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County

Borough of



Middlesbrough

HEALTH DEPARTMENT.

ANNUAL REPORTS

AND


VITAL STATISTICS

FOR THE YEAR

1904.

MIDDLESBROUGH :
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County Borough of Middlesbrough.

Sanitary and Sanatorium Committees.

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COUNCILLOR A. MATTISON, Vice-Chairman.

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"	W. J. Bruce, J.P.	"	W. Harkess.
"	John Hedley, M.D., J.P.	"	T. Hornung.
"	A. Hinton, J.P.	"	C. Imeson.
"	J. McLauchlan, J.P.,	"	J. Jackson.
	Chairman of Sana-	"	J. Johnson.
	torium Committee.	"	A. Main.
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Mr. Councillor	A. E. Allison.	"	W. Meggeson.
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"	J. Dawson.	"	J. Roddy.
"	C. Dorman, J.P.	"	W. T. Thomson.
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COUNCILLOR A. MATTISON, Vice-Chairman.

Mr. Alderman	R. Archibald, J.P.	Mr. Councillor	E. Cone.
"	W. J. Bruce, J.P.	"	E. Pilkington.
Mr. Councillor	A. Allison.	"	W. Meggeson.
"	J. Baines.	"	J. Roddy.

Medical Officer of Health and Superintendent of Fever Hospitals.

CHARLES V. DINGLE, M.D., B.Hy., D.P.H.

Sanitary Staff.

Chief Sanitary Inspector :

MR. GEORGE H. ANDERSON, ASSOC. SAN. INST.

Assistant Sanitary Inspectors :

THOMAS McDONALD.

A. W. LUCAS, C.S.I.

W. SMITH, C.S.I.

H. WATSON, C.S.I.

Lady Sanitary Inspector and Health Visitor :

MISS E. BENTHAM, C.S.I.

Foreman Inspector of Scavengers :

G. STEVENSON.

Clerk :

JOHN W. RAWDON.

Matron of the Sanatorium and Small-Pox Hospitals :

MISS M. WEBB.

BOROUGH OF MIDDLESBROUGH, 1904.

Area of Municipal Borough	..	..	..	..	..	2,824 Acres
Number of Houses	..	..	..	..	..	19,816
Length of Public Streets	..	..	..	..	..	46 Miles
Rateable Value	..	..	..	..	..	£349,434
Population (Estimated 1904)	..	..	..	..	..	96,684
Death Rate for 1904	..	..	..	..	..	19·94 per 1,000
Average Death Rate for 10 years	..	..	..	..	..	21·02 per 1,000
Birth Rate for 1904	..	..	..	..	..	37·12 per 1,000
Average Birth Rate for 10 years	..	..	..	..	..	34·47 per 1,000
Zymotic Death Rate	..	..	..	..	..	2·5 per 1,000
Infantile Deaths per 1,000 Births	..	..	..	..	..	170

MORTALITY STATISTICS FOR ENGLAND AND WALES.

