school age.

In addition to the visitation of infants and expectant mothers at their homes, and their regular sessional work at the maternity and child welfare centre, the Health Visitors also visit and report on cases of measles.

Ante-natal work has for its object the application of preventive medicine to pregnancy in the common interest of both mother and infant. It secures the saving of infant life and the prevention of chronic diseases in childhood. Both ante-natal care and skilful midwifery are required in most instances to secure a healthy mother able to nurse her healthy infant. Lack of these may result in the death of the mother and infant or one of them; or chronic invalidism of the mother and impairment of the health of the infant.

At the ante-natal clinic the expectant mother is advised concerning the special hygiene of her condition and how

best to meet the so-called minor troubles of pregnancy such as constipation, dyspepsia, defective teeth, varicose veins, etc.; and also the more serious troubles such as cardiac and pulmonary diseases, albuminuria, etc. This work supplemented by the sympathetic home visiting of the trained Health Visitor secures a diminution in the number of miscarriages and still births, a better preparation for confinement, a greatly increased interest in the post-natal care of the infant, an increase in breast-feeding, a diminution of ophthalmia neonatorum—in a word an increase, not to be measured, in the happiness of the home.

The Health Visitor as she visits an earlier infant advises the mother to consult her own doctor or failing this to attend at the maternity centre; she is thus a perennial recruiting agent for the clinic.

Still Births :—Many people ask why with all our splendid modern midwifery machinery we should have still births any longer. The problem is complex. But it may be stated that a large number of still births have no relation to midwifery machinery. They are merely the postponed mortality of ante-natal maladies and deformities. An unborn infant may be very seriously diseased and yet continue to live on in the uterus; he may even be born quite easily; but immediately he enters his post-natal life the causes of death which were only potential before become active and for him birth is the gate of death. In this way it comes about that many of the deaths that ought to have been ante-natal come to swell the already high mortaity which exists after birth.

There were only five still births in the district during the year.

A great future work lies along the lines of the *Development of Ante-natal Preventive medicine*; and the educated Health Visitor and the Staff of the Pre-maternity Hospital will fulfil it.

There were no cases of puerperal fever and no cases of ophthalmia neonatorum in the district during the year.

The Health Visitors paid the following visits during the year :

Ante-natal	379
Children under 1	1813
Children 1-5	1472
Measles	22
Sore throats and diphtheria carriers ...	123

The following tables represent in figures something of the activities of the Maternity and Infant Welfare Centre and its adjuncts :

HARROW MATERNITY & INFANT WELFARE CENTRE

Summary of attendances, January—December, 1919.

	QUARTERS.				
	March	June.	Sept.	Dec.	Totals.
Consultations A. (under 1 year)	290	289	236	286	1101
New cases	51	41	29	47	168
Consultations B. (over 1 year)	241	223	165	139	768
New cases	18	22	11	13	64
Weighing only	168	204	183	249	824
Home Visits (under 1)...	264	349	329	396	1338
,, ,, (over 1)	344	298	293	217	1152
Feeding Breast	31	28	16	30	105
,, Bottle } New cases	20	13	11	14	69
,, Mixed	9	12	4	6	31
Ante-Natal cases	6	5 Transferred to A.N Clinic.			—
,, ,, consultations	6	Transferred to Ante-Natal Clinic.			
,, ,, visits	—	43	82	129	154
Number of babies admitted as new cases during quarter	75	68	40	60	243
Attendance of old cases	518	563	520	557	2158
,, ,, new cases	187	158	64	117	526
Total of attendances	705	721	584	674	2684
Number of sessions	24	22	18	23	87
Individual attendance	226	215	167	184	792
Babies under care of Clinic	220	210	167	184	783
Cases attended but once	53	49	42	59	201
Average attendance	30	33	32	30	31·2
Deaths	1	—	—	1	2

JOINT DENTAL CLINIC SUMMARY.

JANUARY — DECEMBER, 1919.

Quarter. ending	Total Sessions.	Extraction Sessions.	Filling Sessions.	Clinic Children.	School Children.	Mothers	Total No. of Cases.
March ...	15	5	10	21	116	31	168
June ...	13	8	7	14	103	31	148
Sept.	8	4	6	8	75	18	99
Dec.	19	6	10	13	117	30	160
Totals ..	55	21	33	56	411	110	577

Qtr.	Att.	Fillings.	Extraction Cases.	Inspection.	Dentures.		Cases completed.	Total fee.		
					New Cases.	Attend.		£	s.	d.
Mar.	289	55	107	111	6	23	79	18	10	0
June	266	36	117	74	6	34	75	17	5	0
Sept.	126	26	40	50	6	18	43	7	11	0
Dec.	306	53	125	227	7	32	71	15	19	6
T't'ls	987	170	389	462	25	107	268	£59	5	6

Medical Notes of Clinic Cases.

