[Report of the Medical Officer of Health for Croydon County Borough 1904].

County Borough of Croydon.

ANNUAL REPORT

ON THE

HEALTH

AND

SANITARY CIRCUMSTANCES

OF

CROYDON,

TOGETHER WITH

THE REPORTS OF THE BOROUGH HOSPITAL AND OF THE BOROUGH LABORATORY,

AND

THE REPORT TO THE EDUCATION COMMITTEE

FOR THE YEAR 1904.

BY

H. MEREDITH RICHARDS, M.D., B.S. (Lond.),

Member of the Royal College of Surgeons, and Licentiate of the Royal College of Physicians; Fellow of University College, London, and of the Royal Sanitary Institute; Medical Officer of Health; Medical Superintendent of the Borough Hospital, and of the Croydon and Wimbledon Joint Small-pox Hospital; Medical Officer to the Croydon Education Committee.

Croydon:

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1905.

Gentlemen,

I beg to present my Fifth Annual Report on the Health and Sanitary circumstances of the Borough.

Thanks to the assistance of Dr. Brincker, I have again been able to add a detailed report of the work done at the Borough Laboratory.

For the first time a special section has been devoted to Public Elementary Schools. The work done in this connection has taken up a considerable share of my time, and is likely to continue to do so.

In conclusion, I have to thank the Council, the Education Committee, and the Staff of the Public Health Department, and Borough Hospital for the assistance which they have afforded me.

I am, Gentlemen,

Your obedient Servant,

H MEREDITH RICHARDS, M.D.

April 8th, 1905.

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COUNTY BOROUGH OF CROYDON

Sanitary Committee (1903-4).

THE MAYOR—Alderman C. C. MORLAND, J.P.
Alderman LILLICO (*Chairman*).
„ ALLEN, J.P.
„ Sir F. T. EDRIDGE, J.P.
„ RYMER, J.P.

Mr. Councillor HELPS.	Mr. Councillor PECK.
„ KING, J.P.	„ SMITH.
„ MOORE.	„ STEWART.
„ Moss.	„ STRANKS.
„ PRICE (*Vice-Chairman*).	„ TRYTHALL.
	„ WALLER.

Staff of the Public Health Department:

Drainage Inspectors.

THOS. H. CULVER (Cert. San. Institute).
J. C. EARWICKER „ „
A. D. PECK „ „
F. RICHARDSON „ „

District Inspectors.

WILLIAM S. ADAMS.
H. HUNTER (Cert. San. Institute).
W. H. STOKES „ „
CHAS. J. VINCENT „ „
FREDK. F. FULKER „ „ (Inspector for Infectious Diseases).

A. LOW, C.S.A. (Inspector of Meat, Dairies, Cowsheds and Milkshops).
JOS. H. BULL, C.S.I. (Inspector under the Factory and Workshops Act and Shop Hours Act).
A. STANLEY (Disinfector).
ARTHUR W. PINK (Senior Clerk).
S. T. BROWN (Junior Clerk).
F. H. LENNARD „
Miss E. EGGLESTON (Health Visitor).
MRS. NOLAN-SLANEY „
Miss J. BARRITT „

Matron of Borough Isolation Hospital.
Miss BOND.

Resident Medical Officer and Bacteriologist.
J. A. H. BRINCKER, M.B., D.P.H. (Cantab.)

Assistant Medical Officer.
H. E. CORBIN, B.Sc., M.R.C.S., L.R.C.P.

Chief Sanitary Inspector and Inspector under Food & Drugs Act.
P. SAUNDERS (Cert. San. Institute).

Medical Officer of Health.
H. MEREDITH RICHARDS, M.D.

SUMMARY OF ANNUAL HEALTH REPORT FOR 1904.

COUNTY BOROUGH OF CROYDON.

Area—9,012 acres.

Soil and Situation—Croydon is situated in the County of Surrey, 10 miles south of London Bridge. The greater part of the Borough is in the watershed of the Wandle, the remainder draining towards the Effra and Ravensbourne. The subsoil in the north of the Borough is London clay, while the upper chalk comes to the surface in the south, the clay and chalk being separated by a strip of lower London tertiaries comprised of beds of clay, sand and pebbles. Both the London clay and chalk are in parts overlaid by irregularly disposed beds of gravel.

Altitude—The height above ordnance datum varies from 375 feet at All Saints' Church, Upper Norwood, to 110 feet at Mitcham Road; Average about 250 feet above ordnance datum.

Population—Census of 1901—133,895.

Estimated Population, June, 1904—144,419.

Estimated Inhabited Houses, 1904—28,000.

Rateable Value, £1,014,487.

General District Rate, 3s. 8d. in the £.

Poor Rate, including Education Rate, 3s. 4d. in the £.

VITAL STATISTICS, 1904.

Birth Rate, per 1,000 living, 26·1.

Death Rate, per 1,000 living, 13·8.

Infantile Mortality, per 1,000 births, 128.

Isolation Hospitals—For Fever at Waddon Marsh Lane. For Small-pox at North Cheam.

Water Supply—From the Thames, and from deep wells in the chalk.

County Borough of Croydon.

REPORT

OF THE

MEDICAL OFFICER OF HEALTH,

For the Year 1904.

A.—VITAL STATISTICS.

THE POPULATION at the Census of 1891 was 102,695, and had increased at the Census of 1901 to 133,895.

The population at the middle of 1904, according to the estimate of the Registrar General, was 144,419.

The number of inhabited houses cannot be ascertained with accuracy. At the last Census, in April, 1901, it was 25,726. From this date until June 30th, 1904, 3,969 houses have been passed by the Borough Engineer as fit for occupation. The total number of inhabitable houses has therefore been increased to that extent. It is, however, a matter of common knowledge that the number of vacant houses in Croydon is larger than for some years past, being about 10 per cent., as compared with about 5 per cent. in 1901. Taking this into consideration it is probable that the number of inhabitable houses in June, 1904, was about 28,000. If the population per house remains the same as in 1901, this will give a total population of 145,600, or more than 1,000 in excess of the Registrar General's figure. This estimate, however, cannot be given with any great amount of confidence, and it is to be regretted that the Local Government Board have not arranged for a quinquennial census, in order that vital statistics might be prepared with greater accuracy.

THE AREA of the Borough is 9,012 acres, and the density of the population was 16·3 per acre.

THE BIRTHS during the year numbered 3,769, of which 1,928 were boys and 1,841 were girls. The birth rate equalled 26·1 per 1,000 as compared with 27·9 for England and Wales. The Croydon rate was slightly lower than in 1903, but higher than the average for the previous ten years.

Of the total births, 186, or 4·9 per cent., were illegitimate.

The births were distributed as follows:—

	Total.	Birth rate per 1,000 estimated population.
Upper Norwood Sub-division ...	148†	... 17·8
South „	399	... 20·9
Central „	362	... 21·2
East „	375	... 22·9
BOROUGH	3,769	... 26.1
West Ward	1,319	... 28·2
South Norwood Ward	621	... 28·3
Thornton Heath	463	... 31·0
The Workhouse	82	...

† Including 20 births at 89, Central Hill.

DEATHS.—During the year, 2,071 deaths were registered in the Borough or 143 per 1,000. Ninety-six of the deaths registered in the Borough were those of strangers dying at the Workhouse or Infirmary, 20 strangers died at the Croydon General Hospital, 16 at the Cottage Hospital, Upper Norwood, 6 at "Court Royal" Convalescent Home, South Norwood Hill, 1 at "Victoria House," 89, Central Hill (Servants' Reformatory), one St. Olave's Union Cottage Homes, while eight deaths at the Borough Hospital occurred among patients admitted from Penge and Wandsworth.* Four of the deaths of strangers at the Borough Hospital were due to diphtheria, one to scarlet fever, and three to other causes.

If we deduct these 148 deaths and add 27 at the Mental Hospital, Warlingham, and 55 deaths of Croydon residents known to have occurred outside the district during the same period, we get a nett total of 1,998 deaths, which is equal to 13·8 per 1,000, as compared with 16·2 for England and Wales, 17·2 for the 76 great towns, 15·6 for the 142 smaller towns, 15·3 for England and Wales less the 218 towns.

Corrections for deaths of strangers occurring within the Borough and of deaths of Croydon people dying outside the Borough are more complete than was formerly possible. This is due to returns being now available for the deaths of Croydon

*The Wandsworth patient was admitted from Burgos Home, Lebanon Road, and died of Scarlet Fever.

lunatics occurring at the Mental Hospital, Warlingham, and of Croydon people dying in London institutions. The latter return has been furnished by the courtesy of the Superintendent of Statistics, Somerset House, and has been available since 1903. Since these deaths have been added to those registered in the Borough, all deaths of strangers occurring at the General Hospital, Cottage Hospital, Upper Norwood, and other institutions in the Borough have been deducted. Formerly these were included in the total number of deaths on the supposition that they were balanced by Croydon deaths in London institutions.

The nett death-rates for the four quarters of the year were :—

	1904.		Average for 1894—1903.
1st Quarter	15·4	.....	15·8
2nd Quarter	12.1	.....	12·1
3rd Quarter	13·6	.....	13·3
4th Quarter	14·2	.....	13·0
Year	13·8	.....	13·6

The death rate for the year is fairly satisfactory, being only decimal two higher than the average for the years 1894—1903. It is, however, exactly two higher than 1903, which is equivalent to 289 deaths. A large share of this excess was due to an increase in the deaths from diarrhœal diseases, measles, convulsions, and respiratory diseases.

WARD DEATH-RATES.—Table II gives the number of deaths assignable to each district in the Borough. Institution deaths have been, as far as possible, debited to the Wards in which the deceased lived prior to admission to hospital. In as many as 46 cases of persons dying at the Workhouse Infirmary we were unable to do this, and I have again to call attention to the necessity of the Local Government Board making such changes in the Poor Law Registers as would enable the previous addresses of deceased paupers to be quickly and accurately obtained.

The Ward deaths for the year were as follows :—

	Deaths.	Death-rate per 1,000.
East ,, ...	193 ...	11·8
South ,, ...	227 ...	11·9
Upper Norwood ,, ...	282 ...	12·1
(*a*) Upper Norwood Sub-Division	90 ...	10·8
(*b*) Thornton Heath ,,	192 ...	12·2
Central ,, ...	229 ...	13·4
BOROUGH	1998 ...	13.8
South Norwood Ward	322 ...	14·7
West Ward	699 ...	14·9

The Registrar General has not yet published his Annual Summary for 1904. I am therefore unable to say what exact position will be assigned to Croydon in comparing the death-rate with that of the other 75 towns, but from an examination of the four quarterly reports, it would seem that Croydon maintains its position at the head of 33 towns. The death-rate, however, was considerably lower in many of the other 75 towns. For instance, Hornsey had a recorded death-rate of 8·3, King's Norton 10·6, Willesden 11·2, Handsworth 11·8, Walthamstow 12·2, Leyton 12·7, and Smethwick 12 8.

INFANTILE MORTALITY is measured by the proportion of deaths under one year to 1,000 births, and amounted to 128 as compared with 104 in 1903, 133 in 1902, and 140 in 1901. During the year 1904 the rate for England and Wales was 146, while in the 76 large towns it ranged from 87 in Hornsey, 118 in Burton-on-Trent, 102 in King's Norton, 107 in Hastings, 115 in Willesden, 115 in Southampton, to 173 in Plymouth, 175 in Nottingham, 180 in Bootle, 188 in Wigan, 195 in Birmingham, 196 in Liverpool, and 206 in Hanley.

The figures for the various Wards were :—

	Births.	Deaths under 1 year	Death-rate per 1,000 Births.
Central „	362	35	97
South Norwood ...	621	70	112
East „	375	47	125
BOROUGH	3769	483	128
Upper Norwood Sub-division	148	20	135
Thornton Heath Sub-division	463	63	136
South „	399	55	138
West Ward	1319	190	144

The following table shows the fluctuations since 1892 in the infantile mortality from "all causes," from "diarrhœal diseases*," and from "causes other than diarrhœal."

Years.	Total Infantile Mortality from all causes.	Infantile Mortality from "diarrhœal" diseases.	Infantile Mortality from other than "diarrhœal" diseases.
1893—1897 ...	142 ...	25 ...	117
1898—1902 ...	143 ...	38 ...	105
1903 ...	104 ...	9 ...	95
1904 ...	128 ...	29 ...	99

*Under "diarrhœal" diseases are included deaths from "diarrhœa," from epidemic and zymotic enteritis, and from enteritis, that is from the causes classified in schedules 10, 11, and 107, of Table IV.

It will be seen that the yearly variations in the infantile mortality rate are in the main ascribable to variations in the number of deaths from "diarrhœal" diseases. Further discussion of this subject is therefore postponed to a later section of this report.

DEATH CERTIFICATION.—All deaths in the Borough were certified by the Medical Attendant or by the Coroner.

INQUESTS were held in 177 instances, or 8·9 per cent. of the total deaths.

THE ASSIGNED CAUSES OF DEATHS are fully set out in Tables IV. and V., but certain of them require special comment.

SMALLPOX.—During the year 1904, 3 cases occurred, as compared with 14 in 1903. All were removed to the Croydon and Wimbledon Joint Smallpox Hospital, and none ended fatally. Two other cases notified as smallpox were subsequently found not to be suffering from that disease. One of these cases was the mother of three smallpox patients, who preferred to be moved to hospital, rather than be left alone at home. To this, no objection was made, as she was exhibiting one of the early subjective symptoms of smallpox, and it was thought that she might possibly be sickening for the disease. Happily, this turned out not to be the case, as she had been re-vaccinated sufficiently early to prevent an attack. The other case was that of a youth who suffered from chickenpox, perhaps modified by a bromide rash. He also was removed on suspicion, as he was an inmate of a school.

The following are the particulars in each instance :—

No. in H. Register	Ward or Division.	Sex and Age.	Vaccinal State.	Source of Infection.	Date of Onset.	Date of Removal.	Remarks.
227	W.	F. 26	Vaccinated in infancy.	Doubtful	20/8 04	27/8/04	Very mild discrete case
228	W.	F. 24	,, ,,	From 227	4/9/04	6/9/04	Mild discrete case
230	W.	M. 18	,, ,,	,, 227	6/9/04	7/9/04	Discrete case

All the above were re-vaccinated in 1901, but on enquiry from the doctor who performed the operation it was found that in the case of 227 the operation was "not quite successful," and in the case of 228 and 230 was "not successful." It is probable that the "not quite successful" re-vaccination of No. 227 accounted for the extreme mildness of her attack. 228 and 230 had only the protection afforded by vaccination in infancy, as the re-vaccination performed in 1901 was not successful, and that attempted on the occurrence of smallpox in 227 was not soon enough to prevent the development of the disease.

It will be seen from the foregoing table that there was only one importation of Small-Pox. The first case, No. 227, was apparently infected while on a holiday tour to the north of Britain.

In November, 1904, Mr. Alderman Morland and the Medical Officer of Health attended a conference of the chief sanitary authorities of England and Wales, called by the London County Council, to consider the spread of infectious disease by vagrants. It was agreed, *inter alia* :—

(1) That means should be provided for the detention and isolation of any vagrant found wandering in a public place, if reasonably suspected of being liable to convey infectious disease.

(2) That this Conference is of opinion that it is desirable that :—

(*a*) Parliamentary powers should be sought for the compulsory vaccination and re-vaccination of all vagrants unable to produce proof of being sufficiently protected against small-pox on entering casual wards or common lodging houses, who, in the opinion of the sanitary authority have been exposed to the infection of small-pox, and also that sanitary authorities should have power to grant such compensation as they think necessary to persons vaccinated or re-vaccinated at their request who may be prevented on that account from work.

(*b*) It should be an offence to withhold information or make false statements to the sanitary authority in carrying out its powers with respect to the disease.

(3) The local authority should have increased control over common lodging-houses, their keepers and occupants. Thus the local authority should have power :—

(*a*) To medically examine the inmates.

(*b*) To detain and isolate persons exposed to infection, and to disinfect them and their clothes.

(*c*) To temporarily close a common lodging-house in whole or in part, compensation to be given to the keeper of the house.

(4) That the local authority should have power to order the keeper of a common lodging-house in which there has been infectious disease to refuse fresh admissions for such time as may be required by the local authority.

(5) That the local authority should be empowered to require medical examination and disinfection of all persons entering casual wards.

(6) That the local sanitary authority should have power to require the removal and isolation of any inmate of a casual ward who may reasonably be suspected of being liable to convey infectious disease.

(7) That the local authority should have full power to require the cleansing and disinfection of the clothes of any person in a casual ward, whether infected or exposed to infection.

CROYDON AND WIMBLEDON JOINT SMALLPOX HOSPITAL.—The smallpox Hospital Board now comprises the County Borough of Croydon, the Urban Districts of Wimbledon and Penge, and the Croydon Rural District.

During the year 5 cases were admitted from the Borough, and 5 cases from the Croydon Rural District. One case was also admitted from the Leatherhead Urban District at the urgent request of that authority, which had no means of isolating smallpox. The majority of the sanitary districts of Surrey are no better off than Leatherhead, but steps have recently been taken by the Surrey County County Council to form a joint hospital district for small-pox purposes. Should the Local Government Board approve of this proposal it will be to the manifest advantage of all concerned that the Croydon and Wimbledon Joint Hospital should receive the cases from the north-east of Surrey. Indeed it would not be difficult to organize the isolation of Small-pox in such a way as to combine the maximum of efficiency and economy of all the authorities concerned.

VACCINATION.—During the year ending December 31st, 1904, the number of primary vaccinations in Croydon and Penge amounted to 4,118, as compared with 3,769 registered births.

MEASLES accounted for 62 deaths during the year as compared with 26 deaths in 1903. The actual number of children who suffered from Measles during the year is unknown, but 1335 notifications were sent to various elementary schools after enquiry into suspected cases by the Health Visitors. All the fatal cases occurred in small houses.

The number of deaths was greater than in any year since 1896, and the number of notifications made to the elementary schools gives no adequate idea of the actual number of cases, as no less

than 19 schools were closed on account of the prevalence of the disease, and the system of notification that normally obtains between the teachers and the Medical Officer of Health was for the time being in abeyance.

The problem of Measles and school attendance is referred to in another section of the report.

SCARLET FEVER (see Tables III., IV., and V.). Two hundred and ninety-one cases were notified, of which eight ended fatally, as compared with 215 cases and 2 deaths in 1903. The disease was somewhat more prevalent than in 1903, and was of a more severe type, the number of deaths being greater than in any year since 1897. The disease was most prevalent in the East Ward, affecting for the most part children attending the Oval Road School. Considerable pains were taken to stamp out this localised outbreak, but we were again and again frustrated by the occurrence of extremely mild cases of the disease which escaped notification until infection of playmates gave rise to suspicion.

213 cases or 73 per cent. were isolated at the Borough Hospital.

RETURN CASES OF SCARLET FEVER.—In 11 instances 16 other cases of Scarlet Fever arose in homes to which patients had been discharged from hospital.

The following are the chief particulars in reference to these cases :—

Discharged Patient.						Note on Discharge.	Onset and number of return case.	Interval between discharge of patient and onset of return case.
No. in Register	Age	Sex.	Date of Discharge.	Days in Hospital.	Length of illness.			
569	6	F	27/2/04	90	93	Head scurvy and face rough, otherwise normal.	13/3/04 (144)	15 days
							4/4/04 (143)	35 ,,
159	5	M	14/6/04	53	56	Tonsils chronically enlarged, otherwise normal.	27/6/04 (248)	13 ,,
197	3	M	5/7/04	47	49	Normal.	10/7/04 (269)	5 ,,
215	4	M	10/8/04	66	68	Normal.	12/9/04 396)	33 ,,
							14/9/04 (399)	35 ,,
							13/9/04 (400)	34 ,,
444	7	M	15/11/04	46	50	Tonsils and glands enlarged, fauces a little red.	26/11/04 (628)	11 ,,
							5/12/04 (640)	20 ,,
490	6	F	3/12/04	51	57	Tonsils enlarged, throat red. Discharge from nose and ear day after discharge.	8/12/04 675	5 ,,
							20/12/04 683)	17 ,,
538	42	F	23/12/04	55	57	Throat red, tonsils enlarged. Patient subject to recurrent tonsillitis.	1/1/05 (5)	9 ,,
503	7	F	21/12/04	64	67	Tonsils and glands enlarged (hard and shotty). Teeth bad.	5/1/05 (11)	15 ,,
500	7	F	6/12/04	49	51	Throat a littte red, otherwise normal.	5/1/05 (18)	30 ,,
457	15	M	31/12/04	89	90	Tonsils enlarged. Had an attack of follicular tonsillitis, 10/12/04 to 15/12/04.	10/1/05 23'	10 ,,
*452	5	F	7/12/04	66	71	Tonsils enlarged, throat a little red.	14/1/05 (40)	38 ,,

* Had a relapse 21 days after admission to Hospital. Was at Hastings from 7/12/04 to 23/12/04.