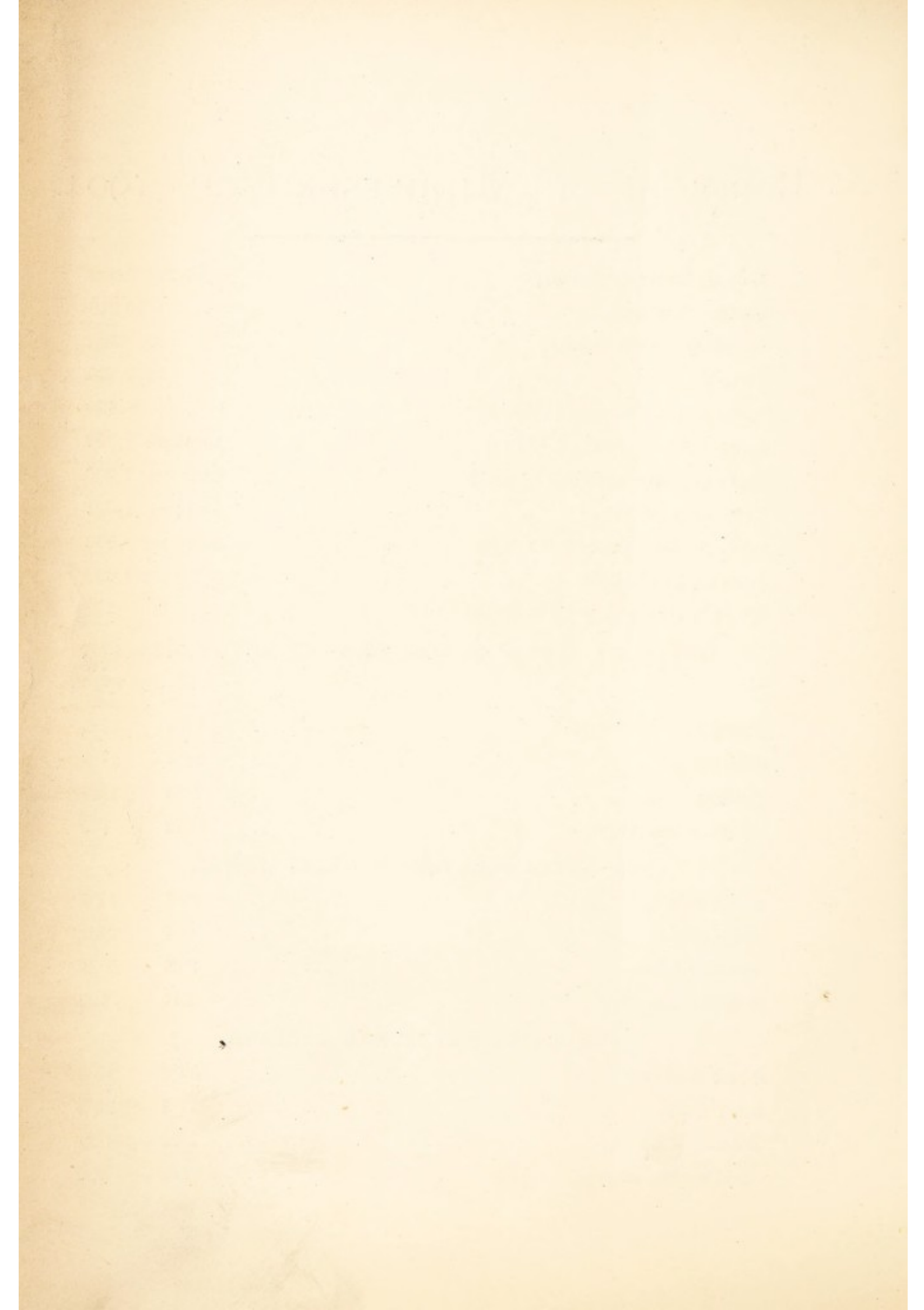
						1903	1904
Death Rate per 1,000	..	..	..	..	..	15·4	16·2
Birth Rate	..	..	..	..	..	28·4	27·9
Zymotic Rate	..	..	..	..	..	1·46	1·94
Infantile Mortality	..	..	..	..	..	132	146

THE RATES FOR THE 76 GREAT TOWNS.

Death Rate per 1,000	..	..	..	..	..	16·3	17·2
Birth Rate	..	..	..	..	..	29·7	29·1
Zymotic Rate	..	..	..	..	..	1·89	2·49
Infantile Mortality	..	..	..	..	..	144	160

THE RATES FOR RURAL ENGLAND.

Death Rate per 1,000	34·8	15·3
Birth Rate	27·3	26·8
Zymotic Rate	1·08	1·28
Infantile Mortality	118	125



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**A COMPARISON OF THE PRINCIPAL VITAL STATISTICS OF MIDDLESBROUGH
WITH SOME OF THE 76 LARGEST TOWNS.**