YEAR JAN. to DEC, 1919.

Nutrition.	Congenital Defects.	Skin.	Bones.
Poor ... 9	Phimosis 64	Impetigo... 4	Slight Rickets ... 14
Marasmus 2	Operations 21	Herpes 2	Rickets ... 10
Weight :—	Nœvus ... 5	Excoriation of Buttocks 16	Scoliosis... 3
Under 7lbs. 14	Talipes ... 1	do. of Scrotum ... 2	Rib malformations 2
Do. 6lbs 6	Cong. Hip. 1	Var. Rashes 22	Rib Rosary 1
Do. 5lbs. 6	Epispadias 1	Ulcers ... 3	PigeonChest 3
Prematurity, 8 months 2	Fontanelle Open. .. 4	Thrush ... 2	Fractures... 3
			Swelling on groin (bony growth) ... 1

Ears, Nose & Throat	Alimentary System	Eyes.	Nervous System.
Enlarged Glands 14	Diarrhœa 32	Strabismus 9	Nervous... 6
Throat congestion ... 2	Blood in stools ... 2	Discharge from ... 9	Cretinism 2
Snuffles ... 2	Persistent Constipation 15	Defective Vision ... 8	Night terrors 2
Mouth Breathers 2	Persistent Vomiting 12	Blockage of Tear Duct 4	Convulsions 2
Nose Blockage ... 3	Acute Flatulence ... 7	Operations 2	Stammering 1
Ear Discharge... 8	Acute Sickness ... 3	Cysts ... 2	Concussion 1
Wry Neck 1	Dyspepsia 8	Conjunctivitis ... 2	
Adenoids 6	Worms ... 8	Tumours on Lids .. 4	Infectious Diseases
Operations 3		Stye ... 1	
Tonsils 16			Whooping Cough ... 5
Operations 4		Lungs.	Scarlet Fever 1
Tonsils & Adenoids 27	Urinary System.		Measles ... 5
Operations 14		Bronchitis 14	Influenza 6
	Incontinence 9	Pneumonia 3	Chicken Pox ... 3
		Congestion 2	Infantile Paralysis 1
		T.B. ... 1	

Referred to—

Local Doctor 25

Hospital ... 21

JOINT REMEDIAL DRILL AND MASSAGE CLINIC.

January to December, 1919.

Quarter.	Sessions	Inspections	Massage	Exercises	Clinic Cases	School Cases	Attendances. Under 5	Attendances. Over 5	Total Attendances
March	19	7	108	16	15	4	76	44	120
June	21	12	143	22	19	5	106	63	169
*Sept	21	14	153	54	18	11	116	86	202
Dec.	34	7	224	96	18	9	148	136	284
	95	40	628	188	70	29	446	329	775

* Closed during the month of August.

MASSAGE CLINIC.

Individual Attendances for 1919.

Ages...	Mths. 9	Yr. 1	Mths. 18	Yrs. 2	Yrs. 3	Yrs. 4	Yrs. 5	Yrs. 6	Yrs. 7	Yrs. 8	Yrs. 9	Yrs. 10	Yrs. 11	Yrs. 12	Mothers	Total.
No. of Cases ...	2	5	6	10	7	5	6	2	1	2	1	1	1	5	1	55

42 Clinic cases. 13 School cases.

Miss Townsend reports from the Massage Clinic as follows: The work of this Clinic has increased considerably during the year, since the room at 8, College Road has been in use and regular attendances thrice weekly inaugurated. The massage room is fitted with two wall bars and a bench on which balance movements can be carried out, which apparatus is of great service in treating scoliosis.

The Baby Clinic has sent 27 cases.

The Tuberculosis Dispensary sent a case of suspected tuberculosis for breathing exercises.

The local medical practitioners have sent 3 cases.

Four applications for massage for children in the neighbourhood have been received from the lady almoner at The Hospital for Sick Children, Great Ormond Street.

Space forbids details but the following few notes on cases may be of interest. Boy aet. 6, rickets, bad pigeon chest: Prominences of ribs and sternum reduced, hollows filled out, general health improved.