The considerable interval that usually elapsed between the discharge of the patient and the infection of another member of the family strongly suggests that "return cases" are due to persistent infection and not to re-infection of discharged patients with exceptionally potent Scarlet Fever germs just prior to their discharge from hospital. Were this the case one would expect that return cases would be limited to the first few days after the return home of the supposed infecting patient.

The following history of a family outbreak of scarlet fever is instructive. A boy named P.W. developed scarlet fever on June 15th, though he had not been out of the house since June 3rd, and the incubation period of scarlet fever is usually not more than three days or a week at most. On enquiry it was found that Mrs. B., P.W.'s aunt (with whom he was living) had been suffering from tonsillitis since June 5th, and that Mr. B. suffered in the same way on June 11th. Careful enquiry failed to find any definite source for P.W.'s infection, but it is not improbable that the apparently simple tonsillitis from which Mrs. B. and Mr. B. suffered was either scarlatinal in origin or had the scarlatinal micro-organism engrafted upon it.

Be this as it may, two other children in the same house failed with scarlet fever within the fortnight following P.W.'s attack and all three were removed to hospital from whence they were discharged on August 23rd, August 23rd, and September 6th respectively. One of the children discharged on August 23rd went to Herne Bay where she contracted diphtheria and was treated at the local hospital until September 27th. She then went to Hastings from October 1st to October 15th. On her return home it was arranged for a small operation to be performed on her throat. This was done on October 18th. On October 20th another child in the family developed symptoms of scarlet fever. In all probability this was a case where scarlatinal infection had remained latent from August 23rd to October 18th and was roused into activity by the operation on the latter date. This theory is supported by the fact that in a not inconsiderable number of cases, removal of tonsils or of adenoids is followed in a day or two by scarlet fever, apparently because the operation gives the germs of scarlet fever the opportunity for multiplying which is lacking under more normal conditions.

The value of isolation hospitals in checking the spread of Scarlet Fever is still under discussion. While the importance of isolating certain cases, such as those occurring in boarding schools and in the families of milk vendors, is undisputed, it is suggested that the general isolation of Scarlet Fever is not worth while, as it is affirmed that Scarlet Fever is just as prevalent whether isolation is adopted or not. This problem does not readily lend itself to a

solution by statistical methods. In considering the question two distinct issues have to be kept in mind:—

(*a*) Does the isolation of Scarlet Fever substantially check the prevalence of the disease?

(*b*) Is the money spent on the isolation of Scarlet Fever expended profitably?

The following was the experience of Croydon in respect to the spread of Scarlet Fever in 1904:—

Two hundred and six families were infected with Scarlet Fever in 1904. In two instances some of the patients were treated at home and some at the Borough Hospital; in 57 instances ("Home Group") all the patients were nursed at home; in 147 ("Hospital Group") all the patients were removed to the Hospital.

In the "Hospital Group" there were 298 susceptible children (under 14 years) left at home on the removal of the primary case or cases.

In the "Home Group" there were only 50 susceptible children (under 14 years) left at home on the notification of the primary case or cases.

"Primary Cases" include all those that had occurred in the family on the receipt of the first notification from the medical attendant, and therefore include a certain proportion of "missed" cases, that were only discovered on the recognition of a subsequent typical case.

An analysis was taken of all cases occurring in the infected houses subsequently to the notification of the primary case or cases.

Susceptible children subsequently developing Scarlet Fever (up to March 31st, 1905).

"Hospital" Group.		"Home" Group	
Developing within	Cases.	Developing within	Cases.
1 week	24	1 week	8
2 ,, ...	13	2 ,, ...	8
3 ,, ...	3	3 ,, ...	3
4 ,, ...	—	4 ,, ...	—
5 ,, ...	—	5 ,, ...	—
6 ,, ...	—	6 ,, ...	—
7 ,, ...	1	7 ,, ...	—
Return cases	22		
Totals	63	Totals	19

Thus in the "Hospital" Group 63 or 21·2 per cent. of the susceptible children developed scarlet fever after removal to hospital of the primary cases while in the "Home" Group as many as 19 or 38 per cent. developed scarlet fever.

It will be seen that the results were much in favour of hospital isolation in spite of the fact that the majority of the "home group" consisted of patients who could be satisfactorily nursed at home, either because they lived in large houses or because there were few, if any, susceptible children in the infected premises.

Whether the cost of isolating Scarlet Fever is a sound investment is a problem which each authority must judge for itself. In every community a certain proportion of cases will always require hospital treatment, and even if the spread of Scarlet Fever were in no way controlled by isolation, the convenience of hospital treatment is worth considerable expenditure on the part of the community.

EPIDEMIC INFLUENZA was the assigned cause of death in 27 instances, as compared with 28 in 1903.

WHOOPING COUGH accounted for 15 deaths, all of which occurred in children under five years of age. The number of cases is unknown, but 249 school notices were necessitated by those coming to the knowledge of the department. The number of deaths was less than any year since 1877. This was mainly due to the diminished prevalence following the wide spread local epidemic of 1902-3

DIPHTHERIA & MEMBRANOUS CROUP:—The number of cases notified amounted to 312, as compared with 259 in 1903 and 285 in 1902, while 24 cases terminated fatally. Seventy-five per cent of the cases were isolated at the Borough Hospital.

The increase in the number of cases is accounted for by the prevalence of the disease among the children under the care of the Guardians at the Infirmary, Workhouse and Cottage Homes.

During the year 31 cases were notified from the Infirmary, 3 from the Workhouse, 12 from the Cottage Homes in Mayday Road, and 14 from Morland Lodge.

As frequent enquiries are made as to the exact method adopted in dealing with cases of Diphtheria, the following information is put on record :—

(1) Free bacteriological assistance is offered to all medical men in the Borough so that a larger proportion of mild and atypical cases may be recognised and isolated.

(2) All cases of "sore throat" reported among the children attending elementary schools are investigated. This is necessary because in many instances Diphtheria is actually present.

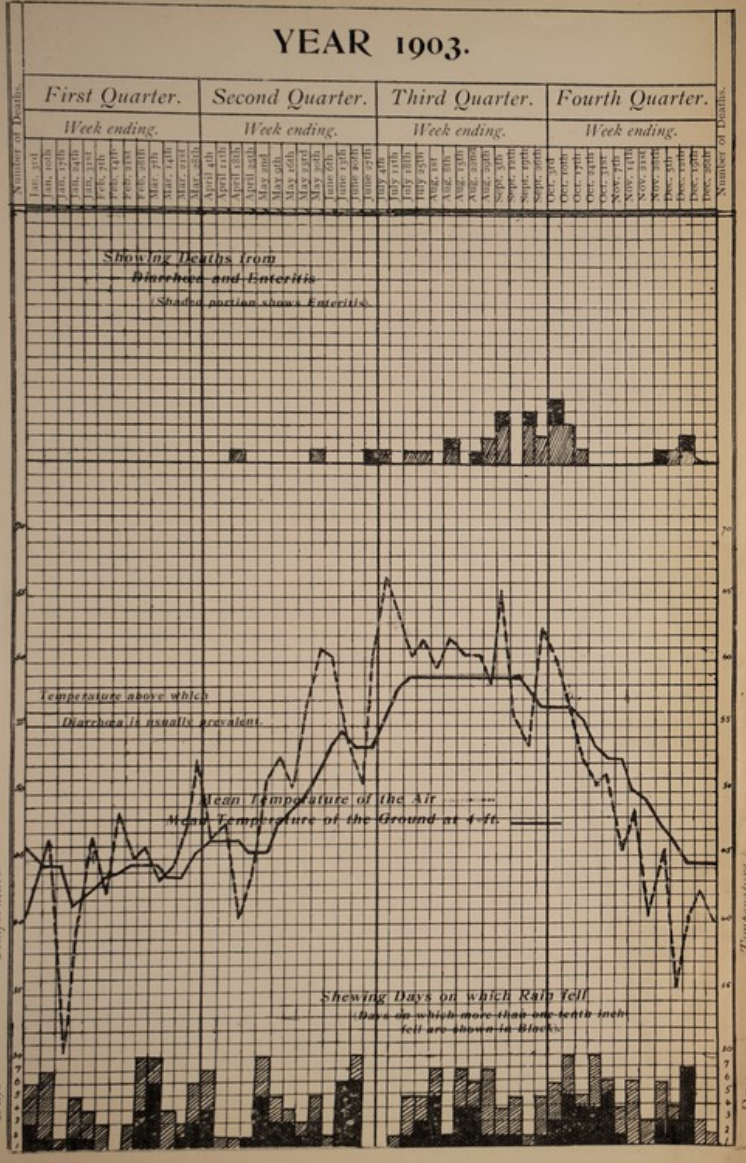
(3) On the receipt of a notification of a case of Diphtheria the premises are visited, and home or hospital isolation secured. If the patient is removed to hospital, isolation is maintained until at least two consecutive bacteriological examinations have been made, *i.e.*, until diphtheria bacilli have apparently disappeared, or at any rate can no longer be found. In the case of patients isolated at home the medical attendant is advised to continue isolation for a similar period, though this is not always carried out.

(4) All children living in infected houses are excluded from school on the notification of the first case. All school teachers or persons engaged in the milk trade are also placed in quarantine, but other adult inmates of infected houses are as a general rule allowed to continue their ordinary occupations.

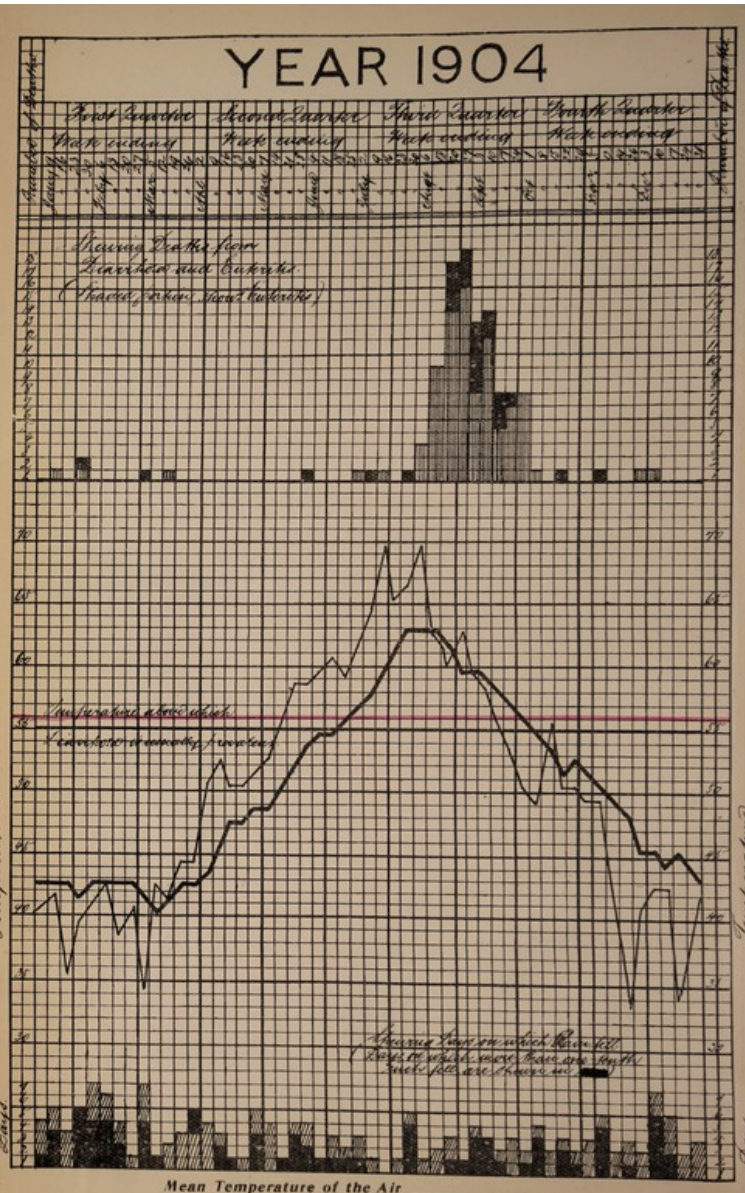
(5) At the end of three weeks after the removal to hospital of the last case a bacteriological examination is made of the throats of the children of school age who have been kept in quarantine, and return to school is allowed after two consecutive examinations are negative. In the case of adult "contacts" who have been placed in quarantine similar examinations are made immediately after the isolation of the first case. It would be an advantage if this could always be done in the case of children of school age also, but the demands on the laboratory have grown so extensive that this is not at present practicable. It is, however, a matter for consideration whether the cost of further laboratory assistance would not be met by the improved school attendance which might reasonably be expected to ensue.

ENTERIC FEVER.—Twenty-one cases were notified, and five deaths from this disease were registered during the year. Twelve cases were removed to hospital. Of these three were subsequently found to be suffering from some other complaint, two patients being tuberculous and one exhibiting symptoms of paratyphoid infection. The notification of one of the home cases was also amended, as the subsequent development of the symptoms gave reason to modify the diagnosis. There was thus seventeen cases of supposed enteric fever which required investigation. Of these eight appeared to have contracted the disease outside the borough. Of the remaining nine cases the origin was indefinite in no less than seven instances, while in one instance watercress and in another ice cream was the suspected cause of illness, but in neither case did further enquiries corroborate this suspicion.

YEAR 1903.



YEAR 1904



Mean Temperature of the Air _____

Mean Temperature of the Ground at 4-ft. _____

In the case of two of the imported cases, personal contact with a previous case was the probable cause of infection. .

The origin of the small residuum of Croydon cases continues to afford interesting matter for speculation. I can only repeat what I have said in former reports, namely, that I think the clues are to be sought in the direction of mild unrecognised cases.

DIARRHŒA AND EPIDEMIC ENTERITIS accounted for 95 deaths, of which 83 occurred in children under one year of age. There were also 35 deaths from other forms of enteritis, of which 25 were under one year of age. Thus of the total, 130 deaths from "diarrhoeal" diseases, no less than 108 were those of infants under one year of age. It will be seen from Table V. that "diarrhoeal" deaths were considerably more numerous than in 1903 and 1902, but somewhat less in number than in 1901.

The accompanying chart shows the seasonal distribution of the deaths under one year from diarrhoeal diseases. It will be seen that 96 out of the 108 deaths were in the third quarter. For comparison, the similar chart prepared for 1903 is reproduced. The curves for these and former years show clearly that a sustained temperature, as indicated by the 4-ft. earth thermometer, is a necessary antecedent of diarrhoea prevalence in an epidemic form. They also show that a high mean temperature of the air does not in itself affect diarrhoeal mortality as it should do, if putrefaction of insufficiently cooled, farm-contaminated milk were the main cause of trouble. The effect of rainfall in combating the evil influence of sustained high temperature is also shown both by the individual curves and by comparison of 1904 and 1903. During the summer of 1903 there were 49 days on which rain fell, and only 22 deaths under one year from "diarrhoeal" diseases, while in the summer of 1904 there were only 28 days on which rain fell, and as many as 96 deaths under one year from "diarrhoeal" diseases.

It was because of the close association between rainfall and diarrhoea prevalence that an attempt was made in the summers of 1903 and 1904 to supply any natural deficiency by copious watering of the streets in that quarter of the East Ward where summer diarrhoea has for many years been unduly prevalent. During 1903 the results of the experiment suggested that good had been done, but for 1904 the figures are disappointing, as the East Ward relapsed into its old position as regards the prevalence of diarrhoea. As will shortly be shown, however, the local diarrhoea rate depends so much on the proportion of infants that are hand fed, that it would be unfair to say that the street watering had been altogether ineffectual.

As the problem of diarrhœa mainly concerns the infantile population the following remarks are confined to an investigation of the 108 deaths under one year. These were all made the subject of special enquiry by the Health Visitors with special reference to the method of feeding.

We must first, however, note the local incidence of these diseases:—

"Diarrhœal" Deaths under one year in 1904.

Quarter.	East Ward.	South Ward.	South Norwood Ward.	Thornton Heath Sub-division	West Ward.	Central Ward.	Upper Norwood Sub-division.	Borough.
First	—	1	3	—	1	—	—	5
Second	—	—	—	—	2	—	—	2
Third	14	16	15	15	26	8	2	96
Fourth	2	—	2	—	1	—	—	5
Total	16	17	20	15	30	8	2	108
Rate per 1,000 Births ...	43	43	32	32	23	22	14	29

A detailed analysis of these figures is almost too complicated a problem to be practicable. The Upper Norwood Sub-division is again distinguished by an extremely low diarrhœa rate. This is not an accidental result from the manipulation of small figures as a similarly low rate has been experienced for many years in this part of the town. It is, I believe, in part to be explained by the favourable situation of the smaller streets in this sub-division already described in previous reports.

The comparatively favourable position of the West Ward as compared with the Borough as a whole is also striking. It is well known that this ward contains more than the average of the poorer artisan class, and it would naturally be expected that the mortality from infantile diarrhœa would also be above the average though the reverse was actually the case. On further inquiry, however, it was found that whereas only about 63 per cent. of all infants in the Borough are suckled during the first six months of life; about 74 per cent. of infants living in the West Ward have this advantage. Now, diarrhœa is almost confined to hand-fed babies, and if due

correction is made for this fact, the apparently favourable position of the West Ward vanishes. This is a factor which I had no means of applying in past years, and even now cannot use for all parts of the Borough. It must, however, continually be borne in mind, and efforts will be made in future years to collect further information on this point.

During the year investigations were made by the three health visitors into the method of feeding employed during the first six months of life in respect to 1,994 infants who survived this length of time. Six months was taken because an infant should if possible be wholly breast fed for at least this time. The following is a summary of the figures :—

Entirely breast fed	1,261	or 63 per cent.
Breast and cow's milk ...	166	„ 8 „
Breast and other foods ...	358	„ 18 „
Cow's milk	119	„ 6 „
Condensed milk	31	„ 2 „
Other prepared foods ...	59	„ 3 „
	1,994	100

Similar enquiries were made in respect to 182 deaths from all causes and 58 deaths from "diarrhœal" diseases occurring among infants who survived for at least one week and died before reaching six months. Deaths under one week are omitted because they could hardly be associated with errors in feeding. Diarrhœal deaths indeed are practically unknown at this early age.

As the figures are small they will not bear sub-division into many classes. Grouping them, however, according as the babies were entirely breast fed or fed in some other way we find the following percentages :—

	Infants aged one week and under six months.		
	Survivors.	Deaths from all causes.	Deaths from diarrhœal diseases.
Entirely breast fed ...	63 ...	42 ...	9
"Otherwise" fed ...	37 ...	58 ...	91

Putting this in another way we may estimate that if the mortality of all infants aged one week to six months were 91 per 1,000 from all causes, and 29 per 1,000 from "diarrhœal" diseases, then the mortality of the breast fed would be 61 from all causes and 4 from "diarrhœal" diseases, while the mortality among the "otherwise fed" would be 143 from all causes and 72 from "diarrhœal" diseases. We have once more, therefore, a striking

proof of the advantages of breast feeding. Every effort should therefore be made to encourage breast feeding and I am at present endeavouring to ascertain why a larger proportion of infants are compelled to forego this advantage. Certainly no steps taken by the Health Department in any way countenance the notion that breast feeding is an advantage that might lightly be dispensed with, but it would, if possible, be well to further emphasize this fact. While in Paris last summer I had an opportunity of seeing the good work done at the *Consultation des Nourissons* attached to the Hôpital Tarnier. This is a Lying-in Hospital but the distinctive feature of the clinique is the system whereby all infants born in the institution are subsequently brought to the out-patient department, either every week or every fortnight, whether well or ill. The doctor in charge (M. Budin) sees that each child is weighed and carefully examines those which are not gaining weight or show other signs of not thriving. Breast feeding is encouraged and advice given, not only as to the exact method to be employed should hand feeding become necessary but on the thousand and one little difficulties that arise in connection with the hygiene of the infant. It is to be feared that a dispensary to which children are brought in order that health might be maintained is too Utopian for this country, but I can imagine no more useful application of preventive medicine.