TOWNS.	Recorded Death Rate.	Corrected Death Rate.	Deaths under 1 year per 1,000 Births.	BIRTH RATE.
London	16.10	17.00	144	28.00
Croydon	13.80	14.20	129	26.10
Willesden	12.22	13.10	115	32.86
Hornsey	8.43	9.62	87	20.40
West Ham	16.76	17.91	165	32.16
East Ham	13.50	14.40	140	31.7
Walthamstow	11.95	12.78	135	32.79
Hastings	13.14	12.65	107	17.59
Southampton	13.83	13.76	114	26.78
Reading	13.89	14.39	133	25.87
Great Yarmouth	17.92	15.62	165	27.90
Plymouth	18.74	18.21	173	25.33
Bristol	15.44	15.86	133	26.05
Hanley	21.20	23.13	206	33.80
Burton-on-Trent	15.05	16.54	118	26.07
Wolverhampton	14.61	15.29	152	29.80
West Bromwich	15.90	16.05	149	33.50
Birmingham	19.30	20.80	195	31.50
King's Norton	11.20	11.53	102	28.40
Smethwick	12.40	13.54	143	32.00
Coventry	15.52	15.54	137	31.40
Leicester	14.56	15.55	163	26.67
Nottingham	17.50	18.40	175	27.86
Derby	15.15	16.33	143	27.25
Stockport	19.98	21.56	201	26.63
Wallasey	16.05	17.57	157	29.43
Liverpool	21.90	23.40	196	33.50
Bootle	18.61	20.56	180	30.93
St. Helens	20.39	22.10	174	37.33
Wigan	19.46	21.49	188	34.59

TOWNS.	Recorded Death Rate.	Corrected Death Rate.	Deaths under 1 year per 1,000 Births.	BIRTH RATE.
Warrington	19.47	21.00	171	32.70
Bolton	16.90	19.12	167	26.90
Bury	17.14	19.20	163	23.66
Salford	21.00	23.22	193	31.70
Oldham	18.30	20.60	155	24.90
Blackburn	17.22	19.40	191	23.50
Preston	17.83	19.52	183	28.26
Huddersfield	17.51	18.81	136	23.71
Halifax	15.50	16.60	139	23.10
Bradford	17.54	19.39	166	22.02
Leeds	17.92	19.56	176	28.00
York	16.18	16.66	170	28.15
Hull	18.00	18.20	182	30.80
West Hartlepool	16.30	14.20	134	33.03
Sunderland	19.40	20.00	165	34.40
South Shields	18.10	19.20	144	34.50
Newport	15.70	17.00	149	32.70
Cardiff	15.20	16.50	144	29.50
Rhondda	19.10	21.00	190	39.70
Merthyr Tydfil	19.70	20.86	186	38.50
Swansea	17.70	18.90	172	30.50
Edinbrough	15.04	15.66	125	23.42
Glasgow	18.16	20.11	145	30.99
County of Durham		18.30	162	35.60
Middlesbrough	19.94	20.00	170	37.12



**To the Chairman (Colonel S. A. Sadler, M.P.) and Members of the Sanitary Committee
of the Corporation of the County Borough of Middlesbrough.**

Gentlemen,

I have the honour to submit my Seventh Annual Report on the Health and Sanitary Condition of the County Borough of Middlesbrough, viz. :—that for the year ending December 31st, 1904.

In making a Report on the Health and Sanitary Condition of a town or district, it is suggested by the Local Government Board that the Physical features of the district should be borne in mind, and this is important, as they often have a direct bearing upon the health.

I am indebted to Mr. F. Baker, the Borough Surveyor, for the following short account of the Physical features of this Borough :—

South of the Railway.—The area of that portion of Middlesbrough South of the Railway, comprising the Cleveland, Cannon, Newport, Acklam, Ayresome, Exchange, Grove Hill, Linthorpe, and part of the Vulcan Wards, including houses and buildings, is 1,819 acres.

The levels vary from 8.00 O.D. in Marsh Road, which is the lowest point in the Borough, to 42.00 O.D. at Linthorpe, in Harrow Road.

The High Water Mark is 8.60 O.D.

The Geological Formation South of the Railway may be described as post-glacial beds, chiefly clay of considerable thickness, with gravel and sand more especially near the lines of the existing Becks.

Sandy loam is met with in the district near the New Cemetery. In excavating for the Marton Beck Valley Sewer the trench passed through hard clay, cutting through two beds of peat near Southfield Road, about 17 feet below the surface—a good specimen of the Antlers of the Red Deer was found about the same depth near Clairville Road—the trench afterwards passed through a long length of running sand full of water on the Middlesbrough Owners' Estate, about 18 feet from the surface, and eventually into hard laminated clay about the line of Eastbourne Road.

North of the Railway.—The area of this portion of the Borough, comprising the Marsh and part of the Vulcan Wards, is 1,005 acres.