Girl, aet. 5, Flat foot and knock knee, pronounced case: Both conditions greatly improved; and improvement well maintained 6 weeks after treatment ceased.

School girl, aet. 12, Scoliosis, general delicacy and tendency to tuberculosis: Satisfactory progress.

Girl, aet. 2, Infantile paralysis; attended Great Ormond Street Hospital for some weeks: Satisfactory repair of affected muscles.

A class for breathing exercises following operation for tonsils and adenoids has recently been started.

A waiting list of patients is already in existence.

HOUSING.

Under the Housing Town Planning, etc., Act, 1919, every local authority is required to consider the needs of their area with respect to the provision of houses for the working classes, and to prepare and submit to the Local Government Board (now Ministry of Health), a scheme specifying (a) the approximate number and the nature of the houses to be provided; (b) the approximate quantity of land to be acquired ;(c) the average number of houses per acre; and (d) the time within which the scheme is to be carried into effect.

A form of survey of housing needs, under the Act, was received by the Clerk in the early Autumn, with the request that it should be completed and returned to the Housing Commissioner, by the 31st October.

In company with the Inspector of Nuisances I made a somewhat hurried survey during the latter part of September and the month of October.

A list of insanitary houses was made setting out the defects in each case.

No unhealthy areas were encountered in which Reconstruction Schemes were deemed necessary.

Forty houses were returned under the heading "considerable areas which contain a large proportion of seriously defective houses but which can in the opinion of the Medical Officer of Health be adequately dealt with otherwise than by Improvement or Reconstruction Scheme; (a) by measures for rendering the houses fit for human habitation by repairs or renovation, and (b) where necessary by the demolition of individual unfit houses."

Eighty-one houses were returned under the heading "considerable areas which although in fair sanitary condition nevertheless for one reason or another fall definitely below the ultimate standard at which it is reasonable to aim, or contain a large proportion of houses which fall below such standard."

These houses are under the observation of the Public Health Committee and at opportune times will be dealt with so as to have them either closed or repaired without hardship to the occupants.

The Council's housing scheme under Sec. 1 of the Housing, etc., Act, 1919, provides for the erection of 200 houses; 44 to comprise living-room, scullery and three bedrooms; 146 to comprise parlour, living-room, scullery and three bedrooms, and 10 to comprise parlour ,living-room, scullery and four bedrooms. Area of land acquired, 22½ acres. The scheme is to be completed in 3 years.

The total number of houses in the district is 4,195; number for the working classes, 1,413; and new houses for the working classes erected during the year, two.

Overcrowding, extent: number of houses intended for one family which are now occupied by two or more families, 70.

Cases of overcrowding dealt with during the year : Four cases of overcrowding were dealt with by statutory notice and 3 abated. One remains in statu quo.

Fitness of Houses : The general character of the defects existing in unfit houses may be summarised in the majority of cases as dampness, lack of proper ventilation, and lack of proper lighting in ground floor rooms, pasages and stairways. Many of the houses included in the above survey are without damp-proof courses.

There was no action taken during the year regarding unfit houses under the Public Health Acts or Housing Acts.

The most important difficulties in remedying unfitness at the moment are lack of labour and lack of materials.

Unhealthy areas : As stated above the district contains no unhealthy areas as defined by Parts I. and II. of the Housing Act, of 1890; accordingly action taken under this Act was nil. No complaints made under this Act.

By-laws relating to houses, houses let in lodgings, tents vans and sheds :—There are not and have not been any dwellers in tents, vans or sheds. There are 3 houses let in lodgings. The by-laws relating to these appear to be quite good for the purposes for which they were formulated. Housing statistics for the 12 months ended Dec. 31, 1919 :—

1. Number of dwelling houses in respect of which complaints were made that they were unfit for human habitation by householders, nil.

2. Action under section 17, Housing Act, 1909 :

(a) Number of dwelling houses inspected for the purpose of the section, 126.

(b) Number of dwelling houses considered unfit for human habitation. Absolutely unfit, nil.

(c) Number of dwelling houses the defects in which were remedied without making closing orders, nil.

3) Action under section 28, Housing Act, 1919 :

(a) Number of orders for repairs issued; nil.

(b) Number of cases in which repairs were carried out by L.A., nil.

(c) Number of dwelling houses voluntarily closed on notice by owner that they could not be made fit without reconstruction. Nil.

(4) Closing orders :

(a) Number of representations made to the L.A. with a view to the making of closing orders, nil.

(b) Number of closing orders made, nil.