So much has been said in previous reports concerning improved milk supplies that I do not propose discussing the question at any great length. I believe, however, that a very great service would be rendered to all classes of the community if the raw material from which infants' food should be prepared were put on the market in a more convenient form and of assured purity. At present the home modification* of cows' milk for the hand-fed infant is somewhat complicated, but the process would be extremely easy if cows' milk contained 7 to 8 per cent. of fat instead of the normal 3·5 to 4 per cent. Now double cream milk could easily be prepared by any dairyman and sold at a profit at eightpence per quart. As only small quantities of this enriched milk would be required for infants under six months the cost would not be prohibitive, and would be no greater than that now paid for double the quantity of ordinary cows' milk.† Such specially prepared "infants' double-cream milk" should be obtained from an inspected, tubercle-free herd. It should be handled with great care and scrupulous cleanliness. It should be at once cooled, except in the summer quarter, when it should first be sterilised or pasteurised. It should be delivered in sealed tins of the capacity of quarter, half

* By "modification" of milk is meant dilution with water, addition of cream and addition of sugar, in order to render this mixture more like human milk.

† The cost of "home modified" milk prepared from the double cream milk would be only fourpence per quart or less.

and one pint, tins being selected because they can readily be sterilised by steam, are extremely cheap in first cost, and do not add to the cost of distribution as glass bottles would do. All appliances must of course be carefully cleansed and be sterilised by steam on each occasion that they are used.

If any milk purveyors in the Borough care to work on these lines it would not be difficult to draw out a schedule of conditions to which they should adhere, and to arrange for the special inspection of this source of supply. Directions, of an extremely simple kind, could also be given for the use of this milk for young infants. Should the trade take up such a supply, I see no reason why milk which comes up to our conditions should not be "certified as produced under conditions satisfactory to the Health Authority," a method which has been followed by most satisfactory results in the United States of America.

PUERPERAL FEVER was notified on nine occasions. Three of these cases ended fatally. Three of the cases were attended by registered midwives. One of the fatal cases occurred in a house where there had recently been two cases of scarlet fever. Streptococci resembling those associated with scarlet fever were found in the blood of this patient.

ERYSIPELAS was notified on 68 occasions and two cases ended fatally.

MIDWIVES ACT, 1902.—During the year one of the registered midwives died and eleven remained on the register on December 31st. The case book and bag of appliances of each midwife have been inspected with, in most instances, unsatisfactory results. In nearly every case the case books were improperly kept, partly from carelessness, but mainly through sheer ignorance as to the meaning of the words used in the Rules. Several, too, of the midwives are unable to write and therefore have to get their forms filled in by deputy. In many instances notifications that should have been sent to the supervising authority have not been received. Many of the women do not possess the instruments they are required to take with them to a confinement, but this is perhaps as well, as they are totally ignorant of the use to which these instruments are to be put.

As this was the first year in which an inspection had been made the Hospital Committee to whom the powers under this Act were delegated, decided that a cautionary letter should be addressed to

each midwife in default. It is proposed during the current year to deal more stringently with any breach of the regulations that may be discovered.

TUBERCULOSIS of all forms was the assigned cause of death in 222 instances, or 1·53 per 1,000 persons living, while phthisis alone was responsible for 142 deaths, or 0·98 per 1,000.

It will be seen from Table V. that the deaths from phthisis are slightly less numerous than in 1903.

Phthisis, or consumption of the lungs, has now been voluntarily notifiable in the borough since October, 1903. During 1904, 129 cases were notified. All the notified cases were investigated by myself or by one of the medical officers from the Borough Hospital, and enquiries made as to the probable origin of the case, condition of the house where the patient lived, and precautions taken to prevent the infection of others. Patients or their relatives were at the same time given a copy of a handbill on the prevention of phthisis, the chief points of which were discussed and explained. Disinfection was offered whenever it seemed likely that house infection might have taken place, and in every case when a fatal termination had ensued.

Where further supervision seemed advisable the Health Visitors were instructed to visit at intervals of three months.

The number of cases notified is still smaller than might have been expected, but I see no reason to modify the opinion expressed last year, namely, that measures for the prevention of phthisis will not be popular or successful until they include hospital accommodation for some of the cases.

It is to be regretted that the Guardians cannot see their way to combine with the Sanitary Committee for the treatment of advanced cases at the Borough Hospital. Such an arrangement would relieve the Guardians from the present pressure on their accommodation as well as provide a place to which patients rather above the pauper class could be removed for temporary treatment. This would be beneficial in many ways. It would free the infirmary from cases that are possibly actively infectious, and in the case of those slightly

above the pauper class would similarly free the home from infection at a time when the risk of transmitting the disease is most marked, namely, during the last few weeks of life when cough can no longer be restrained, and the patients friends are worn out by nursing. Hospital treatment of less advanced cases would also be beneficial if only as an opportunity for the training of the patients in methods of personal hygiene, by which life might be prolonged and the risk to others much diminished.

TUBERCULOSIS AND MILK.—30 samples of milk were taken under the Model Milk Clauses during the year from cowsheds in the Borough, 29 of which gave negative results and one positive. Four cows with suspicious udders were removed from the shed from which the positive sample was obtained, and a subsequent sample of the mixed milk of the remaining cows gave a negative result.

No samples were taken during the year of milk produced outside the Borough, as previous experience showed that it was extremely difficult to deal promptly and efficiently with infected milk from distant parts of the country.

The prevention of the sale of contaminated milk of diseased cows should be the duty of the sanitary authority in whose jurisdiction the animals are kept, and not of the district in which the milk is offered for sale.

DISINFECTION.—During the year, 605 houses and 689 lots of clothing were disinfected. The latter number included 48 lots of infected material from the Urban District of Penge.

The articles disinfected were as follows :—

Beds.	Mattresses.	Blankets.	Sheets.	Pillows.	Other Articles.	Total.
261	250	640	70	646	1,402	3,269

I must again repeat that the present disinfecting station is very unsatisfactory. The station should be removed elsewhere, or be re-modelled on its present site, as soon as it is determined what is to be done with the ground in the immediate neighbourhood of the destructor.

CUSTOMS AND INLAND REVENUE ACTS.—Under Sect. 26, 53 and 54 Vict. c. 8, exemption from inhabited house duty is granted to houses divided into tenements of the annual value of less than £20 provided the medical officer of health certifies that they afford suitable accommodation for each of the families or persons dwelling therein, and that due provision is made for their sanitary requirements.

By Sect. 11, 3 Edward VII., this provision has been extended to houses of the annual value of not more than £40

During the year applications were made in respect of three sets of flats all of which were certified after inspection. A large number of similar applications have been made during the early part of this year and there is every prospect of a considerable increase in the applications for these certificates.

TABLE I.

For whole District, for Calendar Year 1904.

Year.	Population estimated to Middle of each Year.	Births.		Deaths under One Year of Age.		Deaths at all Ages. Total.		Deaths in Public Institutions.	Deaths of Non-residents registered in District.	Deaths of Residents registered beyond District.	Deaths at all Ages. Nett. *d*.	
		Number.	Rate.*	Number.	Rate per 1,000 Births registered.	Number.	Rate.*				Number.	Rate.*
		a		*b*				*c*	*d*	*e*		
1	2	3	4	5	6	7	8	9	10	11	12	13
1894.	111,920	2805	25·1	344	122	1549	13·8	269	69	10	1490	13·3
1895.	114,923	2906	25·3	397	136	1687	14·7	271	58	15	1629	14·2
1896.	118,006	2964	25·1	457	154	1721	14·6	283	73	21	1669	14·1
1897.	121,171	3034	25·0	423	139	1622	13·4	315	64	10	1568	12·9
1898.	124,421	3150	25·3	482	153	1777	14·3	347	85	18	1710	13·7
1899.	127,759	3204	25·1	500	156	1993	15·6	431	101	7	1899	14·9
1900.	131,186	3270	24·9	432	132	1977	15·1	419	63	6	1920	14·6
1901.	134,665	3578	26·6	501	140	1829	13·6	383	83	2	1748	12·9
1902.	137,917	3576	25·9	476	133	1965	14·3	429	74	13	1904	13·8
1903.	141,157	3726	26·4	386	104	1740	12·3	454	129	57	1670	11·8
Averages for years 1894—1903	126,312	3221	25·5	440	137	1786	14·2	361	80	16	1721	13·6
1904.	144,419	3769	26.1	483	128	2071	14·3	598	148	75	1998	13·8

* Rates calculated per 1,000 of estimated population.

a These are total births (uncorrected) for Institutions.

b These are corrected for the Borough Hospital and Workhouse.

c Includes all deaths of residents and non-residents in Workhouse, Workhouse Infirmary, Borough Hospital, General Hospital, Cottage Hospital, 89, Central Hill (Servants Reformatory), and Court Royal Convalescent Home, South Norwood Hill.

d Deaths of non-residents have been excluded in the case of the Workhouse, Workhouse Infirmary, Borough Hospital, General Hospital, Cottage Hospital, 89, Central Hill (Servants' Reformatory), and Court Royal Convalescent Home, South Norwood Hill. Prior to 1903 correction was only made for the first three institutions.

e In 1903 arrangements were made for the first time whereby deaths of Croydon persons in the London district were notified to the Medical Officer of Health.

Area of District in acres (exclusive of area covered by water), 9,012.

At Census of 1901.—Total population at all ages, 133,895; number of inhabited houses, 25,726; average number of persons per house, 5·2.

TABLE II

Names of Localities.	1. West Ward.				2. Central Ward.				3. East Ward.				4. South Ward.				5. South Norwood Ward.				6. Upper Norwood Sub-Division.				7. Thornton Heath Sub-Division.				8. Undistributed Institution Births and Deaths.			
Year.	Population estimated to middle of each year.	Births Registered.	Deaths at all ages.	Deaths under 1 Year	Population estimated to middle of each year.	Births Registered.	Deaths at all ages.	Deaths under 1 Year	Population estimated to middle of each year.	Births Registered.	Deaths at all ages.	Deaths under 1 Year	Population estimated to middle of each year.	Births Registered.	Deaths at all ages.	Deaths under 1 Year	Population estimated to middle of each year.	Births Registered.	Deaths at all ages.	Deaths under 1 Year	Population estimated at middle of each year.	Births Registered.	Deaths at all ages.	Deaths under 1 Year	Population estimated to middle of each year.	Births Registered.	Deaths at all ages.	Deaths under 1 Year	Population estimated to middle of each year.	Births Registered.	Deaths at all ages.	Deaths under 1 Year
	a	b	c	d	a	b	c	d	a	b	c	d	a	b	c	d	a	b	c	d	a	b	c	d	a	b	c	d		b	c	d
1894 * ..	34,651	1065	416	114	16,119	357	219	61	11,139	236	115	25	15,505	368	166	46	16,856	412	162	43	8,184	136	81	12	9,466	229	121	31	*Prior to 1900, Institution Deaths could not be distributed as the Registrar did not supply the necessary information.	..	269	12
1895 * ..	35,778	1136	502	150	16,201	395	197	49	11,627	204	143	26	15,827	373	192	48	17,333	432	184	52	8,191	130	95	9	9,966	236	103	35		..	271	28
1896 * ..	36,955	1158	506	195	16,283	390	218	57	12,145	255	121	36	16,179	426	178	46	17,850	394	215	52	8,198	111	81	14	10,396	230	119	42		..	283	15
1897 * ..	38,162	1135	418	136	16,365	395	203	43	12,658	279	138	34	16,511	381	177	61	18,322	450	195	62	8,206	130	90	23	10,947	264	86	40		..	315	24
1898 * ..	39,379	1072	443	156	16,460	387	230	66	13,186	295	132	45	16,863	431	200	57	18,829	510	235	74	8,216	108	83	15	11,488	277	107	45		..	347	24
1899 * ..	40,606	1100	521	182	16,553	388	223	59	13,734	323	153	58	17,235	421	193	48	19,346	488	248	62	8,258	102	91	13	12,057	315	133	49		..	431	29
1900 * ..	41,839	1142	662	175	16,694	355	264	46	14,241	327	177	33	17,624	394	246	52	19,852	501	234	62	8,241	129	96	11	12,685	353	157	43		69	84	10
1901 * ..	43,136	1230	640	208	16,778	397	200	48	14,799	345	158	45	18,011	409	197	49	20,399	571	245	73	8,254	132	93	16	13,288	414	164	57		80	51	5
1902 * ..	44,361	1271	658	191	16,863	326	219	44	15,326	361	175	44	18,363	413	222	45	20,899	547	276	75	8,277	156	113	26	13,828	404	158	43		98	83	8
1903 * ..	45,540	1355	570	169	16,957	379	210	45	15,836	339	156	34	18,735	378	181	27	21,412	611	260	55	8,302	149	85	7	14,375	443	171	48		72	37	1
Averages of Years 1894 to 1903.	40,040	1166	533	168	16,527	377	218	52	13,469	296	146	38	17,085	399	195	48	19,109	491	225	61	8,229	128	91	14	11,789	317	132	43		90	217	16
1904 † ..	46,741	1319	699	190	17,051	362	229	35	16,346	375	193	47	19,107	399	227	55	21,925	621	322	70	8,327	148	90	20	14,922	463	192	63		82	46	3

NOTES.—†For 1900, 1901, 1902, 1903 and 1904, deaths of residents occurring beyond the district are included in sub-columns **c** of this table, and those of non-residents occurring at the Workhouse, Workhouse Infirmary, Borough Hospital, General Hospital, "Court Royal," Upper Norwood, and 89, Central Hill (Servants' Reformatory) are excluded.

Deaths of residents occurring in Public Institutions are allotted to the respective localities, according to the addresses of the deceased, but deaths of strangers at the Workhouse, Workhouse Infirmary, General Hospital, Norwood Cottage Hospital, "Court Royal," Upper Norwood, and 89, Central Hill (Servants' Reformatory), and also all deaths of Croydon residents whose exact home could not be ascertained, are included in Block 8.

TABLE III.

Cases of Infectious Disease notified during the Year 1904.

Notifiable Disease.	Cases notified in whole District.							Total Cases notified in each Locality.								No. of Cases removed to Hospital from each Locality								
		At Ages—Years.						1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	
	At all Ages.	Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 & upwd	West.	Central.	East.	South.	South Norwood.	Upper Norwood.	Thornton Heath.	Institution cases which could not be distributed.	West.	Central.	East.	South.	South Norwood.	Upper Norwood.	Thornton Heath.	Institution Cases.	Total.
Small pox	3	..	..	..	2	1	..	3	..	..	..	..	..	..	..	3	..	..	..	..	..	..	..	3
Cholera	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diphtheria	312	11	66	184	32	19	..	95	34	48	23	31	11	5	65	69	28	28	16	15	6	4	65	231
Membranous Croup ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Erysipelas	68	..	1	6	4	47	10	36	7	5	5	6	..	8	1	..	..	..	..	..	..	..	..	..
Scarlet Fever	291	4	85	154	27	21	..	61	24	105	10	44	9	26	12	47	11	80	5	32	4	22	12	213
Typhus Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Enteric Fever	21	..	1	6	7	7	..	8	1	1	3	6	1	1	..	4	1	1	2	4	..	..	..	12
Relapsing Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Continued Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Puerperal Fever ..	9	..	..	..	5	4	..	6	..	2	..	1	.	..	..	..	..	1	..	..	..	..	..	1
Plague	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.	..	..	..	..
Phthisis	129	..	1	5	26	96	1	64	9	6	14	12	..	13	11	1	..	..	..	..	..	..	..	1
Totals	833	15	154	355	103	195	11	273	75	167	55	100	21	53	89	124	40	110	23	51	10	26	77	461

The Borough (Fever) Isolation Hospital is situated in the West Ward.
The Croydon and Wimbledon (Small-pox) Isolation Hospital is at North Cheam.

TABLE IV.

Causes of, and Ages at, Deaths during Year ending December 31st, 1904, excluding Deaths of Strangers at the Workhouse, Workhouse Infirmary, Borough Hospital, General Hospital, Cottage Hospital, 89, Central Hill (Servants' Reformatory), and Court Royal Convalescent Home, South Norwood, and adding Deaths of Croydon Residents known to have occurred outside the District.

Schedule No.	Causes of Death in Croydon during the Year ending December 31st, 1904.	Deaths in whole District at Subjoined Ages.									Deaths in Localities at all Ages.							Institution and Street Deaths which could not be distributed.	Total Institution Deaths distributed and not distributed.	Inquest Cases.
		All Ages.			Under 1.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	West.	Central.	East.	South.	South Norwood.	Upper Norwood.	Thornton Heath.			
		Total.	M.	F.																
1	Small Pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2	Measles	62	28	34	18	39	5	..	..	..	25	5	4	7	10	..	6	5	13(2)	3
3	Scarlet Fever	8	6	2	..	5	3	..	..	..	2	1	4	..	1	..	..	..	9(1)	..
5	Epidemic Influenza	27	15	12	1	..	..	2	11	13	7	2	3	2	7	4	2	..	1	1
6	Whooping Cough	15	5	10	9	6	..	..	..	..	11	1	1	2	..	..	..	..	..	..
7	Diphtheria (Mem. Croup)	24	10	14	3	5	15	1	..	..	9	4	6	3	1	1	..	..	24(5)	..
8	Enteric Fever	5	4	1	..	..	1	3	1	..	2	..	..	1	1	1	..	..	3	..
10	Diarrhœa, Dysentery	68	39	29	58	6	..	..	1	3	22	6	9	11	14	1	5	..	6(4)	2
11	Epidemic Enteritis	27	14	13	25	2	..	..	..	..	5	..	1	2	8	1	10	..	..	..
12	Other Allied Diseases	1	..	1	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..
14	Glanders	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15	Tetanus	2	1	1	1	..	..	..	1	..	..	..	..	..	2	..	..	..	1	1
18	Syphilis	8	6	2	7	..	..	..	1	..	3	..	1	2	1	..	1	..	2(1)	1
19	Gonorrhœa	1	1	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	2(1)	..
20	Phagedæna	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
21	Erysipelas	2	1	1	1	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..
22	Puerperal Fever	3	..	3	..	..	..	..	3	..	1	..	2	..	..	..	..	..	3(1)	..
23	Pyæmia (Septicæmia)	4	3	1	..	..	1	1	1	1	2	..	..	1	1	..	..	..	2	2
24	Infective Endocarditis	3	2	1	..	..	..	3	..	..	1	1	..	..	1	..	..	..	1	..
25	Other Allied Diseases	11	7	4	2	1	..	..	2	6	4	..	..	..	5	..	2	..	4	1
27	Rheumatic Fever	6	1	5	..	..	3	1	2	..	3	1	1	..	1	..	..	..	1	..
28	Rheumatism of Heart	3	1	2	..	..	2	..	1	..	..	2	..	..	1	..	..	..	3(1)	..
29	Tuberculosis of Brain	27	17	10	7	13	2	..	5	..	12	1	1	3	3	2	5	..	4(1)	..
30	Tuberculosis of Larynx	1	1	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	1	..
31	Phthisis	142	77	65	3	1	3	16	112	7	57	13	7	18	20	5	12	1	52(21)	..
32	Abdominal Tuberculosis	16	6	10	8	4	..	1	3	..	6	2	1	2	2	2	1	..	10(1)	..
33	General Tuberculosis	18	7	11	2	4	1	3	8	..	9	..	1	1	3	1	2	1	9(1)	..
34	Other forms Tuberculosis	18	6	12	..	3	..	8	6	1	8	2	2	3	3	..	..	..	11(3)	..
41	Acute Alcoholism	2	2	..	..	..	..	..	2	..	1	1	..	..	..	..	..	..	3(1)	..
42	Chronic Alcoholism	3	1	2	..	..	..	..	3	..	1	..	1	..	..	..	1	..	(2)	1
45	Osteo-arthritis	7	2	5	..	..	..	..	2	5	1	..	..	1	1	1	2	1	3	1
46	Gout	5	5	..	..	..	..	..	..	5	2	2	..	..	..	1	..	..	1	..
47	Cancer	160	63	97	1	..	1	..	95	63	52	18	19	18	27	9	15	2	46(5)	2
48	Diabetes Mellitus	17	11	6	..	..	..	2	10	5	6	2	1	4	3	..	1	..	7(1)	..
49	Purpura Hæmorrhagica	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
51	Anæmia	7	4	3	..	..	..	1	5	1	..	1	2	..	1	3	..	..	1	..
52	Lymphadenoma	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
53	Premature Birth	75	44	31	75	..	..	..	..	..	30	6	9	9	11	2	7	1	2(1)	6
54	Injury at Birth	3	3	..	3	..	..	..	..	..	..	..	1	1	1	..	..	..	1	2
55	Debility at Birth	16	8	8	16	..	..	..	..	..	8	4	1	2	..	1	..	..	..	..
56	Atelectasis	4	3	1	4	..	..	..	..	..	3	..	..	..	1	..	..	..	1	..
57	Congenital Defects	10	5	5	9	..	..	1	..	..	5	..	..	..	3	..	2	..	4(2)	..
58	Want of Breast Milk	1	1	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
59	Atrophy. Debility, Marasmus	47	25	22	45	2	..	..	..	.	23	3	..	3	6	1	11	..	18(7)	..
60	Dentition	1	1	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
61	Rickets	3	1	2	1	2	..	..	..	..	..	..	..	1	1	..	1	..	1	..
62	Old Age, Senile Decay	94	29	65	..	..	..	..	..	94	26	17	11	8	18	3	8	3	38(12)	..
63	Convulsions	52	30	22	45	7	..	..	..	..	18	4	4	5	7	1	12	1	1	18
64	Meningitis	13	8	5	3	4	3	..	2	1	4	4	..	1	3	..	1	..	5(2)	..
65	Encephalitis	2	..	2	..	..	..	..	2	..	1	..	..	..	1	..	..	..	(1)	..
66	Apoplexy	15	6	9	..	..	..	..	9	6	6	2	2	1	4	..	..	..	(1)	1
67	Softening of Brain	1	..	1	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..
68	Hemiplegia	14	7	7	..	..	..	..	4	10	4	1	3	..	4	2	..	..	(1)	..
69	General Paralysis of Insane	8	7	1	..	..	..	..	7	1	1	1	..	..	3	1	1	1	5	..
70	Other forms of Insanity	12	5	7	..	..	1	1	6	4	.	5	..	3	3	..	..	1	7	..
72	Cerebral Tumour	3	2	1	..	..	..	..	3	..	..	..	1	..	..	..	2	..	3	..
73	Epilepsy	9	6	3	..	1	..	3	4	1	4	..	..	1	1	..	1	2	1(1)	4
74	Laryngismus Stridulus	3	1	2	2	1	..	..	..	..	1	1	1	..	..	..	..	..	1	..
75	Locomotor Ataxy	3	3	..	..	..	..	..	3	..	2	1	..	..	..	..	..	..	1	..
76	Paraplegia	6	2	4	..	1	..	..	1	4	2	1	1	1	..	..	..	1	3	..
77	Other forms, Brain Diseases	11	3	8	2	1	..	1	5	2	5	..	..	1	2	1	2	..	2(1)	1
78	Otitis	4	3	1	..	1	1	..	1	1	2	..	..	..	..	..	1	1	..	..
81	Pericarditis	5	2	3	..	1	2	..	2	..	2	1	.	..	1	1	..	..	3	..
82	Endocarditis	58	25	33	..	1	2	3	29	23	14	11	9	8	7	2	4	3	17(5)	2
83	Hypertrophy of Heart	1	1	..	..	..	..	..	1	..	..	..	1	.	..	..	..	..	1	..
84	Angina Pectoris	7	4	3	..	..	..	1	2	4	..	1	1	2	1	2	..	..	1	2
85	Aneurism	10	9	1	..	..	..	..	8	2	5	..	1	1	3	..	..	..	..	3
86	Senile Gangrene	8	4	4	..	..	..	..	2	6	3	..	1	1	..	1	1	1	8(2)	..
87	Embolism Thrombosis	12	2	10	..	1	..	..	6	5	4	1	..	1	1	3	1	1 1	3	..
89	Varicose Veins	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	1