The levels vary from 8·00 O.D. at the extreme West and South-West boundary to 38·70 O.D. at the North and North-East boundary.

The Geological Formation of this district is post-glacial beds and recent estuarine deposits, consisting of tipped slag, marine warp, sand, gravel, clay and peat, which contain remains of large oak trees and vegetable matter.

In the low lying portion of the Marsh Ward district the peat bed varies in thickness from 18 inches to 4 feet, and lies at a depth of varying from 4 feet to 5 feet from the surface.

The elevated plateau, upon which the old Town Hall and adjacent Streets are built, comprises a series of terraces consisting of layers of hard silicious red sand, gravel and small boulders.

All the streets West of Stockton Street and in the neighbourhood of Marsh Road, are built upon the estuarine deposits, upon which varying thicknesses of slag are tipped.

The Principal Features likely to influence the health of the Borough are the low level of the site, the formation of the subsoil, and the exposed position and want of natural protection from wind, etc.

On examination of Table XVII and of similar Tables in former Reports, it is seen that the greatest number of deaths occur in the following three groups, viz. :—

Diseases of the Respiratory System, causing over 20 per cent. of the total deaths.

Secondly, Constitutional Diseases, being diseases due to a bad habit of the body, possibly sometimes due to hereditary influences, in which group the chief causes of death are Tubercular and Malignant Diseases.

Thirdly, Diseases of the Digestive System, in which Diarrhœa plays the most important part.

Reviewing the conditions which are favourable to the existence of the above diseases, it is known that diseases of the Respiratory System are most frequent at the season of sudden changes of the temperature, and that their prevalence varies with the intensity of these changes; other predisposing causes are insanitary conditions, overcrowding and bad ventilation, and in addition the presence of dust, grit or irritating particles of any kind in the air breathed increases the liability to attack.

It is probable that the large amount of sharp irritating particles in the air of Middlesbrough is one of the principal reasons for the high mortality from diseases of the Respiratory System.

Tubercular Diseases are the most frequent in the second group, and of these Phthisis, or as it is usually termed consumption, is the chief. The conditions favourable to Phthisis are coldness and dampness of the soil, especially where the level of the ground water is high.

The presence of clay renders the soil cold. In this district where the clay is very prevalent its evil is increased owing to the low level of the site and to the fact that the higher ground slopes away from the town, consequently bringing the surface water down over the clayey subsoil.

Other conditions favourable to Tubercular Diseases are narrow streets and courts, back to back houses, overcrowding and want of ventilation.

Deaths from Diarrhœa comprise the bulk of those due to diseases of the Digestive System, and are mainly those of Infants under five years of age. Errors in feeding, pollution of the soil, a debilitated condition of the constitution through exposure to emanations of sewer gas, dampness, want of proper cleanliness, care, attention and clothing, are all causes which help to produce the great Infantile Mortality from Diarrhœa.

In considering this Report, the influence of the Physical features upon the various death rates should be carefully noted.

The Statistics for the past year are much more favourable than those of the previous five years, the death rate being 19·9 per 1,000 of the estimated population, being the lowest recorded death rate since the year 1897.

The birth rate was 37·12 per 1,000 of the population, being one of the highest birth rates in the country, and is the highest birth rate recorded in Middlesbrough since the year 1893.

The Infantile Mortality has also decreased from 186 to 170 per 1,000 births.

The death rate of the district South of the Railway, with an estimated population of 81,542 persons, was 19·14 per 1,000, whilst that of the district North of the Railway, with an estimated population of 15,142, was 24·23 per 1,000.

It is more difficult, year by year, to account for the steadily increasing death rate in the district North of the Railway, and a careful examination of the statistics for the past year does not show this increase to have been due to any one special cause.

The chief points worthy of note regarding the deaths in this district being the following : 33·7 per cent. of the total deaths were under one year of age and 55·2 per cent. were under five years of age. Only 7 per cent. of those who died during the past year lived to exceed 65 years of age.

40 per cent. of the total deaths which occurred in the various Public Institutions of the Borough were admitted from this district.

Housing of the Working Classes Act.—During the year 40 houses were dealt with under the Public Health Act of 1875 and the Housing of the Working Classes Act of 1900.