(c) Number of dwelling houses made fit and closing orders accordingly determined, nil.

(5) Demolition orders : (a) number of demolition orders made, nil.

(6) Number of dwelling houses demolished voluntarily, nil.

(7) Obstructive buildings :

(a) Number of representations made (Sect. 38 Housing Act, 1890), nil. (b) Number of buildings demolished, nil. (c) Number of representations still under consideration, nil.

(8 Staff engaged in housing work : M.O.H. and Sanitary Inspector, who carry out inspections together.

PUBLIC ANALYST'S REPORT FOR HARROW.

Particulars relating to samples taken by Middlesex County Inspectors during the year ended 31st December, 1919.

Article	Taken	Adulterated.
Milk	106	28
Whisky	13	4
Cream	5	5
Vinegar	5	1
Beer	4	0
Coffee	3	0
Self-Raising Flour	2	1
Seidlitze Powder	2	1
Olive Oil	1	0
Barley, pearl	1	0
Walnuts, pickled	1	1
Baking Powder	1	0
	144	41

Prosecutions	11
Convictions	9
Dismissed	1
Summons not served	1

The figures given for adulterated samples include some adulterated informal samples in respect of which no proceedings could be taken.

MEMORANDA, ETC., RECEIVED FROM THE L.G.B. AND MINISTRY OF HEALTH DURING THE YEAR.

Jany.	Memorandum on Pneumonia.
Jany.	The Public Health (Pneumonia, Malaria, Dysentery, etc.) Regulations, 1919.
Feb.	Memorandum : Prevention of Influenza. Influenza Vaccine.
Mar.	Memorandum and Circular Letter with reference to Measures for the Prevention of Lousiness and Itch.
Mar. 3rd.	Memorandum on Prevention of Influenza from re Public Health (Influenza) Regulations, 1915.
Mar. 3rd.	Memorandum or Prevention of Influenza from Local Government Board.
Mar. 12th.	Order, Memoradum, and Circular Letter from Local Government Board re Notification of Pneumonia, Malaria and Dysentery.
April 28th.	Procedure in event of persons bitten by rabid dogs.
May 6th	Letter from Local Government Board rescinding Public Health (Influenza) Reguations, 1919.
May 26th.	Circular letter Local Government Board calling attention to the Rag Flock Act, 1911.
June, 1919.	Memorandum from Ministry of Health re Rabies.
June 1st.	Circular letter from Middlesex County Council re Rats Order.
June 14th.	Circular letter and draft Regulations as to training of Health Visitors for Maternity and Child Welfare Work.

August.	Vaccination of Small pox contacts.
Sept. 30th.	Circular letter from Ministry of Health re Training of Midwives.
Oct. 14th.	Supply of Milk for Expectant and Nursing Mothers and for Infants.
Oct 31st.	Memorandum on the Prophlactic Use of Tetanus Antitoxin.
Nov. 28th.	Order from Ministry of Health rescinding the Notification of Measles and German Measles.
Nov. 29th.	Sanatoria.
Dec. 22nd.	The Milk (Mothers' and Children's) Order, 1919.
Dec. 31st.	Public Health (Acute Encephalitis Lethargica and Acute Polioencephalitis) Regulations, 1919.
Dec.	Memoradum on Prevention of Influenza.

METEOROLOGICAL OBSERVATIONS

TAKEN AT HARROW DURING THE YEAR ENDING DECEMBER 31st, 1919.

By J PERCY BENNETTS, Engineer and Surveyor.