TABLE IV—*continued.*

Causes of, and Ages at, Death during Year ending December 31st, 1904.

Schedule No.	Causes of Death in Croydon during the Year ending December 31st, 1904.	Deaths in whole District at subjoined Ages.									Deaths in Localities at all Ages.							Institution and Street Deaths which could not be distributed.	Total Institution Deaths distributed and not distributed.	Inquest Cases
		All Ages.			Under 1.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	West.	Central.	East.	South.	South Norwood.	Upper Norwood.	Thornton Heath.			
		Total.	M.	F.																
90	Other Diseases, Heart and Vessels	162	66	96	..	..	1	2	70	89	53	24	8	19	27	12	12	7	65(12)	23
91	Laryngitis	4	3	1	2	1	1	..	..	..	..	..	1	..	2	..	1	..	..	..
92	Croup	2	1	1	1	1	..	..	..	..	..	..	.	2	..	..	..	..	..	..
94	Acute Bronchitis	64	45	19	36	10	..	..	3	15	23	11	7	5	12	2	4	..	6(1)	8
95	Chronic Bronchitis	111	46	65	..	1	..	..	23	87	42	22	7	9	16	..	10	5	20(7)	2
96	Lobar Pneumonia	20	13	7	1	2	4	..	10	3	9	1	1	5	3	..	1	..	5(1)	..
97	Lobular Pneumonia	53	31	22	25	15	1	..	3	9	23	6	4	5	4	5	5	1	12(5)	1
98	Pneumonia	51	23	28	6	5	1	4	26	9	16	8	5	8	5	3	6	..	13(5)	1
99	Emphysema, Asthma	7	4	3	..	..	..	..	4	3	1	1	2	1	1	..	1	..	..	..
100	Pleurisy	8	4	4	..	..	1	1	5	1	3	1	1	1	..	..	1	1	3	2
102	Diseases of Mouth and Annexa	3	1	2	..	1	..	..	..	2	1	..	..	1	1	..	..	..	..	..
105	Ulcer of Stomach and Duodenum	10	6	4	..	..	..	1	8	1	6	..	1	1	1	..	1	..	6(3)	1
106	Other Diseases of Stomach	11	7	4	8	1	..	..	2	..	5	3	1	1	1	..	..	..	1	..
107	Enteritis	35	24	11	25	3	1	1	..	5	13	3	7	6	2	1	3	..	5(3)	..
108	Appendicitis	8	3	5	..	1	..	3	2	2	3	1	..	3	..	1	..	..	4(2)	..
109	Obstruction of Intestine	18	6	12	7	..	..	..	7	4	4	2	2	4	3	1	1	1	16(4)	2
111	Cirrhosis of Liver	16	8	8	..	..	..	..	14	2	4	1	3	3	4	..	1	..	6(1)	..
112	Other Diseases of Liver	13	3	10	1	3	..	..	7	2	5	2	3	1	1	1	..	..	2	..
113	Peritonitis	8	5	3	1	..	..	1	5	1	3	..	1	..	1	2	1	..	4	..
114	Other Diseases, Digestive System	5	4	1	..	..	..	..	4	1	1	1	..	1	2	..	..	..	1	2
116	Acute Nephritis	15	7	8	..	..	1	2	8	4	4	2	2	..	4	1	1	1	2(1)	2
117	Bright's Disease	46	22	24	..	..	..	1	25	20	18	3	7	6	3	2	6	1	13(3)	2
118	Calculus	1	1	..	..	..	..	..	..	1	.	..	..	..	1	..	..	..	..	..
119	Diseases of Bladder and Prostrate	11	10	1	..	..	..	..	3	8	1	..	1	4	3	..	2	..	2	..
120	Other Diseases, Urinary System	2	2	..	..	..	..	..	1	1	1	1	..	..	..	..	..	..	1	..
121	Diseases of Testis & Penis	1	1	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	1	..
122	Diseases of Ovaries	2	..	2	..	..	..	..	2	..	..	1	..	..	..	..	1	..	..	..
123	Diseases of Uterus and Appendages	2	..	2	..	..	..	..	2	..	..	..	1	1	..	..	..	..	(4)	..
126	Abortion, Miscarriage	2	..	2	..	..	..	..	2	..	1	..	..	..	..	..	1	..	..	..
128	Puerperal Convulsions	1	..	1	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..
129	Placenta Prævia Flooding	2	..	2	..	..	..	..	2	..	1	..	..	..	..	1	..	..	..	..
131	Other Diseases, Pregnancy and Childbirth	2	..	2	1	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..
134	Ulcer, Bedsore	3	2	1	..	..	..	..	2	1	1	1	..	..	..	..	1	..	2	..
135	Eczema	2	..	2	1	..	..	..	..	1	..	..	1	..	1	..	..	..	..	..
136	Pemphigus	1	1	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	1	..
	Accidents.																			
139	In Vehicular Traffic	8	7	1	..	1	2	1	4	..	4	..	..	1	1	..	2	..	8(2)	8
140	On Railways	4	3	1	..	..	..	..	4	..	1	..	2	..	1	..	..	..	2	4
142	In Building Operations	1	1	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	2(1)	1
143	By Machinery	1	1	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	1	1
145	Burns and Scalds	8	1	7	..	3	1	1	1	2	2	1	1	1	2	..	..	1	4(1)	8
146	Poisons, Poisonous Vapours	2	2	..	..	1	1	..	..	..	2	..	..	..	..	..	..	..	..	2
150	Drowning	2	1	1	..	1	1	..	..	..	..	1	1	..	..	..	..	..	..	2
151	Suffocation, Overlaid in Bed	10	6	4	10	..	..	..	..	..	3	..	1	..	2	1	3	..	..	10
152	,, Otherwise	1	1	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	1
153	Falls not specified	12	6	6	2	2	..	..	1	7	7	1	..	..	1	..	2	1	5(2)	12
154	Weather Agencies	1	..	1	1	..	..	..	..	1	1	..	..	..	..	..	..	..	(1)	1
155	Otherwise, not stated	2	2	..	1	..	..	..	1	..	1	..	..	1	..	..	..	..	1	2
156	Homicide	1	1	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
	Suicides.																			
157	By Poison	6	3	3	..	..	..	1	5	..	2	..	..	2	..	..	2	..	2	6
159	By Hanging and Strangulation	4	4	..	..	..	..	..	4	..	.	..	2	..	1	1	..	..	..	4
161	By Shooting	1	1	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	(1)	1
162	By Cut or Stab	4	1	3	..	..	..	..	3	1		1	1	..	1	..	..	..	2	4
163	By Precipitation from Elevated Places	1	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	1	1
164	By Crushing	1	..	1	..	..		..	1	..	..	..	1	..	..	..	..	..	..	1
165	By other and unspecified methods	2	2	..	..	..	..	..	2	..	..	..	..	1	1	..	..	..	1	2
168	Ill-defined and unspecified causes	9	2	7	1	..	..	..	4	4	3	..	1	1	2	..	2	..	3	4
	Total	1008	991	1007	483	165	62	72	653	563	699	229	193	227	322	90	192	46	598 (148)	177

The total Institution Deaths include those of strangers occurring within the Borough Deaths of such strangers occurring at the Workhouse, Workhouse Infirmary, General Hospital, Cottage Hospital, Borough Hospital, 89, Central Hill (Servants' Reformatory), and Court Royal Convalescent Home, South Norwood Hill, are excluded from all other columns of the Table. The numbers so excluded are in brackets.

TABLE V.

Table showing the number of cases notified and deaths from the principal zymotic diseases for the Year 1904 and ten preceding Years.

	Disease.	1904.		1903.		1902.		1901.		1900.		1899.		1898.		1897.		1896.		1895.		1894.	
		Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Notifiable.	Small Pox	3	..	14	2	51	11	5	..	1	..	..	..	..	..	..	..	1	..	..	..	6	..
	Scarlet Fever	291	8	215	2	295	6	391	1	432	5	350	3	301	..	563	13	284	4	157	4	298	8
	Diphtheria and (1) Memb. Croup	312	24	259	8	285	29	448	23	187	25	127	19	162	19	135	7	172	30	132	22	161	32
	(2) Erysipelas	68	2	79	4	102	5	79	4	71	6	..	7	..	6	..	4	..	11	..	5	..	4
	Puerperal Fever	9	3	7	1	8	5	9	3	12	8	7	4	6	5	9	1	6	4	6	6	3	8
	Enteric Fever	21	5	32	5	59	9	57	11	56	9	56	8	64	9	50	7	108	17	43	15	57	7
	Simple Continued Fever ..	..	..	2	..	5	..	..	..	4	..	1	1	2	1	1	..	12	..	4	..	2	..
Non-notifiable.	Diarrhœa and Epidemic or Zymotic Enteritis	..	95	..	37	..	73	..	129	..	88	..	195	..	200	..	127	..	72	..	64	..	23
	Enteritis	..	35	..	14	..	17	..	37	..	25	..	1	..	6	..	12	..	7	..	45	..	8
	Measles	..	62	..	26	..	30	..	21	..	20	..	18	..	32	..	17	..	67	..	16	..	43
	Whooping Cough	..	15	..	58	..	31	..	25	..	56	..	40	..	36	..	32	..	62	..	27	..	63
	Influenza	..	27	..	28	..	58	..	37	..	106	..	91	..	39	..	20	..	18	..	78	..	25
	Bronchitis, Pneumonia, and Pleurisy	..	314	..	247	..	331	..	283	..	354	..	309	..	232	..	190	..	309	..	298	..	259
	Phthisis	..	142	..	151	..	112	..	123	..	135	..	154	..	133	..	115	..	140	..	149	..	126

(1) Notifiable since May, 1897. (2) Notifiable since January, 1900.

In the above Table deaths of Non-residents occurring at the Workhouse, Workhouse Infirmary, Borough Hospital, General Hospital, "Court Royal," Upper Norwood, and "89, Central Hill" (Servants' Reformatory), are excluded. Prior to 1903 correction was only made for the first three institutions.

B.—SANITARY WORK OF THE YEAR.

GENERAL SANITARY WORK.—This is summarised in Table VI. which gives a fair idea of the various matters coming within the cognizance of the Public Health Department.

During the year, 5,816 house-to-house inspections were made, as compared with 3,293 in 1903. This is a considerable increase and was accounted for by the appointment of two additional inspectors in March. Further reference to Table VI. will show that more work was done by the sanitary inspectors in nearly every direction and resulted in the discovery of 9,455 nuisances, as compared with 6,781 in 1903. House drains still continue to be re-tested after completion as well as during re-construction.

The number of combined drains dealt with during the year was 18. The cost of carrying out the necessary works amounted to about £314 10s. 2d., and was borne by the owners instead of by the inhabitants at large.

Most of the nuisances discovered were remedied on receipt of informal notices, but in 274 cases, Council Orders had to be applied for. Of the 274 legal notices, 231 were complied with, and 43 were outstanding at the end of the year. Of the 43 outstanding Council Orders, 37 have now been complied with (March 31st, 1905).

No prosecution had to be undertaken for non-compliance with ordinary nuisance notices.

MUNICIPAL COMMON LODGING HOUSE.—This Lodging House affords accommodation for 17 women and 84 men. The number of occupants during the year amounted to 24,325 men and 4,473 women. The average number of lodgers amounted to 67 men and 12 women per night.

The receipts and expenditure (exclusive of sinking fund and interest) for the past three years were :—

	Receipts. £ s. d.	Expenditure.
1902 ...	766 0 0	... £734, including £68 for alterations.
1903 ...	790 0 0	... £570.
1904 ...	800 17 7	... £679 1s. 6d.

OTHER COMMON LODGING HOUSES.—There are nine other houses on the register.

The following Table gives the situation of the nine registered houses and the accommodation provided therein.

Premises	No. of Rooms.	Accommodation.
11 & 12, Princess Road ..	12 ..	54 men and 8 married couples.
9, Bell Yard ..	6 ..	14 men and 5 married couples.
19, 20, 21, 22, 23 & 24, Lahore Road ..	30 ..	50 men, 10 women, and 6 married couples.

Nos. 19 to 24, Lahore Road,—These houses are under one management and worked as one establishment, as also are Nos. 11 and 12, Princess Road. Practically, therefore, only three common lodging houses now remain in the Borough, with a total accommodation for 166 adults, or if we add the Municipal Common Lodging House, a total of four houses with 229 single beds and 19 double beds. The number is 57 less than in 1902, and in my opinion not sufficient for the needs of the town. There is indeed little doubt that other unregistered houses are really used as common lodging houses. During the year the tenant of No. 48, Union Street, was convicted for keeping an unregistered house, and was fined £5 and £3 15s. 6d. costs. There is still urgent need for additional accommodation in the neighbourhood of Old Town, though the Committee have not yet seen their way to make the necessary provision, and private enterprise shows no signs of doing so.

During the year common lodging houses received 437 visits and 9 night visits.

Minor infringements of bye-laws were detected on 12 occasions, but in no case were they sufficiently serious for legal proceedings to be taken.

HOUSES LET IN LODGINGS.—There are now 73 houses registered under the bye-laws. During the year these houses received 1,783 visits, 14 having been visited at midnight. On no occasion were offences discovered for which prosecutions were necessary.

At the present moment the following houses are registered as houses let in lodgings:—

	Houses.
Wilford Road	43
Forster Road	12
Princess Road	4
Ely Road	8
Sundry Roads	6

The results of registration and inspection have, on the whole, been very satisfactory.

HOUSING OF THE WORKING CLASSES ACT.—Five houses were represented under Part II. Sect. 30, as unfit for human habitashon. One was converted from a dwelling house into a lock-up tiop, one was closed and the remaining three are in abeyance.

The six houses in Mercer Place, Gloucester Road, are still outstanding though they were represented in May, 1903, and the necessary resolution for closure was then passed by the Council. Owing to legal difficulties the matter has been in abeyance until the present time, though summonses have now been applied for and the case comes on for hearing on April 11th, 1905.

FACTORIES AND WORKSHOPS.

FACTORY AND WORKSHOP ACT.—Section 132 of the Factory and Workshop Act, 1901, provides:

> "The Medical Officer of Health of every District Council, shall, in his Annual Report to them, report specifically on the administration of this Act in workshops and workplaces, and he shall send a copy of his Annual Report, or so much of it as deals with this subject, to the Secretary of State."

The following is a summary of the work done under this Act, in Croydon during 1904.

FACTORIES.—For the most part the law relating to Factories is administered by the Home Office. Seventy-nine visits were, however, made to Factories, one being for the purpose of ascertaining the means of escape in case of fire, 65 being in reference to sanitary accommodation, 10 in reference to smoke nuisances, and three in order to ascertain whether the premises came within the meaning of the Act. All the defects noted were remedied during the year.

WORKSHOPS.—The number of workshops on the register, the various trades carried on therein, the number of workpeople employed, and the number of visits paid by the Inspector, are shown in table VII.

The following is a list of the various matters requiring attention :—

	Factories.	Workshops	Laundries	Bake-houses.	Work-places.	Out-workers.	Total.
Premises requiring repair	—	2	1	3	—	—	6
Cleansing, etc.	—	10	2	14	4	—	30
Insufficient W.C. accommodation	1	6	—	—	—	—	7
Defective ditto	7	16	5	9	5	2	44
Eaves and gutters ..	—	1	—	2	1	—	4
Ventilation	—	1	—	1	—	—	2
Dustbins	1	1	2	10	5	—	19
Paving	—	1	—	2	1	—	4
Offensive Accummulation	—	—	—	3	1	—	4
Animals improperly left ..	—	—	—	1	1	—	2
Stoppages	—	1	—	1	—	—	2
Manure receptacles ..	1	—	—	—	—	—	1
	10	39	10	46	18	2	125

Notices served—

Factories	6
Workshops	34
Laundries	8
Bakehouses	37
Workplaces	16
Outworkers	2
	103

All were remedied during the year with the exception of four, which have since been complied with (February, 1905).

Forty-seven notices were sent to H.M. Inspector of Factories in accordance with the various requirements of the Act.

HOME WORK.—Ninety-four lists were received from employers, containing the names of 115 outworkers residing in the Borough. Nineteen further names were received from Medical Officers of Health of various neighbouring districts, and the names of 32 outworkers residing outside the Borough were similarly despatched to the Medical Officer of Health for the district concerned.

Seventy-nine visits were paid to outworkers.

BAKEHOUSES.—At the end of the year there were 125 Bakehouses in occupation, of which 12 were underground. 681 visits were made by the Inspector during the year, and 46 nuisances discovered and abated.

During 1904 considerable attention has been paid to the sanitation of ground floor bakehouses. Though the powers possessed by the sanitary authority are not so stringent as in the case of underground bakehouses it is hoped that by constant pressure the hygiene of all bakehouses may be raised to a high level. In addition to numerous minor improvements effected during the year the condition of 15 out of the 113 overground bakehouses has been substantially improved.

WORKPLACES.—At the end of the year there were 67 workplaces on the register. 118 visits to eating-house kitchens have been made, and 16 notices served for the cleansing of walls and ceilings and minor repairs, all of which have been complied with.