These houses were situated in the following streets :—

Linthorpe Mews	..	4 houses.
McNally's Yard	..	3 „
Graham's Yard (Dacre St.)	3	„
Stockton Street	..	2 „
Hilda Place	..	2 „
Dacre Street	..	1 „
Goschen Street	..	2 „
Hardman Street	..	1 „
Thorpe Street	..	2 „
Thomas Street	..	2 „
Woodhouse Terrace	..	2 „
Albion Place	..	7 „
Raby Street	..	3 „
Vine Street	..	1 „
Bulmer Street	..	4 „
Hatherley Street	..	1 „

Of these, 26 have been made habitable, 8 are not yet satisfactorily repaired, and the rest are being dealt with by arrangement with the owner, who has consented to demolish 2 houses and improve the remainder.

The Nile Street area has been declared to be an unhealthy area, and Plans are being drawn up for an improvement scheme under Part I. of the Act.

In addition to the above, many dilapidated houses have been dealt with during the past year, and special attention has been given to the houses in the Cannon, Newport and Marsh Wards, a house to house inspection having been made in the worst districts.

Houses let in Lodgings.—The new Bye-Laws for Houses let in Lodgings came into force in November 1904.

It is requisite, for the proper carrying out of these Bye-Laws, that a special Inspector should be appointed, as the work now performed by the various Inspectors, owing to the many new Acts which have come into force during recent years, is greater than can be thoroughly and efficiently carried out by the present staff.

Midwives' Registration Act.—There have been 15 Midwives registered during the past year, being only a small proportion of those who are practicing Midwifery in the Borough.

The period allowed for registration expires in March of this year for all except those possessing a qualification.

This Act when it is in full force will undoubtedly be of great service and will minimise the number of cases of Puerperal Fever and also the number of Still Births.

An unregistered Midwife was, at the instance of the Health Department, severely censured by the Coroner's Court in April of last year, with the remarkable result that not a single case of either Puerperal Fever or of a Still Birth which had been attended by a Midwife was reported during the following three months.

Two important Sanitary works have been completed during the past year, namely the Pumping Station and the Marton Valley Beck Sewer.

Two matters, which are of extreme importance, and which should receive your consideration during the year, are the high Infantile Mortality (see Appendix C) and the steadily increasing death rate North of the Railway.

The question of abolishing Ashpit Middens is closely connected with the latter.

STATISTICS RELATING TO BIRTHS, DEATHS, CAUSES OF DEATH, ZYMOTIC DISEASES, &c.

Death Rate.—During the 52 weeks ending December 31st, 1904, there were 1,928 deaths registered in the Borough, representing a death rate for the year of 19·94 per 1,000 of the population, the estimated population being 96,684.

The number of non-residents who died in the Borough was 44, and of residents who died outside the Borough 50; allowing for these, a death rate of 20·0 per 1,000 of the population represents the corrected death rate for the year 1904.

The following have been the death rates during the past 10 years :—

1895	..	19.31	1900	..	24.81	*25.07
1896	..	19.64	1901	..	21.84	*21.90
1897	..	19.16	1902	..	20.48	*20.48
1898	..	21.77	1903	..	21.80	*21.77
1899	..	22.00	1904	..	19.94	*20.00

*Corrected death rates.

The average death rate for these years being 21.02 per 1,000.

Death Rates in the Districts.—The following deaths occurred in the various districts into which the town is divided for statistical purposes, viz. :—

North of the Railway	..	367 deaths, equal to a death rate of 24.23 per 1,000.
East of Linthorpe Road	..	466 deaths, equal to a death rate of 14.71 per 1,000.
West of Linthorpe Road	..	772 deaths, equal to a death rate of 15.48 per 1,000.

In previous years the death rates in these districts were :—

		1901.	1902.	1903.
North of the Railway	..	23.38	21.32	22.38 per 1,000.
East of Linthorpe Road	..	15.64	16.02	15.62 „
West of Linthorpe Road	..	19.62	16.57	19.77 „

The corrected death rates for the districts (i.e., the deaths registered in the districts together with deaths of persons belonging thereto but dying outside the Borough, and also including deaths of persons dying in Public Institutions admitted thereto from the various districts, but eliminating deaths of all non-residents) were :—

		1902.	1903.	1904.
North of the Railway	..	28.3	29.98	32.62
East of Linthorpe Road	..	17.8	17.01	16.67
West of Linthorpe Road	..	19.6	22.24	18.28

TABLE I. gives the uncorrected death rates for the various districts during the past 20 years.