Month	Hygrometer.		Temperature.				Rainfall			
	Dry Bulb	Wet Bulb	Max.	Min.	Earth		Total Depth	Greatest Fall in 24 Hours		No. of Days on which ·01 or more fell
					1 ft.	4 ft.		Depth	Date	
January.										
Means..... ...	35 70	35·22	41·99	31·96	39·83	45·96	...	...	...	...
Highest	50·00	50·00	52·00	45·00	43·00	47·00	4·03	·90	27	22
Lowest	27·00	26·00	34·00	25 00	36·00	43·00	...	...	...	...
February.										
Means	33·92	33·71	41·64	30·32	36·00	41·64	...	...	...	...
Highest	48 00	48·00	50·00	47·00	41·00	43·00	2·87	·70	16	15
Lowest	21·00	21·00	34·00	15·00	32·00	41·00	...	...	...	...
March										
Means.....	38·90	37·70	46·00	34·29	40·45	42·64	...	...	...	...
Highest	51·00	53·00	56·00	48·00	43·00	43·00	3·54	·48	5	19
Lowest	32·00	31·00	39 00	26·00	38·00	41·00	...	...	...	...
April.										
Means.....	42·23	40·93	52·66	37·36	44·26	43 43	...	...	...	...
Highest	53·00	51·00	68·00	51·00	49·00	45.00	3·27	1.28	27	16
Lowest	29·00	29·00	44·00	27·00	39·00	42·00	..	...	...	...
May.										
Means.....	55·58	51·83	67·19	46·74	51·87	47·16	...	...	...	...
Highest	68·00	65·00	79·00	52·00	56·00	50·00	·36	·25	2	6
Lowest	47·00	45·00	55·00	41·00	44.00	45·00	...	...	...	...
June.										
Means.....	58·13	55.40	69·26	49·36	45·70	50·70	...	...	...	...
Highest	73·00	68·00	81·00	60·00	60·00	54·00	1·45	·76	20	7
Lowest	48·00	46·00	56·00	39·00	55·00	50 00	...	...	...	...
July.										
Means.....	55·12	53 45	65·45	50 35	57·87	25·32	..	...	...	...
Highest	63·00	61·00	78·00	57·00	61·00	56·00	1·99	·41	19	15
Lowest	49 00	48 00	55·00	44·00	55·00	54·00	...	...	...	...
August.										
Means.....	59·67	57·80	73·20	53·64	60·48	56·74	...	...	...	...
Highest	67·00	65·00	86·00	63·00	64·00	58 00	2·68	·86	28	12
Lowest	49 00	48·00	61·00	44 00	57·00	56·00	...	...	...	...

Meteorological Observations *(continued)*.

Month	Hygrometer		Temperature.				Rainfall			
	Dry Bulb	Wet Bulb	Max.	Min.	Earth		Total Depth	Greatest Fall in 24 Hours.		No. of days on which ·01 or more fell.
					1ft.	4ft.		Depth	Date	
SEPTEMBER.										
Means.....	53·03	52·10	66·03	47·66	57·23	58·30	...	...	..	...
Highest	66·00	64·00	87·00	60·00	62·00	59·00	1·52	·45	14	11
Lowest	33·00	32·00	52·00	33·00	50·00	56·00	...	...	...	...
OCTOBER.										
Means..	43·29	42·54	53·80	36·82	47·35	54·00	...	...	...	..
Highest	55·00	54·00	66·00	49·00	52·00	57·00	·55	·11	29	9
Lowest	36·00	36·00	44·00	29·00	44·00	52·00	...	..	...	...
NOVEMBER.										
Means.....	36·16	35·73	44·03	32·10	42·23	48·93	...	...	...	...
Highest	53·00	52·00	55·00	41·00	45·00	52·00	1·61	·24	30	21
Lowest	23·00	23·00	38·00	24·00	40·00	47·00	...	..	...	..
DECEMBER.										
Means.....	42·22	40·54	47·54	35·67	41·61	45·67		...	...	...
Highest	51·00	51·00	55·00	46·00	44·00	47·00	4·57	1·03	1	28
Lowest	30·00	30·00	38·00	23·00	39·00	45·00	...	...	...	...

LIST OF ACTS ADOPTED IN HARROW URBAN DISTRICT.

Infectious Disease Prevention Act,		1890.
Public Health Acts Amendment Act,		1890.
Do.	Do.	1907

BYE-LAWS IN FORCE.

Common Lodging Houses, Slaughter Houses, Nuisances, Cleansing of Earth Closets, Privies and Ashpits, Removal of House Refuse, Houses let in Lodgings, Provisions of means of escape in case of fire, Factories and Workshops, Pleasure Grounds and Open Spaces, Fish Frying, New Streets and Buildings.

STAFF OF THE PUBLIC HEALTH DEPARTMENT.

MEDICAL OFFICER OF HEALTH:

DAVID SOMMERVILLE, M.Sc. M.D.

SANITARY INSPECTOR:

A. B. KRAMM.

ASSISTANT:

MISS E. COLE (training).

MATRON ISOLATION HOSPITAL:

MISS E. MUSKER.

DISINFECTOR:

J. LIVY.

MATERNITY AND CHILD WELFARE.

MEDICAL OFFICER:

DR. AGATHA DOHERTY.

SUPERINTENDENT:

MRS. D. HANDLEY.

HEALTH VISITORS:

NURSE M. A. BYERLEY.

NURSE E. RANDALL.

MATERNITY NURSE:

NURSE K. KINDELL.