SHOP HOURS AND SEATS IN SHOPS ACTS entailed 139 visits and resulted in the discovery of eight infringements of the Acts. Written cautions were sent to eight offenders and subsequently complied with.

OFFENSIVE TRADES.—Only two such trades are now carried on in the Borough, viz., one by a knacker and one by a gut scraper. Both have been visited from time to time during the year, and found in a satisfactory condition.

SMOKE NUISANCES.—Fifty-five observations were made and six persons were cautioned.

DAIRIES AND COWSHEDS.—There were 44 cowsheds on the register at the end of the year, of which 32 were in occupation, as against 44 sheds and 40 in occupation in 1903. The registered cowsheds provide accommodation for 673 cows, with [illegible] per head. The number of cows in the registered sheds in December was 469.

The number of Cowkeepers in the Borough is now 22, as compared with 25 in 1903.

During the year 11 dairies were removed from and 39 added to the register, leaving 193 on the register at the end of the year.

Five applications for registration were refused, as the premises were unsuitable.

Twenty six notices were served during the year for various matters requiring attention on the premises of dairymen, 24 of these were complied with, while two were outstanding at the end of the year, but have since been complied with.

ICE CREAM VENDORS.—All premises where ice cream was known to be made were regularly visited during the season. All were found in a fairly satisfactory condition, and there was no occasion to serve any notices during the year.

MEAT AND FOOD.—The following is a summary of the meat and other articles of food destroyed as unfit for consumption during the year.

ARTICLES.	Weight in lbs.			Remarks.
	Diseased.	Unsound.	Total.	
Beef	3,842	3,374	7,216	Including 7 carcases.
Mutton	68	1,963	2,031	,, 23 ,,
Pork	3,866	216	4,082	,, 24 ,,
Veal	284	—	284	,, 4 ,,
Offal	4,349	839	5,188	
Fish	..	254	254	
Fruit	..	80	80	
Other Articles ..	..	1,086	1,086	
Total lbs. ..	12,409	7,812	20,221	Including 58 carcases.

The whole carcases condemned were affected as undernoted :—

	Tuber-culosis.	Periton-itis.	Neph-ritis.	Jaundice.	Pneu-monia.	Diarrhœa	Emaci-ated and Dropsical	Unsound and Bruised.	Total No.	Weight in lbs.
Cattle .	3	2	..	..	..	..	1	1	7	3,652
Sheep ..	..	..	..	..	..	..	2	21	23	1,380
Pigs ..	19	..	2	..	1	..	..	2	24	3,408
Calves ..	1	..	..	1	..	2	..	..	4	284
	23	2	2	1	1	2	3	24	58	8,724

SLAUGHTERHOUSES.—There are 17 registered Slaughterhouses and one licensed Slaughterhouse, in addition to the Municipal Slaughterhouses at Pitlake.

The following are the approximate number of animals slaughtered at Pitlake :—

Municipal.	Beasts.	Sheep.	Pigs.	Calves.	Total.
Private Slaughterhouses ...	440	5,784	23,505	1,649	31 438
Public ,, ...	288	696	810	241	1,975
Total	728	6 480	24,315	1,890	33 413

The visits paid by Inspector Low in connection with the milk and meat trades are shown in the following Table :—

No. of Inspections.

Nature of Premises.	Ward.						Total
	West.	Central.	East.	South.	S. Nor.	U. Nor.	
Slaughter-houses	450	417	15	319	75	83	1359
Butchers	159	234	11	82	104	29	619
Fishmongers	12	62	7	24	25	3	133
Markets	..	49	..	49	..	..	98
Cowkeepers	123	25	43	82	34	66	373
Milk Purveyors	200	50	62	76	86	122	596
Total	944	837	138	632	324	303	3178

FOOD AND DRUGS ACTS.—Table VIII gives the number of samples taken by Mr. Saunders during the year, the results of the analyses and the action taken thereon.

PROSECUTIONS:—

1 vendor was prosecuted for carrying on the business of a purveyor of milk without being registered, and for selling separated milk containing 26 per cent. of added water, and was fined £1 and 6/6 costs.

1 vendor was prosecuted for selling milk 19 per cent. deficient in fat, and was fined £2 and 8/6 costs.

1 vendor was prosecuted for selling skimmed milk containing 60 per cent. of added water, and was fined £1 and 6/6 costs.

1 vendor was prosecuted for selling coffee containing about 80 per cent. of chicory, and was fined £2 and 7/6 costs.

1 vendor was prosecuted for selling butter containing 89 per cent. of foreign fat, and was convicted and fined £5 and 7/6 costs.

1 vendor was prosecuted for selling brandy being only 45·9 of ethers per 100,000 c.c. absolute alcohol, and also being 32 degrees below proof. He was fined £5 and £12 18/6 costs.

In 16 cases where the samples of milk were slightly below the Standard fixed by the Board of Agriculture, the vendors were written to calling their attention to the fact, and asking for some explanation, further samples being taken subsequently.

Of these 16 samples, 7 contained an average excess of water to the extent of an average of 6 per cent, whilst 9 were deficient in fat to the extent of an average of 7 per cent.

Two samples of milk were found to contain a small quantity of Boric Acid.

The following table has been prepared from figures kindly supplied by the Borough Analyst (Mr. Lester Reed):—

Total Number of Samples of Milk collected and percentage below standard.

1904.

	No. of Samples.	No. below Standard.	Percentage of Samples below Standard.	Average percentage of fat of Genuine Samples.
Wholesale taken in course of delivery at Railway Station. **New Milk.**	68	4	5·9	3·8
Wholesale taken in course of delivery at Railway Station. **Separated Milk.**	4	1	25·0	—
Retail taken on Milkmen's rounds. Sunday morning. **New Milk.** ..	40	12	30·0	3·6
Retail taken on Milkmen's rounds. Sunday morning. **Separated Milk.**	—	—	—	—
Retail taken on Milkmen's rounds. Week day. **New Milk.**	40	5	12·5	3·5
Retail taken on Milkmen's rounds. Week day. **Separated Milk.** ..	5	4	80·0	—

REFUSE COLLECTION AND DISPOSAL.—During the year the weekly collection of house refuse has been maintained, and the daily collection has been slightly extended, while Lodging Houses, Schools, and other large establishments are cleared twice or three times a week.

The refuse collected during the year consisted of

	Loads.
House Refuse	30 416
Trade ,, ...	906
Garden ,, ...	224
	31,546

this was tipped

At Factory Lane	14,023
At various brick yards	10,348
At Pawson's Road and other places to raise low lying ground for allotments and other gardens	7,175
	31,546

HEALTH VISITORS.—The following is a summary of the work done and visits paid by the three Health Visitors.

Visits to Houses where the following Diseases have been reported.	Miss Eggleston.				Mrs. Nolan-Slaney.				Miss Barritt.				Totals.			
	School Cases.		Other Cases.		School Cases.		Other Cases.		School Cases.		Other Cases.		School Cases.		Other Cases.	
	1st Visits.	2nd Visits.	1st Visits.	2nd Visits.	1st Visits.	2nd V sits.	1st Visits.	2nd Visits.	1st Visits.	2nd Visits.	1st Visits.	2nd Visits.	1st Visits.	2nd Visits.	1st Visits.	2nd Visits.
Measles	504	484	..	..	430	663	..	2	434	525	43	30	1368	1672	42	32
German Measles	14	4	..	..	2	3	..	..	5	2	..	..	21	9	..	..
Sore Throat	102	62	83	35	90	167	4	4	232	273	38	15	424	502	125	54
Whooping Cough	81	89	..	..	62	133	..	..	120	107	11	9	263	329	11	9
Chicken-pox	99	32	..	..	98	132	1	..	93	55	3	..	290	219	4	..
Ringworm	162	286	2	10	114	299	4	5	148	225	28	13	424	810	34	28
Mumps	121	67	..	4	128	154	1	..	228	233	21	13	477	454	22	17
Other diseases	267	295	98	55	202	474	61	97	380	249	186	106	849	1018	345	258
Total	1350	1319	183	104	1126	2025	71	108	1640	1669	330	186	4116	5013	584	398
	1st Visits.		d Visits.		1st Visits.		2nd Visits.		1st Visits.		2nd Visits.		1st Visits.		2nd Visits.	
Visits to houses where Infants have been born	1279		523		920		1060		457		342		2656		1925	
Addresses given re Infant feeding, etc.	25		..		26		..		23		..		74		..	
Visits to houses where Infants have died under one year of age	203		41		146		39		83		1		432		81	

HEALTH LECTURES.—In August, 1904, and in accordance with the precedent of 1903, the following circular letter was addressed to those responsible for the organisation of the various "Mothers' Meetings" held in the Borough—

31st August 1904.

DEAR SIR OR MADAM,

During last winter a number of short addresses on Domestic Hygiene, with special reference to the Care of Infants, were given in connection with various organizations in the borough.

Similar arrangements will be made for the coming winter, and I should be glad to hear whether you would wish me to arrange for such addresses to be delivered at your Mothers' Meetings or similar gatherings.

It is proposed that the addresses should be given in sets of three, and that each should last for about half-an-hour.

An early reply on the accompanying form will oblige,

Yours faithfully,

H. MEREDITH RICHARDS, M.D.,
Medical Officer of Health.

I am pleased to say that the suggestion was again very favourably received, and sixty addresses were arranged to be given between November, 1904, and April, 1905. Attendances have been very satisfactory, amounting to as many as 300 on some occasions. General satisfaction has been expressed at the way in which the Health Visitors performed their task. As far as possible, three talks or lectures were given at each place of meeting.

TABLE VI.

Work done by the Drainage and Sanitary Inspectors during the Year ending December 31st, 1904.

NATURE OF CASES DEALT WITH.	Insp. Culver.	Insp. Earwicker	Insp. Peck.	Ins. Richardson	Insp. Stanley.	Insp. Bull.	Insp. Adams.	Insp Fulker.	Insp. Vincent.	Insp. Hunter.	Insp. Stokes.	TOTAL.
House to House Inspection	247	153	175	424	..	..	830	393	1182	1004	1408	5816
Visits to houses where zymotic diseases have occurred	..	..	..	..	..	..	..	943	1	18	..	962
Inspection of Premises where offensive trades are conducted	..	..	..	..	..	..	..	..	4	..	..	4
Inspections of Factories, Workshops and Outworkers..	..	..	..	..	..	816	..	..	..	..	..	816
,, ,, Greengrocers, Fishmongers & Ice Cream Shops	..	..	..	177	..	..	1489	1	470	339	425	2901
,, ,, Schools..	..	..	..	..	..	..	..	216	..	..	..	216
,, ,, Shops	..	..	..	..	..	139	..	..	..	..	..	139
,, ,, Bakehouses	..	..	..	..	..	681	..	..	..	..	..	681
,, ,, Yards and Stables	..	..	..	381	..	.	1228	..	1311	896	1252	5068
,, ,, Common Lodging Houses ..	..	..	..	..	..	437	..	..	..	..	..	437
,, ,, ,, (night visits)	..	..	..	..	..	9	..	..	9	..	..	18
,, ,, Houses let in Lodgings ..	..	..	..	..	..	737	..	..	1046	..	..	1783
,, ,, ,, ,, (night visits	..	..	..	..	..	14	..	..	14	..	..	28
,, ,, Urinals..	..	..	..	406	..	..	1402	..	1048	678	1287	4821
Smoke observations	..	..	..	..	..	50	..	..	..	..	..	50
House drains tested with smoke	172	423	306	454	..	..	11	223	161	122	407	2279
,, ,, ,, water	488	813	666	704	..	..	..	..	12	..	..	2683
,, ,, on application	85	83	70	76	..	..	..	..	4	..	..	318
Re-inspections of work in progress	927	1006	1025	1023	..	..	1041	290	1269	1305	1003	8889
Sundry inspections	524	148	340	207	..	181	173	49	160	55	210	2047
Complaints from public investigated ..	..	..	..	34	..	..	178	2	158	158	73	603
Houses disinfected	..	..	..	..	605	..	..	..	..	..	..	605
Lots of clothing and bedding disinfected ..	..	..	..	..	689	..	..	..	..	..	..	689
NUISANCES DISCOVERED.												
Premises requiring repair	..	..	..	90	..	11	349	31	185	376	168	1210
,, ,, Cleansing and Whitewashing	..	..	..	55	82	37	333	67	173	360	190	1297
,, Overcrowded	..	..	..	3	..	6	5	2	13	1	10	40
Drains found defective	281	173	135	104	..	..		39	35	25	128	920
,, ,, stopped	57	62	40	65	..	17	66	15	118	53	52	545
,, re-laid	102	165	124	120	..	..	..	..	..	..	..	511
,, repaired	46	161	109	35	..	..	..	..	..	..	..	351
Defective Sanitary Fittings	278	111	95	181	..	96	133	47	182	194	173	1490
,, Yard Surfaces	167	121	66	157	..	8	130	20	147	151	244	1211
,, Eaves and Downspouts	125	83	37	68	..	9	10	25	66	70	95	588
,, Manure Receptacles	..	..	..	1	..	1	..	..	5	..	16	23
,, Urinals	..	..	..	26	..	..	53	..	9	2	18	108
,, Ashbins	26	6	20	95	..	20	149	25	116	194	199	850
Smoke Nuisances	..	..	..	..	..	12	..	1	..		..	13
Animals improperly kept	..	..	..	4	..	2	10	1	1	5	8	31
Infringements of Bye-laws and Regulations	..	..	..	1	..	21	..	..	..	3	6	31
Offensive Accumulations	..	..	..	5	..	17	3	3	37	4	15	84
Sundry other Nuisances	8	1	5	9	..	78	9	27	9	..	6	152
Total number of Nuisances	1090	883	631	1019	82	335	1250	303	1096	1438	1328	9455
Informal Notices served	190	61	132	319	82	117	235	93	338	574	469	2610
Informal Notices complied with ..	103	33	139	289	82	124	252	127	407	639	480	2675*
In abeyance	8	24	13	64	..	4	14	11	38	44	16	236
Referred to Committee	30	18	27	66	..	4	17	3	96	13	..	274

* Including 171 from the year 1903.

TABLE VII.

Workshops on Register, number of Employees, and visits paid during the year.

TRADE.	No. of Workshops.	No. of Employees.	No. of Visits.
Bottlewashers	4	4	2
Brushmaker	1	2	1
Brass Works	1	3	17
Builder	1	15	1
Blacksmiths	2	4	2
Blind Makers	3	7	3
Baking Powder Manufacturer ..	1	4	11
Bootmakers	8	16	9
Cabinet Makers	3	8	13
Carriage Builders	7	74	21
Confectioner	1	5	1
Collar Maker	1	10	1
Cycle Makers	7	16	8
Dressmakers	125	622	155
Dentist		4	1
Dye Works..	1	5	1
Glass Works	2	7	5
Ironmongers	6	31	6
Laundries	54	316	90
Ladder Makers	6	20	11
Milliners	28	120	25
Modeller	1	3	10
Naturalist	1	3	1
Photographers	7	32	12
Plumbers	1	2	2
Pill Makers	1	6	1
Picture Frame Makers	7	20	6
Sign Writers	1	7	1
Saddlers	6	22	7
Stonemasons	2	15	2
Scale Makers	1	3	1
Shop Fitters	1	2	1
Tin Works	1	8	2
Tailors	23	74	43
Tyre Maker	1	1	1
Umbrella Makers	3	8	4
Upholsterers	16	34	14
Varnish Works	1	2	1
Woodchopper	1	2	1
Wig Makers	2	4	5
Wheelwrights	7	29	41
Total	347	1570	540

TABLE VIII.

Food and Drugs Act.

Total number of Samples taken during the Year 1904.

Sample of	Total Samples.	Genuine.	Not Genuine.	Prosecutions.	Convictions.	Cautions
Milk	†148	126	22	1	1	13
Separated Milk	9	4	5	2	2	3
Butter	115	113	2	1	1	1
Margarine	12	11	1	..	..	1
Lard	3	3	..	..	..	..
Cheese	6	6	..	..	..	..
Bread	6	6	..	..	..	..
Coffee	44	43	1	1	1	..
Pepper	3	3	..	..	..	..
Preserved Peas	3	1	2	..	..	..
Brandy	5	1	4	1	1	4
Totals ..	354	317	37	6	6	22

† Country Milk taken in course of delivery at Railway Stations 72

† Sunday morning taken on Milkmen's rounds 40

† Week-day taken on Milkmen's rounds 45

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TABLE IX.

METEOROLOGICAL RECORD—YEAR 1904.

Rain Gauge 5-in. in diameter, 1-ft. above ground, 146-ft. above sea level. Temperature taken in the shade of a Stevenson's Screen, 4-ft. from the ground. The Ground Thermometer is suspended in an iron tube, the bulb being 4-ft. below the level of the ground.

Months.	Temperature of Air during the Month.				Mean Temperature of Air.	Difference from average 50 years at Greenwich.	Mean Temperature of Ground at 4-ft.	Mean Temperature of the Dew Point.	Mean Tensional Differen e between Ground and Dew Point at 9 a.m. and 3 p.m.	Rainfall.		
			Mean of							No. of Days on which Rain fell.	Amount collected in Inches.	Difference from average 85 years at Greenwich
	Highest.	Lowest.	All Highest.	All Lowest.								
									in		in.	in.
January ..	54°	21°	43°·3	33°·9	38°·6	+ 0°·1	41°·9	37°·7	0·040	20	3·64	+ 1·77
February..	53°	28°	44°·2	34°.8	39°·0	— 0°·5	41°·8	36°·8	·047	19	2·94	+ 1·34
March ..	58°	27°	47°·5	35°·0	41° 2	— 0°·5	41°·1	37°·7	·032	15	1·61	+ ·07
April ..	69°	34°	58°·5	42°·4	50°·4	+ 3°·2	45°·2	42°·6	·029	10	1·29	— ·35
May ..	76°	35°	62°·3	46°·7	54°·5	+ 1°·4	49°·5	48°·4	·015	17	2·45	+ ·48
June ..	81°	45°	68°·5	49°·5	59°·0	— 0°·4	54°·5	52°·0	·037	8	·80	— 1·15
July ..	88°	50°	77°·0	55°·7	66°·3	+ 3°·8	59°·6	56°·9	·047	9	1·26	— 1·04
August ..	90°	44°	73°·5	52°·4	62°·9	+ 1°·3	60°·7	55°·5	·090	8	1·68	— ·62
September	76°	38°	65°·3	47°·1	56°·2	— 1°·0	56°·8	52°·0	·074	12	1·23	— 1·07
October ..	66°	31°	57°·4	44°·2	50°·8	+ 0°·8	52°·4	48°·5	·052	14	2·06	— ·71
November	58°	22°	47°·9	36°·1	42°·0	— 1°·2	48°·9	40°·2	·097	12	1·52	— ·83
December	55°	23°	46°·1	33°·1	39°·6	— 0°·1	44°·2	38°·8	0·054	18	2·52	+ ·57
Means and Totals for the Year.	90°	21°	57°·6	42°·6	50°·1	+ 0°·6	49°·7	45°·6	0·051	162	23·00	

The Rainfall for the Year was 2·84 inches *below*, and the number of days on which rain fell 2 *above* the average of 39 years at Croydon.

GEO. CORDEN, F.R. Met. Soc.
Croydon.

C.—REPORT TO THE EDUCATION COMMITTEE.

In October, 1902, I was appointed Medical Adviser to the late School Board. This appointment was confirmed by the Education Committee and Council in January, 1904, and the duties of the office were at the same time defined as follows :—

(*a*) To visit each School at least once a year, and report in writing as to the sanitary condition of the premises, and the general health of the scholars, and to attend, when required, any meetings of the Education Committee or Sub-Committees.

(*b*) To examine blind, deaf, and defective children, to decide whether they are suitable cases to be dealt with under the Act, and to give the necessary certificates.

(*c*) When required, to examine any plans for new buildings, of alteration of existing buildings, and to report as to the sanitary arrangements, ventilation, lighting, etc.

(*d*) When required by the Committee, to examine medically all candidates selected for appointment under the Committee, pupil teachers or employees, and to make out certificates.

(*e*) To examine truant children before their despatch to truant schools.

(*f*) To visit, when required by the Committee, any employee who is absent from duty on account of illness, and to report in writing.

(*g*) To examine, when required by the Committee, any child who is stated to be physically unfit to attend school, and make out a certificate.

(*h*) To advise the Committee on special occasions when required.