Quarterly Death Rates.—During the four quarters of 1904 the death rates were :—

1st Quarter	..	Deaths 471, equal to a death rate of 19.48 per 1,000.
2nd	..	425, „ „ „ 17.58 „
3rd	..	481, „ „ „ 19.89 „
4th	..	551, „ „ „ 22.79 „

The quarterly death rates in the various districts during 1904 were :—

DISTRICTS.	Death Rates per 1,000			
	1st quarter.	2nd quarter.	3rd quarter.	4th quarter.
North of the Railway	20·07	21·92	27·27	27·73
East of Linthorpe Road	14·01	13·26	13·26	18·31
West of Linthorpe Road	14·91	14·03	16·36	18·20

During the previous year these death rates were :—

North of the Railway	25·24	28·06	33·54	29·99
East of Linthorpe Road	13·64	19·98	15·38	17·26
West of Linthorpe Road	18·81	22·53	22·07	24·03

Of the 1,928 deaths registered in the Borough during 1904 :—

367 occurred North of the Railway.

1,561 occurred South of the Railway.

The death rate for the year North of the Railway being 24·23 per 1,000.

„ „ „ South „ 19·14 „

and the corrected death rates :—

North of the Railway being ^{*} 32·62 per 1,000.

South „ 17·65 „

Mortality at different Age Periods.—The 1,928 deaths occurred at the following age periods :—

Under 1 year of age	..	612	deaths being equal to	31·74	per cent. of
					the total deaths.
1 and under 5 years of age	..	305	„ „	15·81	„
5 and under 10 years of age	..	50	„ „	2·59	„
10 and under 15 years of age	..	37	„ „	1·91	„
15 and under 25 years of age	..	81	„ „	4·20	„
25 and under 65 years of age	..	563	„ „	29·20	„
65 years of age and over	..	280	„ „	14·57	„

The following table compares these rates with those of the previous 6 years :—

AGES.	Percentage of Deaths at various age periods to Total Deaths.						
	1898	1899	1900	1901	1902	1903	1904
Under 1 year	28·77	27·93	27·51	32·93	32·21	31·37	31·74
1 and under 5	16·21	17·93	12·83	18·89	16·68	18·29	15·81
5 and under 10	2·8	2·5	2·3	2·3	3·5	2·6	2·5
10 and under 15	1·9	1·1	0·8	1·4	1·4	1·4	1·9
15 and under 25	6·1	4·9	5·4	4·5	4·4	4·8	4·2
25 and under 65	29·8	29·7	31·2	28·9	29·2	29·8	29·2
65 years and over	14·2	15·3	20·0	10·9	11·8	11·5	14·5

The percentage of deaths, at various age periods, to total deaths in the various districts were :—

AGE PERIODS.	Percentage of Deaths to Total Deaths in the following districts.		
	East of Linthorpe Road.	West of Linthorpe Road.	North of the Railway.
Under 1 year	30·2	41·3	33·7
1 and under 5 years	17·3	16·2	21·5
5 and under 10 years	2·1	2·0	3·5
10 and under 15 years	2·1	1·6	1·9
15 and under 25 years	3·4	4·2	2·9
25 and under 65 years	28·1	23·8	28·3
65 years and over	16·5	10·6	7·9

The monthly death rates per 1,000 of the estimated population in the various Wards of the Borough for the year 1904 were as follows :—