The following is a brief summary of the work done in connection with the schools during the year. The summary, however, is incomplete for two reasons. First, because much of the work done in connection with notifiable diseases, though really a matter of school hygiene, has already been dealt with in the first section of this report. Secondly, because many consultations with head teachers and attendance officers dealt with a variety of subjects that cannot well be tabulated in the annual report.

SCHOOL BUILDINGS.—Each school was visited at least once and most of them several times during the year. The majority of inspections related to non-provided schools concerning which a conjoint report was presented during the year. No detailed reports

have been submitted respecting provided schools, though the attention of the Surveyor was called to minor matters that appeared to require alteration or amendment. During 1905 it is intended to deal with the provided schools in greater detail.

In the meantime it may be noted that considerable overcrowding takes place during part of the year in both the provided and in the unprovided schools. This is injurious, not only because it diminishes the amount of pure air available per child, but because it leads to a closer aggregation of larger numbers of children, and consequently greater risk of the spread not only of diseases like diphtheria and measles, but of itch and body vermin.

In regard to overcrowding, two or three practical points require to be insisted upon :—

(1) The standard of accommodation should be calculated on a proper basis. This should be at least 10 square feet of floor space per child in the schools for older children, and nine square feet per child in the infant schools. In many of the older schools accommodation is still calculated on the standard of eight cubic feet per child. This has been considered by the Education Committee, who in October, 1904, requested the Board of Education to raise the standard of floor space in older schools to the minimum standard now required in new school buildings, *i.e.*, to ten square feet for senior scholars and nine square feet for infants.

It is to be hoped that this resolution will become effective in course of the next two years.

(2) If overcrowding is to be avoided it must be remembered that the nominal school accommodation should be equal to the number on the register and not to the average number in attendance. Whereas in many Croydon schools the average number in attendance is in excess of the nominal accommodation. This means that on many occasions the children are too tightly packed.

(3) It would be a great advantage if the nominal accommodation were legibly printed in each classroom, and the Head Teachers instructed to report the number of occasions on which these numbers were exceeded.

(4) Even the highest standard of cubic space is insufficient if the teachers neglect to make use of the windows and other means of ventilation. In only a minority of the schools does this simple fact seem to be appreciated.

(5) It is well worth considering whether in a town such as Croydon* there is any advantage in admitting into school children below five years of age. Of these there are about 1600 on the registers, though little, if any, educational benefit results from schooling at this early age. The exclusion of these children would increase the accommodation available, and allow of more efficient teaching of the older children without any increased cost. From a health point of view postponement of school attendance would be all to the good, as it is among the infants that epidemics of measles, whooping cough, etc., are most frequent and most fatal. The question seems to be one concerning which Parliament should give discretion to local authorities. In the meantime, Teachers and Attendance Officers might be instructed to discountenance the attendance of children of the age named.

BLIND, DEAF, AND DEFECTIVE CHILDREN.—The children attending the deaf class were examined during the year as also were children whom it was proposed to send to blind schools. The provision of a centre for the education of mentally defective children which has long been under discussion was further postponed, but it was finally resolved to utilise the old pupil teachers' centre at Whitehorse Road for this purpose. No provision has yet been made for physically defective children.

EXAMINATION OF CANDIDATES.—Forty-three young person who desired to become pupil teachers were medically examined during the year. Of these 38 were passed and 4 rejected, and one was passed subject to further examination during the course of the first year.

The physical examination of even this small number of candidates occupied a considerable time as the examination must be as complete as if for life insurance if candidates who are likely to become physically unfit are to be weeded out.

The system of training teachers now in vogue differs fundamentally from that in force in former years. It is however equally if not more important that unsuitable candidates should be eliminated at an early stage in their career.

TRUANTS.—Twenty-five children were examined before despatch to truant schools and the necessary certificates given to the Police.

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* It is possible that in the slum quarters of our large towns, a baby class may be a necessary evil. Even there, well-regulated public nurseries on a much smaller scale are what are really wanted.

EXAMINATION OF CHILDREN UNFIT TO ATTEND SCHOOL.—On Saturday mornings children alleged to be physically unfit for school, and concerning whom medical certificates are not forthcoming, are brought to the Town Hall for medical examination. Many of these children are found to be physically unfit to attend school either on account of debility or because they are suffering from some chronic infectious disease such as ringworm. In other cases the parents are advised that school attendance should be resumed either for whole or part time.

SPECIAL EXAMINATION OF TEACHERS.—Nine teachers were interviewed on one or more occasions by the medical officer. In three instances the interview had reference to the existence of infectious disease at the home of the teacher, while in six cases a special report was for some reason or other required concerning the health of the teacher.

STANDING ORDERS AS TO HEALTH.—These were revised during the year and approved by the Education Committee on May 10th, 1904. The chief modifications introduced were :—

(1) General simplification of the forms previously in use.

(2) Direct notification to the Medical Officer's Department of all suspicious cases of illness. Formerly notifications were sent to the Clerk's Department, and forwarded thence to the Medical Officer.

(3) Some relaxation of the old standing orders in respect to measles, German measles, whooping cough, chicken pox and mumps. Formerly all inmates of an infected house were excluded from school. Now only those attending infant schools and older children who have not already suffered from these diseases are excluded.

(4) The introduction of a method for dealing with verminous children.

(5) Additional standing orders as to lighting, ventilation, posture, etc., etc.

As already reported to the Elementary School Committee on January 2nd, 1905, the new standing orders are a distinct improvement, but the following matters deserve the further consideration of the Committee :—

METHOD OF DEALING WITH SUSPICIOUS CASES.—Should a Teacher or Attendance Officer suspect that a child is suffering from any of the communicable diseases, or is coming from an infected

house, the necessary particulars are entered on the face of Form A, which is despatched (with Form B attached) to the Medical Officer. Both these forms are then stamped with the date of arrival, and Form A is given to the Health Visitor for the district, who calls at the house and fills in the particulars set out on the back of the form. Form B is then made out in accordance with the information obtained by the Health Visitor, exclusion from school or re-admission being advised according to circumstances. The Health Visitors, in all cases, advise the parents to seek medical advice, but in a good number of instances this is not done, and I am therefore compelled to deal with the matter in accordance with the presumption raised by the Health Visitors' report, aided in the case of suspected diphtheria and ringworm by a report from the laboratory on the material obtained for examination by the Health Visitor. This is not altogether satisfactory, and I am of opinion that a certain number of medical men in various parts of the town should be asked to furnish me with a medical certificate concerning those cases in which the preliminary enquiry of the Health Visitor gave rise to definite cause for suspicion. It has also been suggested that a medical man should be attached to each school, and should pay a daily visit of inspection, but there are many drawbacks to such a scheme. I believe that these daily visits by a busy practitioner would in time become perfunctory, and, as far as communicable diseases are concerned, would be to a large extent useless, unless the children were kept under observation at their homes. On the other hand, the time does not appear ripe for discussing a more thorough system of medical inspection such as that prevailing in New York, and I should be glad to see a fair trial given to the modification of our present scheme, which has just been indicated.

In addition to the notifications to School Teachers of the existence of cases of notifiable infectious diseases, such as diphtheria, scarlet fever and enteric fever, further advice has been given respecting

Disease.	Number of Cases.
Whooping Cough	249
Sore Throat	401
Measles	1,335
Ringworm	417
Mumps...	428
Chickenpox	267
Various Skin Diseases	315
Itch	29
Ophthalmia	8
Various cases of suspected infectious disease ...	249

No. _____

COUNTERFOIL.

Date _____

Christian and Surname of Child _____

Address _____

Stated by Parents to be suffering from _____

Excluded from School on account of exhibiting symptoms of _____

_____

Believed to be suffering from _____

Has been excluded because it is stated that a case of _____ has occurred in house.

REMARKS.

To be filled up and sent with Form B attached to Medical Officer.

No. _____

Form A.

Croydon Education Committee.

To the Medical Officer, Town Hall, Croydon.

_____ 190 .

I beg to inform you that a Child named _____

(a) _____

residing at

(b) _____

and attending the

_____ School, _____ Department,

* (1) is stated by its parents to be suffering from _____

* (2) has been excluded from School on account of exhibiting symptoms of _____

* (3) is believed to be suffering from _____

* (4) has been excluded because it is stated that a case of _____ has occurred in house.

_____ *Attendance Officer.*

_____ *Head Teacher.*

(a) Insert Name in full.

(b) **Care should be taken to ascertain the correct address.**

* Strike out the clauses which do not apply.

For use of Medical Officer.

No. _____

Form B.

Corporation of Croydon.

From the Medical Officer, Town Hall, Croydon,
To the Clerk of the Education Committee, Croydon

Re _____

of _____ reported as

suffering from _____ and attending the

_____ School Department.

I beg to advise that :—

(1) the child is allowed to resume attendance.

(2) the child be excluded for the time named in Standing Order 8, reckoning from _____, and other members of family in accordance with Standing Orders 3 and 9.

(3) the child be excluded in accordance with Form E herewith.

H. MEREDITH RICHARDS, M.D.

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REMARKS.

Standing Orders Nos. 3, 8 and 9.

3.—No child shall attend an infants' school from a house where there is a case of measles, German measles, whooping cough, chicken-pox or mumps, but children in departments for older scholars who have previously suffered from the disease in question need not be excluded under similar circumstances.

8.—Children suffering from the following diseases must be excluded from school for the undermentioned periods :—

In the case of measles or German measles, for three weeks from the appearance of the rash.

In the case of whooping cough, for as long as the whoop continues and not less than five weeks from the commencement of the whooping.

In the case of chicken-pox, for at least two weeks and until every scab has fallen off the body and scalp.

In the case of mumps, for at least three weeks.

9.—Children living in infected houses and excluded from school under the terms of Standing Order 3 must be excluded for like periods, except in the case of whooping cough, for which the period need only be four weeks.

FOR USE BY MEDICAL OFFICER ONLY.

Date of visit .....

Name of Dr. ..... Date onset .....

Whooping Cough.	**Measles.**	**Diphtheria and Sore Throat.**
If Whooping.	If any cough.	Glands swollen.
If sick with cough.	If eyes watery.	Culture taken.
	Date of rash.	Any other throat illness in house.
	Position of rash.	
	If on face.	
	If vomited.	
	If sore throat.	
Chickenpox.	**Ringworm.**	**Mumps.**
When vaccinated.	On scalp or body.	Position of swelling.
If most spots on face or body.	Hair sent to Lab.	

Other Disease.

Full Name.	Age.	School.	Dept.	X History.	Remarks.

X—A=Now has B=Not had C=Has had

Instructions given

H.V.

FINANCIAL LOSS ENTAILED BY EXCLUSION OF SUSPECTED CASES OF COMMUNICABLE DISEASE.—Until recently the Board of Education made an allowance under section 101* of the old code whereby local authorities received a grant for children excluded at the request of the Medical Officer. The abolition of this "epidemic grant" is much to be regretted, as it tempts teachers, attendance officers and all concerned to hasten the return to school of children for whom a long period of exclusion is an advantage. It also makes it more profitable for Educational Authorities to close a whole school rather than exclude a large number of suspects, or close a specially affected classroom. This is to be deplored, and I would suggest that representations be made to the Board of Education to this effect.

VERMINOUS CONDITIONS.—In Croydon, as in other towns, a large number of children attending Elementary Schools suffer from verminous heads. It is indeed only by the exercise of the greatest care that children can be protected from this condition. During the year the Committee decided to introduce a slight modification of the method devised by Dr. Kerr, of the London Education Committee, for dealing with these cases. All parents are given cards warning them as to necessity of carefully watching the condition of their children, and suggesting certain simple precautions. Subsequently if a child is seen to be infected, a further card is sent requiring the parent to cleanse the child within one week. If this is not effectual the child is isolated in a special part of the classroom, and a further week's grace allowed. If at the end of that time the head is still dirty, the child should be excluded from school and a summons applied for. So far this system has not been as prompt and effective as was hoped. This is partly due to the difficulty of getting convictions, and partly to some want of system in examining the children's heads. This should be done as part of the routine on the first day of each term. If the Teachers find the duty too unpleasant assistance might be given them. At any rate it is only fair that everything possible should be done to protect the clean from the unclean.

BODY VERMIN have given trouble in a few schools. All children so affected should be at once excluded, and the parents warned that they must be cleansed within one week, the assistance of the Public Health Department being offered for disinfecting clothing and bedding. Here, again, difficulty has arisen in dealing with refractory parents. In London such children are excluded from school, and the parents prosecuted under the Education Acts for not sending them in a fit state. In Croydon the Bench prefer adjourning these cases in order that the children may be cleansed. This is not sufficiently stringent, as only superficial cleansing is

carried out, and the child is soon as bad as ever. Recently it has been suggested that a summons should be taken out under the Cruelty to Children Act. It remains to be seen whether this will prove a better deterrent.

RINGWORM is an increasing cause of trouble and anxiety in many schools. If this complaint gets a firm hold of the scalp it is a matter of the greatest difficulty to eradicate it. Even with constant care and the best treatment now obtainable in Croydon, at least six months is likely to elapse before a bad case is cured, while with the perfunctory treatment that most cases receive a year or more may elapse before recovery. At the time of preparing this report (March, 1905) 39 boys and 28 girls were known to be absent from school on account of ringworm.

Of these

1	had been	absent	32	weeks
2	,,	,,	31	,,
1	,,	,,	27	,,
1	,,	,,	23	,,
1	,,	,,	22	,,
2	,,	,,	20	,,
3	,,	,,	18	,,
1	,,	,,	15	,,
1	,,	,,	14	,,
1	,,	,,	12	,,
9	,,	,,	11	,,
4	,,	,,	10	,,
4	,,	,,	8	,,
3	,,	,,	7	,,
4	,,	,,	6	,,
8	,,	,,	5	,,
10	,,	,,	4	,,
11	,,	,,	3	,,

Nor is this all, as it is certain that a good number of slighter cases are still attending school though the symptoms are not sufficiently marked to obtrude them on the notice of the teachers.

Prevention must be sought in two directions. Firstly, teachers must assist by calling attention to the disease in its earliest stages. Secondly, more efficient treatment must in some way be secured for those already infected. It was suggested that the latter might be obtained by procuring hospital letters for those not under medical care. So far this has not been given a fair trial, as the number of hospital letters at my disposal is very small, though a special appeal for these letters was made by the chairman of the Education Committee.

In the meantime encouraging reports are being received as to the results obtained in Paris by treating ringworm by means of X rays. The method is somewhat complicated but is stated to render the cases free from infection in the space of a month. If this is corroborated it would be well worth while to establish a centre for the out-patient treatment of ringworm at the Borough Hospital or to give a grant in aid of such an installation at the Croydon General Hospital. Not only would the rapid treatment of these cases be a great boon to those infected but it would materially check the spread of the disease and be an economical expenditure in as much as the grant-earning capacity of the schools would be increased by the improved average attendance.

SCHOOL CLOSURE.—The following schools were closed during 1904 on account of Measles :—

Feb.	23.	St. Andrew Infant School.
Mar.	18.	Dering Road School (Infants' Department).
,,	18.	Whitehorse Road School do.
,,	22.	Ragged School, Old Town.
,,	23.	Whitehorse Road School (Junior Department).
,,	24.	Ecclesbourne Road School (Infants).
,,	24.	South Norwood School (Infants).
,,	25.	St. Saviour's School (Infants).
,,	28.	Ecclesbourne Road School.
,,	28.	Dering Place Mixed School.
Apl.	12.	St. Saviour's School.
,,	27.	St. Mark's School.
May	7.	Portland Road School (Infants' Department).
,,	7.	Good Shepherd School do.
,,	7.	Christ Church School do.
,,	12.	Good Shepherd School
,,	12.	St. Peter's School (Infants' Department).
,,	12.	Holy Trinity School do.
,,	18.	Christ Church School.

It must be admitted that in most of these cases I was influenced as much by the disorganization which had resulted from diminished attendance as by the hope of checking the further spread of measles. School managers, too, naturally favour closure rather than the exclusion of a large number of individual children for whom no "epidemic grant" is now allowed. As a preventive measure against measles school closure, as at present practised, is of little value, as infection is too diffuse before closure is insisted upon, and the number of new cases thus prevented is but small. The rational plan is that proposed by Dr. Kerr, namely, to keep a register of the children who have had measles, and to at once close a class or department on the occurrence of a single case if the amount of "explosive material" is considerable. By "explosive material" is meant the number of children who have not already had the disease,

School managers, however, would naturally look askance at such a suggestion unless the Board of Education revise their present system of making grants on average actual attendance.

EYESIGHT.—This department of school hygiene is still under the charge of the Ophthalmic Surgeon, who visits the schools periodically and examines the sight of those children who have been selected by the teachers as unable to read the ordinary test types.

FURTHER DEVELOPMENTS.—*The Teaching of Hygiene in Schools.*—This is a matter which the medical profession has repeatedly brought to the notice of the Board of Education. My own views have already been expressed on several occasions. In the first place the choice of the term "hygiene" is perhaps unfortunate. What we want is to impress boys and girls with a living knowledge of the simple laws of health. These are few and simple, and could probably be condensed into a page of this report, if not into a page of notepaper. The lessons inculcating these laws must be clear, brief and practical; technical terms and all pseudo-science being carefully eschewed. This can only be realized when the schools are permeated by a sanitary atmosphere, which means informed and intelligent teaching in healthy schools. The healthy schools are gradually being evolved, but the teachers have yet to be taught, and no real progress can be made until this has been done. In Cardiff and in the West Riding methodical instruction in the various departments of school hygiene is being imparted to school teachers, and I am of opinion that all those now receiving training under the Education Committee should be obliged to take up a similar thorough course and to pass a qualifying examination. Until the whole subject is grasped by the teachers very little can be done, as the mere appointment of peripatetic instructors will have comparatively little effect on the habits of the children and on the school atmosphere.

MEDICAL INSPECTION OF SCHOOL CHILDREN.—The Committee on Physical Deterioration, in their report submitted to Parliament in 1904, were "emphatic in recommending that a systematic medical inspection of school children should be imposed as a public duty on every school authority, and they agree with the Royal Commission on Physical Training (Scotland) that a contribution towards the cost should be made out of the Parliamentary vote. With the assistance of teachers properly trained in the various branches of hygiene, the system could be so far based on their observations and records, that no large and expensive medical staff would be necessary."

With this I am in general agreement, and see no reason why a start should not be made by requiring certain facts to be recorded on cards for each child attending school. These should, for the present be limited to

(1) The age (2) weight (3) height.

(4) Previous history as to measles and whooping cough.

(5) Acuity of vision as ascertained by test types.

(6) The condition of scalp (*i.e.* in respect to ringworm and vermin).

Particulars as to 2, 3 and 6 should be entered on the cards at the beginning of each term.

The weight and height would afford useful information whereby random statements as to physical degeneration might be checked, and would draw attention to cases of neglect, underfeeding or actual disease. The previous history as to measles and whooping cough would enable outbreaks of these diseases to be intelligently coped with, and periodical inspection of the scalps would be of immense value in eradicating the diseases already referred to.

It does not seem impracticable to require this, even from untrained teachers, while those who were trained would, in the course of this simple physical census, select the majority of children concerning whom an expert medical opinion was desirable.

Furthermore, so far from the time thus spent being wasted, the children would have an interesting and extremely practical lesson in simple mensuration if the methods employed for weighing and measuring were explained to the class.

SCHOOL FURNITURE.—It is to be hoped that when the next school is being furnished, opportunity will be afforded for selecting more suitable desks and seats. The dual desks now used are often very unsatisfactory. As many as seven children are sometimes crowded into two dual desks placed end to end. Slates, too, should be abolished in the remainder of the schools.

Attention might also be given to the periodical destruction of old copy books and antiquated text-books. In some schools these are allowed to accumulate for many years. Class-rooms should be kept free from rubbish of all kinds and there is no reason why old and useless books should not be sent to the paper mill or destructor at the end of each term.

D—REPORT OF THE WORK OF THE BOROUGH HOSPITAL.

THE BOROUGH HOSPITAL.—The following table shows the number of patients under treatment, and their average stay in Hospital during the year:—

1.—*Total cases in Hospital, 1904, and average residence in Hospital.*

Disease.	Remaining at end of 1903.	Admitted during 1904.	Discharged during 1904.	Died during 1904.	Remaining at end of 1904.	Average Residence in days.		*Probable detention in Hospital in days.
						Fatal Cases.	Non-Fatal Cases.	
Scarlet Fever	27	235	206	9	47	14·4	64·81	61
Cases admitted as but not Scarlet Fever	—	19	19	—	—	—	21·26	17
Diphtheria	15	233	184	21	43	4·6	58·48	52
Cases admitted as but not Diphtheria	—	21	15	5	1	9·4	16·26	14
Enteric Fever	7	12	15	3	1	10·3	74·	74
Cases admitted as but not Enteric Fever	—	2	1	1	—	11·0	50·	—
Puerperal Fever	1	1	1	1	—	2·0	28·	—
Pulmonary Phthisis ...	—	1	1	—	—	—	63·	—
Other Diseases	—	9	9	—	—	—	21·33	—
Total	50	533	451	40	92	8·1	58·1	56

2.—*The following comparative table shows the admissions of the various diseases during* 1901, 1902, 1903 *and* 1904.

	Cases admitted during 1901.	Cases admitted during 1902.	Cases admitted during 1903.	Cases admitted during 1904.
Scarlet Fever	304	231	172	235
Diphtheria	286	198	178	233
Enteric Fever	38	30	19	12
Puerperal Fever	—	—	—	1
Pulmonary Phthisis	—	—	—	1
Other diseases	2	22	28	51
Total	630	481	397	533

* "Probable detention in Hospital" in the above table means the number of days at which exactly half of the admitted patients will have been discharged.

3.—*The fatality of the various diseases was as under :—*

Scarlet Fever	4·65
Diphtheria	10·24
Enteric Fever	26·66
Enteric Fever for last three years (102 cases)	*20·49
Other diseases	13·20
All cases	8·14

4.—*Under "Other diseases" are included the following :—*

Notified as Scarlet Fever :—	Rötheln	12.	
	Erythema Scarlatiniforme	4.	
	Tonsillitis	1.	
	Abscess of Neck ...	1.	
	Influenza	1.	Total 19
Notified as Diphtheria :—	Tonsillitis	6.	
	Measles	3.	
	Simple Sore Throat ...	3.	
	Whooping Cough ...	1.	
	Influenza	1.	
	"Thrush"	1.	
	Spyhilitic Ulceration of Soft Palate	1.	Total 16.
Cases admitted with B. Diphtheriae in their throats, but without clinical evidence of the disease and died from other causes :— ...	Tuberculosis	3.	
	Marasmus	2.	Total 5.
Cases notified as Enteric Fever :—	Tuberculosis of Lung ...	1.	
	Tuberculous Meningitis	1.	Total 2
Other cases admitted into Hospital :—	Tonsillitis	4.	
	Acute Periostitis of Jaw	1.	
	Pleurisy	1.	
	Acute Gastro-enteritis ..	1.	
	Gastric Ulcer	2.	Total 9.

*As the number of enteric fever cases was small the fatality has been calculated on the number of admissions for the last three years.

5.—*Cases from Outside Districts under Hospital treatment during* 1904.

Districts.	Remaining at end of 1904.	Admitted during 1904.	Discharged during 1904.	Died during 1904.	Remaining at end of 1904.
Penge Urban D.C. ..	4	26	27	1	2
Reigate Rural D.C. ..	—	2	2	—	—
The Borough of Kingston upon Thames ..	2	12	13	—	1
The Croydon Union ...	1	2	3	—	—
Private Cases	—	2	2	—	—
Total	7	44	47	1	3

6.—*Recorded complications amongst* 215 *completed Scarlet Fever cases under treatment during* 1904.

	No. of cases affected.	Percentage of completed cases.
1. Complications :—		
Abscess	7	3·25
Adenitis—primary	11	5·11
,, secondary..	36	16·74
Albuminuria	33	15·34
Bronchitis	1	0·46
Broncho-pneumonia	13	6·04
Burns	1	0·46
Membranous Laryngitis (probably non-diphtheritic)	2	0·93
Endocarditis	5	2·32
Pericarditis	1	0·46
Chorea	1	0·46
Mastoiditis	7	3·25
Meningitis	1	0·46
Nephritis	6	2·79
Orbital cellulitis	1	0·46
Otorrhœa	29	13·48
Phagedœna	3	1·39
Pneumonia	1	0·46
Relapse	6	2·79
Rheumatism	14	6·51
Rhinorrhœa	25	11·62
Secondary Sore Throat	5	2·32
Secondary Rash	12	5·58
Tonsillar Abscess	4	1·86
,, Membrane	10	4·65
B. Diphtheriæ present in Throat ..	18	8·37
B. Pseudo-diphtheriæ present in Throat ..	60	27·9
2. Scarlet Fever associated with :—		
Diphtheria (clinical)..	8	3·72
Whooping Cough	7	3·25
Chicken-pox	1	0·46
Mumps	—	—
Measles	2	0·93
Röthein	5	2·32
Ringworm	16	7·44
3. Operations performed for :—		
Cervical Abscess	6	2·79
Other Abscesses	2	0·93
Mastoid Disease	7	3·25
Removal of Tonsils and Adenoids ..	10	4·65
Laryngeal Obstruction (Tracheotomy) ..	2	0·93

7.—*Recorded complications amongst* 205 *completed Diphtheria cases under treatment during* 1904.

	No. of cases affected.	Percentage of completed cases.
1. Complications:—		
Abscess	5	2·43
Adenitis primary	33	16·09
,, secondary	7	3·41
Albuminuria	22	10·73
Broncho-pneumonia	6	2·92
Endocarditis	1	0·48
Pericarditis	—	—
Cardiac failure	13	6·34
Diarrhœa	2	0·96
Entensive Gangrene of Fauces	4	1·95
Hæmorrhage from Mucous surfaces	5	2·43
Nephritis	1	0·48
Poly-neuritis	2	0·96
Otorrhœa	16	7·72
Paralysis—Loss of Kneejerks	4	1·95
,, Faucial	26	12·68
,, Ocular	4	1·95
Relapse	1	0·48
Rheumatism	12	5·85
Rhinorrhœa	22	10·73
Secondary Sore Throat	1	0·48
Rash - Antitoxin	86	41·90
,, Septic	3	1·46
Tonsillar Abscess	1	0·48
Persistent Vomiting	12	5·85
2. Diphtheria associated with:—		
Measles	2	0·96
Mumps	4	1·95
Scarlet Fever	6	2·92
Whooping Cough	2	0·96
Ringworm	11	5·31
3. Operations performed for:—		
Cervical Abscess	5	2·43
Intubation	5	2·43
Intubation Cases—recovered	5	100 %
Intravenous injection of Antitoxin	4	1·95
Laryngeal Obstruction (Tracheotomy)	12	5·85
Tracheotomy Cases—recovered	6	50 %
Removal of Tonsils and Adenoids	2	0·96

8.—Recorded complications amongst 102 completed Enteric Fever cases under treatment during 1901—1904.

	No. of cases affected in 18 completed cases for 1904.	No. of cases affected in 102 completed cases for 1901—1904.	Percentage of 102 completed cases.
1. Complications :—			
Abscess	2	5	4·85
Albuminuria	2	5	4·85
Bronchitis	1	2	1·94
Endocarditis	1	1	0·97
Hæmorrhage	4	18	11·47
Orchitis	—	1	0·97
Parotitis	1	2	1·94
Perforation	1	5	4·85
Peritonitis	1	6	5·82
Pleurisy	1	3	2·91
Pneumonia	5	19	12·44
Relapse	2	8	5·76
Rigors	1	3	2·91
Septicæmia	1	3	2·91
Tympanitis	2	—	—
Venous Thrombosis	—	1	0·97
Widal's Agglutinative reaction of 18 cases completed : Positive reaction ..	15	—	83·3
Negative reaction ..	3	—	16·7

9.—*The following Table shows the highest and lowest number of beds occupied on any one night during each month of the year:—*

	Beds Occupied.			Beds Occupied.	
	Highest.	Lowest.		Highest.	Lowest.
January ..	49	33	July	74	48
February ..	58	34	August	91	56
March	69	58	September ..	114	83
April	62	45	October ..	114	83
May	51	42	November ..	122	109
June	52	46	December ...	117	90

10.—Infectious illness amongst staff during 1904:—

Scarlet Fever	1 case.
Diphtheria	4 cases.
Other illnesses necessitating treatment in Hospital	9 cases.

AMBULANCE.—During the year 429 journeys were made in removing patients to the Borough Hospital, and 6 journeys to the joint Smallpox Hospital at Cheam. The ambulance also made sundry other journeys in connection with the removal of patients from one house to another in the town, in addition to the collection of parcels from the Town Hall.

The sum of £42 6s. 0d. was received from the Penge Urban District Council, the Croydon Guardians, and the Epsom Rural District Council, and others for services rendered during the year. The nett cost of the ambulance to the Hospital Committee is therefore just under £40 per annum, a very reasonable amount for an efficient ambulance service.

MAINTENANCE OF BUILDINGS.—No important alterations were carried out during 1904. The exterior of pavilions A and B were painted, the internal painting of pavilions C and D was renovated, and the woodwork of the corridors cleaned and oiled. Numerous minor repairs were very efficiently carried out by the engineer (Levey).

TABLE X.

CROYDON BOROUGH HOSPITAL.

Detailed Analysis of Expenditure under all Heads for the Year ending March 25th, 1904, and four preceding Years.

Year ending March.	Average No. of Patients.	Provisions.		Alcohol.		Surgery and Dispensary.		Domestic, including Coal and Gas.		Establishment and Miscellaneous Charges.				Salaries and Wages.		Total Ordinary Expenditure.	Total Average Cost per Bed.
		Total.	Average Cost per Bed occupied.	Total.	Average Cost per Bed occupied.	Total.	Average Cost per Bed occupied.	Total.	Average Cost per Bed occupied.	Establishment Charges and Repairs.	Miscellaneous Charges.	Total.	Average Cost per Bed occupied.	Medical Dispensing, Nursing & other.	Average Cost per Bed occupied.		
		£ s. d.	£ s. d.	£ s. d.	s. d.	£ s. d.	£ s. d	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d	£ s. d.	£ s. d.
1900	62	1322 6 6	21 6 6	10 0 0	3 3	186 13 10	3 0 3	855 15 4	13 16 0	265 15 8	308 8 3	574 3 11	9 5 3	1179 9 4	19 0 6	4128 8 11	66 11 9
1901	77	1435 10 3	18 12 10	9 0 0	2 4	307 9 9	3 19 10	1024 19 6	13 6 3	479 8 6	140 15 8	620 4 2	8 1 1	1426 10 9	18 10 7	4823 14 5	62 12 11
1902	88	1954 15 9	22 4 3	26 18 3	6 1	400 5 5	4 11 0	1281 15 5	14 11 4	904 14 3	105 7 5	1010 1 8	11 9 6	1611 19 11	18 6 4	6285 19 5	71 8 7
1903	68	1905 19 8	28 0 7	20 11 0	6 0	403 8 4	5 18 8	1135 11 11	16 14 0	954 18 7	123 16 9	1078 15 4	15 17 3	1603 4 9	23 11 7	6147 11 9	90 8 1
1904	53	1728 7 7	32 12 3	29 9 2	11 1	394 9 0	7 8 10	936 11 9	17 13 5	755 13 10	129 11 0	885 4 10	16 14 1	1581 14 2	29 16 11	5555 16 6	104 16 7

During the Year 1903-4 the sum of £1,598 0s. 8d. was receivable from other Local Authorities and Private Patients.

E.—REPORT ON THE BACTERIOLOGICAL AND CHEMICAL LABORATORY.

In the year 1896, a small bacteriological laboratory was fitted up at the Borough Hospital. This was designed to assist in the recognition of obscure cases of diphtheria or phthisis occurring in the Borough. Subsequently this assistance was extended to the examination of blood from doubtful cases of enteric fever.

For the first few years of its existence comparatively little use was made of the laboratory as is shown by the following table :—

Year.	Specimens Examined for Diphtheria, Enteric Fever, and Tuberculosis. Borough Cases (outside the Hospital).	Hospital Cases.
1897	85	not recorded.
1898	125	not recorded.
1899	not recorded	not recorded.
1900	199	248
1901	784	885
1902	698	859
1903	1089	1322
1904	2027	2494

In the last report reference was made to the very large increase in the use made of the bacteriological laboratory. This increase has been more than maintained. The total number of examinations in 1904 amounted to 4,521, as compared with 2,411 in 1903, and 1,557 in 1902. This is almost entirely due to the large number of investigations made into doubtful cases of "sore throat" occurring among children attending elementary schools, and has been rendered necessary during 1904 by the very large number of scattered cases of diphtheria occurring in the Borough.

Various additions have been made to the equipment of the laboratory during the year, of which the most important is the provision of two additional incubators, namely, one set at 42° centigrade and one at 18° centigrade.

Laboratory work is therefore being carried out on a much extended scale, and it is accordingly desirable to summarise what is being done.

Bacteriology (1).—Material from suspected cases of diphtheria, enteric fever, and phthisis, is examined free of cost for all medical men in the Borough. For this purpose suitable "outfits," containing the necessary apparatus for transmitting material to the laboratory have first to be prepared. These "outfits" can be obtained on application at the Town Hall, or at any of some six depots situated in various parts of the town.

Accompanying these "outfits" are printed directions as to how the material should be obtained and forwarded to the laboratory. On arrival at the laboratory the contents of the "outfit" are examined bacteriologically, and the result communicated to the medical attendant, either by telephone or by telegram, if the result is positive, and the case be one of diphtheria or enteric fever. All other reports are sent by post, unless there is any special urgency.

(2).—Similar examinations are made of cases of "sore throat" reported to the medical officer by school teachers, and of a large proportion of "contacts" in invaded houses.

(3).—Specimens of milk are examined from time to time for special purposes. Should inoculation be necessary, the samples are sent to the Lister Institute.

(4).—Specimens of the public water supply are examined from time to time. Arrangements should also be made for this to be done periodically, as under present conditions this is not practicable on account of the large amount of other routine work.

(5).—Sundry specimens from cases of suspected glanders and other rare diseases, and specimens of diseased meat are also examined when required.

Microscopical Examinations are made in cases of suspected ringworm; also in certain cases of the tissues of diseased animals slaughtered for human consumption.

Chemical Examinations are made in connection with special investigations of the *public water supply, and of various sewage effluents.

For the following account of the results obtained in the laboratory during the year, I am indebted to Dr. Brincker, the Borough Bacteriologist and Senior Resident Medical Officer of the Borough Hospital.

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* Specimens from the various wells are also examined periodically by Mr. Dibdin

Clinical Bacteriology.—The following is a summary of the number of specimens examined for suspected diphtheria, enteric fever, or tuberculosis :—

	Suspected Diphtheria.				Serum reaction for suspected Enteric Fever.				Sputum for suspected Tuberculosis.			
	1903.		1904.		1903.		1904.		1903.		1904.	
	Boro.	Hosp.	Boro.	Hosp	Boro	Hosp	Boro	Hosp	Boro	Hosp	Boro	Hosp
January	65	119	70	105	2	4	3	3	8	..	13	1
February . ..	84	83	68	101	2	..	5	..	6	..	15	..
March	80	78	104	127	9	4	3	..	4	3	11	3
April	52	109	49	163	..	3	2	..	2	4	7	5
May	34	34	77	59	3	2	1	...	3	2	12	3
June	32	43	163	131	5	7	3	..	5	4	16	..
July	87	70	141	131	1	3	4	4	2	3	13	3
August	74	112	190	141	2	8	4	4	4	..	7	3
September ..	147	185	219	194	2	..	10	1	8	..	11	1
October	119	173	294	379	5	1	5	4	18	..	12	..
November ..	84	136	239	428	..	8	2	..	9	1	13	2
December . ..	119	121	220	491	4	1	3	5	8	1	18	2
First Quarter ..	229	280	242	333	13	8	11	3	18	3	39	4
Second ,, ..	118	186	289	353	8	12	6	..	10	10	35	8
Third ,, ..	308	367	550	466	5	11	18	9	14	3	31	7
Fourth ,, ..	322	430	753	1298	9	10	10	9	35	2	43	4
Yearly Total ..	977	1263	1834	2450	35	41	45	21	77	18	148	23
Grand Total ..	2240		4284		76		66		95		71	

The maximum number of examinations corresponds as a rule with the prevalence of the particular dieease in question. Thus in the case of diphtheria it will be observed that the maximum occurred during the last quarter of the year, when diphtheria and sore throat were very prevalent.

Diphtheria.—During 1904 4,291 specimens were examined in the Laboratory, as compared with 5,240 during the three previous years. Of the 4,284 specimens examined, about one quarter were primary examinations for diagnostic purposes. The remaining specimens were from "contacts" who had been exposed to diphtheria, or from the throats of convalescents. The latter were examined with a view of ascertaining whether the bacillus of diphtheria was absent from the throat. In some cases this organism was very persistent, requiring many examinations before it was found to have disappeared.

Every case of scarlet fever admitted to the Hospital was also examined bacteriologically, in order to ascertain if diphtheria was also present. It was found that in 37 instances diphtheria bacilli were present on admission. These patients were isolated with the object of checking the spread of diphtheria among the scarlet fever convalescents. By this method it is possible to reduce post-scarlatinal diphtheria to a minimum, although this complication was at one time very serious, and frequently led to a fatal issue. This method cannot, however, be regarded as absolutely trustworthy, as during the year three scarlet fever convalescents developed clinical diphtheria though bacilli had not been found in their throats on admission. It is not clear how this can be accounted for, but it must be ascribed either to the examination on admission being not sufficiently complete to detect all the cases of latent diphtheria, or to the isolation of those harbouring diphtheria bacilli not being efficient. The latter suggestion is now receiving the attention of the Hospital Committee, and emphasizes the importance of providing additional isolation accommodation, where cases of double infection and doubtful diagnosis could be isolated.

Many of the specimens examined were from cases of sore throat occurring in children attending elementary schools. In many instances these "sore throats" were found to be slight cases of diphtheria, and the knowledge gained in the bacteriological laboratory enabled steps to be taken for the isolation of these masked cases which are found year by year to account very largely for the prevalence and spread of diphtheria. Many of these cases were formerly known as follicular tonsillitis, some as quinsy, and many as simple "sore throat,"

RESULTS OF BACTERIOLOGICAL EXAMINATION: I.—DIPHTHERIA.

	Examination of Specimens from Borough.																Examination of Specimens from Hospital.												Total.			
	Specimens from Primary Cases.								Specimens from Contacts.								Total.				Cases admitted for Diphtheria.								For Scarlet Fever.				
	1st Examination.				2nd Examination.				1st Examination.				2nd Examination.								1st Examination.				Subsequent Examin'tn.								
	B. Diphth.	B. Pseudo.	Negative.	Total.	B. Diphth.	B. Pseudo.	Negative.	Total.	B. Diphth.	B. Pseudo.	Negative.	Total.	B. Diphth.	B. Pseudo.	Negative.	Total.	B. Diphth.	B. Pseudo.	Negative.	Total.	B. Diphth.	B. Pseudo.	Negative.	Total.	B. Diphth.	B. Pseudo.	Negative.	Total.	B. Diphth.	B. Pseudo.	Negative.	Total.	
Jan. ...	11	2	31	44	—	—	9	9	—	—	10	10	—	—	7	7	11	2	57	70	6	1	—	7	17	12	33	62	1	6	29	36	24	19	62	105
Feb....	6	5	27	38	1	—	4	5	3	4	15	22	2	—	1	3	12	9	47	68	12	1	4	17	8	18	24	50	3	11	20	34	23	30	48	101
Mar....	8	5	30	48	2	1	6	9	7	5	10	22	8	6	16	30	25	17	62	104	9	2	1	12	18	14	47	79	1	10	25	36	28	26	73	127
April	3	1	8	12	-	—	1	1	1	4	10	15	1	—	20	21	5	5	39	49	3	—	14	17	13	10	84	107	1	10	28	39	17	20	126	163
May ...	6	2	24	32	1	1	1	3	3	9	7	19	15	5	3	23	25	17	35	77	14	—	5	19	2	—	11	13	—	3	24	27	16	3	40	59
June...	13	15	24	52	1	1	—	2	4	8	10	22	21	44	22	87	39	68	56	163	13	—	—	13	18	20	54	92	2	10	14	26	33	30	68	131
July ..	7	23	22	52	2	—	1	3	1	4	2	7	13	40	26	79	23	67	51	141	5	—	—	5	14	30	48	92	—	16	18	34	19	46	66	131
Aug....	15	6	25	46	3	1	7	11	30	15	20	65	8	24	36	68	56	46	88	190	10	3	1	14	7	20	71	98	1	8	20	29	18	31	92	141
Sept.	13	25	58	96	3	4	11	18	7	11	20	38	9	38	20	67	32	78	109	218	16	1	4	21	6	49	59	114	5	21	34	60	27	71	97	195
Oct. ...	22	22	92	136	6	7	33	46	10	13	38	61	8	20	23	51	46	62	186	294	22	4	8	34	26	46	187	259	6	21	59	86	54	71	254	379
Nov ...	18	12	49	79	1	—	12	13	4	12	60	76	9	25	37	71	32	49	158	239	27	1	8	36	44	26	244	314	8	12	58	78	79	39	310	428
Dec....	10	2	43	55	—	2	10	12	4	8	26	38	14	36	65	116	28	48	144	220	20	2	9	31	45	55	222	322	9	36	93	138	74	93	324	491
1st Q.	25	12	88	130	3	1	19	23	10	9	35	54	10	6	24	40	48	28	166	247	27	4	5	36	43	44	104	191	5	27	74	106	75	75	183	333
2nd Q.	22	18	56	96	2	2	2	6	8	21	27	56	37	49	45	131	69	90	130	289	30	—	19	49	33	30	149	212	3	23	66	92	66	53	234	353
3rd Q.	35	54	105	194	8	5	19	32	38	30	42	110	30	102	82	214	111	191	248	550	31	4	5	40	27	99	178	304	6	45	72	123	64	148	255	467
4th Q.	50	36	184	270	7	9	55	71	18	33	124	175	31	81	125	238	106	159	488	754	69	7	25	101	115	127	653	895	23	69	210	302	207	203	888	1298
Total	132	120	433	690	20	17	95	132	74	93	228	395	108	238	276	623	334	468	1032	1840	157	15	54	226	218	300	1084	1602	37	164	422	623	412	479	1560	2451

THE BACTERIOLOGICAL (SERUM) DIAGNOSIS OF ENTERIC FEVER.—This is specially valuable as Enteric Fever is extremely variable in its manifestations, and is correspondingly difficult to diagnose. In cases of Enteric Fever the "serum reaction" can usually be obtained by the tenth day of the disease or even earlier, and is of very great value in assisting in the recognition of obscure cases.