WARDS.	January	February	March	April	May	June	July	August	September	October	November	December
Ayresome ..	16·89	14·09	12·74	12·33	14·30	15·66	7·11	12·74	10·57	9·56	20·67	22·30
Acklam ..	11·82	11·44	16·22	19·62	8·80	16·72	13·20	11·82	10·69	22·13	9·18	26·54
Cannon ..	16·73	13·88	36·32	20·18	25·27	14·36	16·73	36·32	24·45	23·75	14·36	25·04
Cleveland ..	17·53	14·14	15·90	14·81	6·39	19·85	9·51	15·90	18·08	11·14	14·81	17·53
Exchange ..	17·15	15·81	15·69	18·00	14·23	10·34	17·15	22·87	23·60	18·61	19·22	19·95
Grove Hill ..	8·13	15·11	8·45	18·83	10·0	12·32	8·13	11·86	14·10	17·28	18·83	16·35
Linthorpe ..	21·40	23·75	22·97	15·87	12·25	12·66	15·27	12·27	14·22	13·70	23·75	22·97
Marsh ..	22·74	26·34	44·39	27·99	31·40	26·89	32·51	44·39	35·82	22·74	35·82	50·93
Newport ..	26·65	28·22	17·36	16·77	19·73	14·40	17·36	37·10	32·36	20·82	31·18	27·82
Vulcan ..	23·14	22·42	24·61	20·92	20·18	28·43	12·92	30·40	20·92	24·61	32·86	27·44

The average death rates for these Wards per annum during the past four years being :—

			*1901		1902		1903		1904
Ayresome	..	..	19·5	..	15·07	..	17·48	..	14·08
Acklam	..	..	16·3	..	16·28	..	20·67	..	14·84
Cannon	..	..	26·0	..	22·84	..	27·27	..	22·28
Cleveland	..	..	18·1	..	18·86	..	19·66	..	14·63
Exchange	..	..	18·1	..	19·56	..	20·18	..	17·71
Grove Hill	..	..	10·9	..	13·33	..	13·35	..	13·28
Linthorpe	..	..	14·6	..	15·50	..	14·09	..	17·59
Marsh..	..	..	23·1	..	28·69	..	29·06	..	33·49
Newport	..	..	24·6	..	25·87	..	27·18	..	24·14
Vulcan	..	..	21·0	..	23·61	..	25·76	..	24·07

*During the year 1901, deaths occurring in Public Institutions were not allotted to the Wards from which the persons had been removed.

Births.—During the year 1904, 3,589 births were registered in the Borough. Of these 1,894 were males and 1,695 were females, the birth rate for the year being 37·12 per 1,000 of the population.

The natural increase, i.e., the excess of births over deaths, during the year 1904 being 1,661, during 1903 the natural increase was 1,417.

The following have been the birth rates during the past 10 years :—

1895	..	..	32·91	1900	..	..	34·46
1896	..	..	31·70	1901	..	..	36·44
1897	..	..	33·35	1902	..	..	36·09
1898	..	..	32·52	1903	..	..	36·72
1899	..	..	33·47	1904	..	..	37·12

The average birth rate for these years being 34·47.

Uncertified Deaths.—During the year there were 24 uncertified deaths, being 1·19 per cent. of the total deaths.

The causes of death being as follows :—

Convulsions	..	..	7	Asthma	..	..	1
Heart Disease	..	..	4	Hæmorrhage	..	..	1
Natural Causes	..	..	2	Premature Birth	..	..	1
Tubercular Disease	..	..	2	Syphilis	..	..	1
Debility	..	..	2	Teething	..	..	1
Old Age	..	..	1	Phthisis	..	..	1
							—
							24
							<u> </u>

Of these, 11 were under 1 year of age.

Zymotic Diseases.—(The principal Zymotic Diseases include Small-Pox, Measles, Scarlet Fever, Diphtheria, Whooping Cough, “Fever”—Typhus, Simple, Continued and Enteric—and Diarrhœa).

During the year 1904, there were 246 deaths from the above diseases, the Zymotic rate being 2·5 per 1,000 of the population.

The number of deaths from the principal Zymotic diseases and the Zymotic death rates per 1,000 of the population during the past 7 years were as follows :—

Deaths from Zymotic Diseases.			Zymotic Death Rate.
1898	..	383	4·2 per 1,000.
1899	..	216	2·3 „
1900	..	159	1·6 „
1901	..	270	2·9 „
1902	..	224	2·4 „
1903	..	271	2·8 „
1904	..	246	2·5 „

Notifiable Diseases.—The total number of Infectious Diseases notified during the year 1904 was 867, in the previous year there were 570 cases notified.