During past years this test has not been as frequently made use of as one would have expected or desired. This is to be regretted as Enteric Fever is a disease which requires careful investigation in every instance, and it is naturally important that the preliminary diagnosis should invariably be checked by laboratory methods. Errors in diagnosis must occur if medical men comply with the letter of the notification act and notify forthwith, but it is very desirable that such provisional diagnosis should subsequently be reviewed in the light of the serum reaction.

During 1904 there were 18 completed cases of Enteric Fever, including one about which there was considerable doubt. Of these, 15 gave the serum reaction and 3 did not. One of these three was a doubtful case and the other two were fatal cases of Enteric Fever. The failure to show the serum reaction in the last two instances was perhaps due to the severity of the attack.

The following table gives a summary of serum reactions performed in this Laboratory during 1904:—

RESULTS OF EXAMINATIONS ENTERIC FEVER.

1904.	Examinations for Borough.						In Hospital.			Total.		
	Agglutination, re-action for Enteric Fever.			Agglutination, re-action determined for other reasons.			Agglutination re-action for Enteric Fever.			Agglutination re-action for all purposes.		
	+	—	Total	+	—	Total	+	—	Total	+	—	Total
January	—	3	3	—	—	—	3	—	3	3	3	6
February	2	3	5	—	—	—	—	—	—	2	3	5
March	—	3	3	—	—	—	—	—	—	—	3	3
April	—	2	2	—	—	—	—	—	—	—	2	2
May	—	1	1	—	—	—	—	—	—	—	1	1
June..	—	3	3	—	—	—	—	—	—	—	3	3
July..	1	3	4	—	—	—	2	2	4	3	5	8
August	1	1	2	—	2	2	1	3	4	2	6	8
September	3	5	8	1	1	2	—	1	1	4	7	11
October	—	5	5	—	—	—	4	—	4	4	5	9
November	—	2	2	—	—	—	—	—	—	—	2	2
December	1	2	3	—	—	—	3	2	5	4	4	8
First Quarter ..	2	9	11	—	—	—	3	—	3	5	9	14
Second ,, ..	—	6	6	—	—	—	—	—	—	—	6	6
Third ,, ..	5	9	14	1	3	4	3	6	9	9	18	27
Fourth ,, ..	1	9	10	—	—	—	7	2	9	8	11	19
Total	8	33	41	1	3	4	13	8	21	22	44	66

The urine of enteric fever patients was again examined during convalesence. Out of 20 such specimens the Bacillus Typhosus was found in five instances. In each case the bacillus isolated agglutinated with the blood of the patient. The serum reaction was also tried against an allied organism, namely the bacillus enteritidis (Gartner) on two occasions, but in each case gave negative results; the first was in a case of poisoning after eating oysters, and the second acute diarrhœa which ended fatally.

Examination for the Bacillus Tuberculosis in Sputum, Urine, and other Specimens:—

The number of specimens sent for examination showed a considerable increase during the year. This was no doubt due to the fact that voluntary notification of pulmonary phthisis has been in force since October 1st, 1903.

The following table shows the number of specimens sent for the detection of B. Tuberculosis during 1904.

RESULTS OF EXAMINATIONS TUBERCULOSIS.

1904.	Examinations for the Borough.						For the Hospital.			Total.		
	Primary Examinations (for diagnosis).			Secondary Examinations (for cure).			All Examinations.			All Examinations.		
	+	—	Total	+	—	Total	+	—	Total	+	—	Total
January	7	5	12	—	1	1	—	1	1	7	7	14
February	2	10	12	—	3	3	—	—	—	2	13	15
March	3	6	9	—	2	2	—	3	3	3	11	14
April	—	7	7	—	—	—	2	3	5	2	10	12
May	5	6	11	1	—	1	1	2	3	7	8	15
June	5	10	15	—	—	—	—	—	—	5	10	15
July	4	8	12	1	—	1	1	2	3	6	10	16
August	3	3	6	—	1	1	3	—	3	6	4	10
September	5	3	8	1	2	3	—	1	1	6	6	12
October	1	10	11	—	1	1	—	—	—	1	11	12
November	5	8	13	—	—	—	—	2	2	5	10	15
December	4	12	16	—	2	2	—	2	2	4	16	20
First Quarter ..	12	21	33	—	6	6	—	4	4	12	31	43
Second ,, .	10	23	33	1	—	1	3	5	8	14	28	42
Third ,, ..	12	14	26	2	3	5	4	3	7	18	20	38
Fourth ,, ..	10	30	40	—	3	3	—	4	4	10	37	47
Total ..	44	88	132	3	12	15	7	16	23	54	116	170

Miscellaneous Examinations.—Examinations were also conducted in the laboratory on the following:

1. *Urines.*—
   (1) Chemical examination (119).
   (2) Bacteriological.
      (*a*) 2 specimens for the b. tuberculosis, both with negative results.
      (*b*) 20 specimens for the detection of the b. typhosus, 5 of which gave positive results.

2. *Blood.*—
   (1) Blood from 2 cases of puerperal fever.
      From a fatal case a streptococcus isolated. This coccus had all the appearances of the streptococcus conglomeratus of Gordon. The case followed on 2 cases of scarlet fever in the family, and proved fatal.
      The second case showed no streptococci, and recovered.
   (2) Blood from 4 cases of malignant scarlet fever. All yielded the streptococcus (?) conglomeratus.
   (3) Blood from
      (1) Obscure case, which proved to be one of septicæmia.
      (2) A supposed case of enteric fever, which proved to be one of septicæmia.

3. *Pus.*—
   8 for gono-coccus (2 positive).
   8 for tuberculosis (— positive).
   1 for actinomycosis (negative).
   4 from nose for b. diphtheria (negative).

4. *Milk.*—
   15 samples of fresh milk for bacteriological and mechanical impurity.
   2 samples of sterilised milk for ditto.

5. *Water.*—

(1) Experiments with the fluorescope, to determine contamination of water supply by flow of Bourne	60	samples
(2) A chemical and bacteriological examination, conducted simultaneously in samples of water from Waddon, Surrey Street and Bourne, to detect contamination ...	15	,,
(3) Experiments conducted on Croydon Borough water, i.e., by softening same to diminish the number of bacteria ...	87	,,
Total ...	162	,,

6. *Hairs for Ringworm* (56).

Hairs showing small spored ringworm (M. Audouini)...	36
„ „ large „ „ (T. Endothrix)...	2
„ „ no disease	18
	56

7. *Diphtheria.*

Isolation of the so called b. pseudo-diphtheriæ from the throat of contacts, and testing a broth growth of the same for virulence	217

CONCLUSIONS.—The increase in the work of the Laboratory foreshadowed in the last annual report has been even greater than was expected. Much still remains to be done. Were it possible with the amount of assistance at present at our disposal it would be an advantage to take even a larger number of specimens from the throats of diphtheria convalescents and "contacts."

Further increase in the future ought to lie in the direction of more frequent examinations of the milk and of the public water supply. The latter will be essential should it be found necessary to filter and soften the public water supply.

APPENDIX.

COUNTY BOROUGH OF CROYDON.

SCARLET FEVER OR SCARLATINA.

HOME CASE.

Children from this house must not attend day or Sunday School until permission is given by the Medical Officer of Health.

All cases of "sore throat," "lumps in the neck," or of "peeling skin" occurring in the household are probably scarlatinal, and should be immediately reported to your Medical Attendant. Suspicion should also be roused by any sudden attack of illness, especially if beginning with vomiting.

Public Library Books must be taken to the Public Health Department, Town Hall, and no books borrowed until the house has been disinfected.

If treated at home the patient must be confined to one room, and *no one except the person in charge allowed to enter the room.* All unnecessary furniture should be removed from the sick room forthwith, and the floor and furniture should be frequently wiped with a damp cloth. *Fresh air* must be freely admitted, a fire being lighted if necessary.

Attendants should wear washable dresses, should wash their hands immediately after attending the sick person, and should always wash their hands and faces and change their shoes and outer clothes before going off duty.

No domestic animal should be allowed to enter the sick room.

No children should be allowed to visit the infected house.

A patient suffering from this disease is generally DANGEROUS TO OTHERS for six to eight weeks, and must not be allowed to mix with other people until the Medical Attendant certifies that there is no danger. There is risk of infection while there is any discharge from ear or nose, or while the throat remains sore or unhealthy.

DISINFECTION.

1.—All soiled linen should be at once placed in a tub of water to which a handful of ordinary washing soda has been added, soaked for twelve hours, and then boiled in a copper. Materials which cannot be boiled should be soaked for one hour in liquid disinfectant, and then washed.

2.—Special cups, saucers and spoons should be used for the patient, and any spare food from the sick room destroyed.

3.—Discharges from ear, nose or mouth should be received on a rag, which should be at once burnt, as also should any dust collected in the room.

4.—During recovery the patient should have a warm bath every day, unless the doctor orders otherwise. The body should be freely lathered with soap, special precaution being taken to thoroughly cleanse the hair and scalp.

5.—When the patient is free from infection, the Corporation undertake the disinfection of the sick room, bedding, &c., free of cost. The accompaning card should be returned when the patient is free from infection.

Disinfectants are supplied free to home cases once a week on application to the Public Health Department, Town Hall, between the hours of 9 a.m. and 5 p.m. (Saturdays 9 a.m. till 1 p.m.).

H. MEREDITH RICHARDS, M.D.

Medical Officer of Health.

Town Hall,
Croydon.

The following handbill is used in those cases in which the primary case is removed to hospital. Similar leaflets are issued for diphtheria and enteric fever :—

COUNTY BOROUGH OF CROYDON.

SCARLET FEVER OR SCARLATINA.

Hospital Case.

Children from this house must not attend day or Sunday School until permission is given by the Medical Officer of Health.

All cases of "sore throat," "lumps in the neck" or of "peeling skin" occurring in the household are probably scarlatinal, and should be immediately reported to your medical attendant. Suspicion should also be roused by any sudden attack of illness, especially if beginning with vomiting.

Public Library books must be taken to the Public Health Department, Town Hall, and no books borrowed until the house has been disinfected.

All articles exposed to infection should be placed in the room occupied by the patient before removal to Hospital, and the room then locked until the Inspector calls to arrange for disinfection. He will instruct you what to do.

The Hospital is in Waddon Marsh Lane, Croydon. Information as to the condition of patients may be obtained at

THE HOSPITAL GATE,

THE PUBLIC HEALTH DEPARTMENT, TOWN HALL (during office hours), and THE FIRE STATION (after 10 a.m.)

Enquiries may also be made by telephoning to the Hospital (No. 66 Croydon), between 2 and 4 p.m. The Resident Medical Officer can be seen at the Hospital between 1 and 1.15 each day.

H. MEREDITH RICHARDS, M.D.,
Medical Officer of Health.

Town Hall, Croydon.

A penalty of £5 is attached to the exposure of infected persons and things.

COUNTY BOROUGH OF CROYDON.

DIPHTHERIA AND MEMBRANOUS CROUP.

HOME CASE.

Children from this house must not attend day or Sunday school until permission is given by the Medical Officer of Health.

All cases of "sore throat," "croupy cough," or "lumps in the neck" occurring in the household are probably diphtheritic, and should be immediately reported to your Medical Attendant. Any suspicious cases can be examined bacteriologically at the Borough Laboratory, free of charge.

Public Library Books must be taken to the Public Health Department, Town Hall, and no books borrowed until the house has been disinfected.

If treated at home the patient must be confined to one room, and *no one except the person in charge allowed to enter the room.* All unnecessary furniture should be removed from the sick room forthwith, and the floor and furniture should be frequently wiped with a damp cloth, *Fresh Air* must be freely admitted, a fire being lighted if necessary.

Attendants should wear washable dresses, should wash their hands immediately after attending the sick person, and should always wash their hands and faces and change their shoes and outer clothes before going off duty.

No domestic animal should be allowed to enter the sick room.

A patient suffering from this disease is generally DANGEROUS TO OTHERS for a period of at least Three Weeks, and must not be allowed to mix with other people during that period, or while there is any sore throat, or any discharge from ear or nose, or while diphtheria germs can be detected in the throat.

Examinations for the detection of diphtheria germs are made at the Borough Laboratory, free of cost. The necessary arrangements will be made by your Medical Attendant

DISINFECTION.

1.—All soiled linen should be at once placed in a tub of water to which a handful of ordinary washing soda has been added, soaked for 12 hours, and then boiled in a copper. Materials which cannot be boiled should be soaked for one hour in liquid disinfectant, and then washed.

2.—Special cups, saucers and spoons should be used for the patient, and any spare food from the sick room destroyed.

3.—Discharges from ear, nose or mouth should be received on a rag, which should be at once burnt, as also should any dust collected in the room.

4.—When the patient is free from infection, the Corporation undertake the disinfection of the sick room, bedding, etc., free of cost. The accompanying card should be returned when the patient is free from infection.

Disinfectants are supplied free to home cases once a week on application to the Public Health Department, Town Hall, between the hours of 9 a.m. and 5 p.m. (Saturdays 9 a.m. till 1 p.m.)

H. MEREDITH RICHARDS, M.D.,
Medical Officer of Health.

TOWN HALL,
CROYDON.

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COUNTY BOROUGH OF CROYDON.

TYPHOID (ENTERIC) FEVER.

HOME CASE.

All cases of "diarrhœa," "severe headache" or "feverishness" occurring in the household should be immediately reported to your Medical Attendant. Any suspicious cases can be examined bacteriologically at the Borough Laboratory, free of charge.

Public Library books must be taken to the Public Health Department, Town Hall, and no books borrowed until the house has been disinfected.

If treated at home, the patient must be confined to one room, and *no one, except the person in charge, allowed to enter the room.* All unnecessary furniture should be removed from the sick room forthwith, and the floor and furniture should be frequently wiped with a damp cloth. *Fresh Air* must be freely admitted, a fire being lighted if necessary.

Attendants should wear washable dresses, and should always wash their hands and faces and change their shoes and outer clothes before going off duty. Scrupulous cleanliness is essential. Nurses should keep their nails short, and should scrub their hands and disinfect them immediately after attending the patient.

No domestic animal should be allowed to enter the sick room.

A patient suffering from this disease is generally DANGEROUS TO OTHERS for a period of a fortnight after return to ordinary food.

DISINFECTION.

1.—All soiled linen should be at once placed in a tub of water to which a handful of ordinary washing soda has been added, soaked for 12 hours, and then boiled in a copper. Materials which cannot be boiled should be soaked for one hour in liquid disinfectant, and then washed.

2.—Special cups, saucers and spoons should be used for the patient, and any spare food from the sick room destroyed.

3.—Everything passing from the patient should be received into a mixture of water and disinfectant, sufficient being used to completely cover it, and be allowed to stand for half-an-hour before being thrown away, the vessel being covered with a cloth soaked in the disinfectant. Nothing coming from the patients must be thrown into the ash-bin, or upon the surface of the soil, or into the drains without disinfection.

4.—Discharges from ear, nose or mouth should be received on a rag, which should be at once burnt, as also should any dust collected in the room.

5.—When the patient is free from infection, the Corporation undertake the disinfection of the sick room, bedding, &c., free of cost. The accompanying card should be returned when the patient is free from infection.

Disinfectants are supplied free to home cases once a week on application to the Public Health Department, Town Hall, between the hours of 9 a.m. and 5 p.m. (Saturday 9 a.m. till 1 p.m.).

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COUNTY BOROUGH OF CROYDON.

PUERPERAL FEVER AND OTHER ACCIDENTS OF CHILDBIRTH.

These are best avoided by attention to the following simple rules during pregnancy:—

Diet should be plain, easy of digestion, nutritious, and taken at regular intervals. Milk should be taken freely, and beer, wine, or spirits only sparingly and under medical advice.

Exercise should be moderate in amount, and in the fresh air. Violent exercise and fatigue should be avoided.

Rest should be taken daily in the afternoons, and mental excitement avoided.

Clothing should be loose and warm, woollens being warn next the skin.

Bathing should be carefully attended to, especially towards the end of pregnancy.

The Bowels should act daily—cascara is a useful, simple laxative.

Infectious Disease. Pregnant women should avoid contact with any kind of infectious disease, and with patients suffering from discharging sores.

The Nipples during the last two months of pregnancy should be bathed with boiled warm water, and glycerine of borax applied daily. When taken in labour the patient should have a warm bath, plenty of soap and water being used, and fresh clean underclothing be put on.

The Lying-in Room.

The room should be scrupulously clean, the window and grate register opened. In cold weather a small fire is necessary. The room should not have been recently used for any case of infectious disease. If there is any doubt about this the room will be disinfected free of charge on application to the Medical Officer of Health.

Two wash basins, a nail brush, soap and hot water, an efficient antiseptic, scissors, thread, and plenty of clean towels, and a binder with safety pins, should be prepared ready beforehand.

The patient should lie on a firm mattress with a clean mackintosh and sheets.

The Maternity Nurse.

The nurse must be scrupulously clean in every way, and should not have been recently engaged in nursing any case of puerperal fever or other infectious disease. All maternity nurses are advised to procure a copy of the instructions issued by the Central Midwives' Board, and to follow the rules given therein in respect to clothing, disinfection of hands, disinfection of appliances, and disinfection of the patient.

COUNTY BOROUGH OF CROYDON.

PUERPERAL FEVER.

Directions as to the Disinfection of Midwives and Maternity Nurses.

No Midwife or Nurse in attendance on a patient suffering from Puerperal Fever or other infectious illness should visit or attend any other patient.

Whenever a Midwife or Nurse has been in attendance upon a patient suffering from Puerperal Fever or from any other illness supposed or suspected to be infectious, she should conform to the following methods of disinfection at the conclusion of the case :—

1. All washable clothing should be steeped in water to which a little soda has been added and then boiled. Gloves should be boiled.

2. All other clothing should be disinfected at the Public Disinfecting Station. This will be done free of cost by the Corporation. Application should be made at the Town Hall.

3. The Nurse's bag should be disinfected by washing thoroughly inside and out with 1 in 1,000 perchloride of mercury solution.

4. All instruments and nail-brushes should be boiled.

5. A complete bath should be taken, soap being freely used. The nails should be cut short and the hands first scrubbed and then immersed for five minutes in 1 in 1,000 perchloride of mercury solution.

Midwives and Nurses should not resume work until they have satisfied the Corporation that the requirements of the Medical Officer of Health as regards disinfection and other precautions have been complied with.

H. MEREDITH RICHARDS, M.D.