During the past 7 years the number of cases of Scarlet Fever, Enteric Fever and Diphtheria notified in the Borough was as follows :—

	Scarlet Fever.	Enteric Fever.	Diphtheria.	Total Notifications during the Year.
1898	237	234	54	2,032 (Small-Pox Epidemic).
1899	345	136	30	611
1900	284	96	25	502
1901	376	156	68	680
1902	500	121	164	879
1903	252	81	117	570
1904	612	67	79	867

Small-Pox.—15 cases of Small-Pox were notified during the year, all of which were removed to the Small-Pox Hospital at Hemlington.

Date of N'fication.	Age.	Sex.	Condition as to Vaccination.	Probable source of Infection.	Result.
Case No. 1 Jan. 4th	15	M.	2 marks, done in Infancy, fairly well foveated, $\frac{1}{2}$ in. in diam. Re-vaccinated 13 days before appearance of rash.	Living in a house in which a previous case occurred	Very mild case.
No. 2 Jan. 8th	50	M.	No marks visible. Said to have been vaccinated in Infancy.	Contracted the disease whilst tramping from town to town.	Severe confluent case.
No. 3 Feb. 5th	35	F.	3 marks, done in Infancy, badly foveated and poor, $\frac{1}{4}$ in. in diam.	Source of disease unknown.	Mild discrete case.
No. 4 Feb. 6th	14	M.	3 marks, done in Infancy, well foveated, $1\frac{1}{2}$ in. in diam.	Contracted at same time as Case No. 3. These two are Mother and Son.	Very mild case.
No. 5 Feb. 9th	33	M.	2 marks, done in Infancy, poor and badly foveated, $\frac{1}{2}$ in. in diam.	Probable source of infection some of the previous cases Man was a canvasser from door to door in the same district.	Severe discrete case.
No. 6 Feb. 16th	30	F.	1 mark, done in Infancy, $\frac{1}{2}$ in. in diam, well foveated.	Contracted by visiting at house where Cases Nos. 4 and 3 occurred.	Mild discrete case.
No. 7 Feb. 17th	34	F.	3 marks, done in Infancy, well foveated, $\frac{1}{2}$ in. in diam.	Contracted by visiting house where Cases 3 and 4 occurred.	Mild discrete case.
No. 8 Apr. 12th	22	M.	1 mark, done in Infancy, well foveated, $\frac{1}{2}$ in. in diam.	Contracted at Falkirk in Scotland.	Mild case.
No. 9 July 28th	50	M.	3 marks, done in Infancy, well foveated, $\frac{1}{2}$ in. in diam.	Contracted at Longnewton.	Severe discrete case.
No. 10 Nov. 3rd	45	M.	2 marks, done in Infancy, well foveated, $\frac{1}{2}$ in. in diam.	Contracted at Hull.	Mild discrete case.
No. 11 Nov. 8th	36	M.	4 marks, done in Infancy, well foveated, 2 in. in diam. Re-vaccinated 6 years ago, 2 marks fairly well foveated		Proved not to be Small-Pox
No. 12 Nov. 29th	40	M.	1 mark, done in Infancy, not well foveated, $\frac{1}{4}$ in. in diam.	Contracted from an unknown case which was not traced until after recovery.	Severe confluent case.

Date of N'ficat on.	Age.	Sex.	Condition as to Vaccination.	Probable source of Infection.	Result.
Case No. 13 Dec. 12th	30	M.	4 marks, done in Infancy, well foveated, 2 in. in diam. Re-vaccination 20 years ago whilst in the Army, 1 mark good and well foveated.		Case proved not to be Small-Pox, was probably Measles.
No. 14 Dec. 13th	40	F.	2 marks, done in Infancy, not well foveated, $\frac{1}{2}$ in. in diam. Re-vaccinated Nov 30th, Rash appeared Dec. 12th.	Contracted the disease from Case No. 12. Husband and Wife.	Mild case.
No. 15 Dec. 19th	22	F.	4 marks, done in Infancy, not well foveated, 2 in. in diam.	Contracted the disease from same source as Case No. 12. Was living in the house where the unknown Case occurred.	Severe confluent case.

Enteric Fever.—67 cases were notified, 18 of which proved fatal, the mortality being 26·8 per cent.

34 of the cases were removed to the Isolation Hospital for treatment.

The death rate per 1,000 of the population from Enteric Fever during the past year being 0·18.

The following have been the death rates during the past 10 years :—

1895	..	..	·32	per 1,000 of the population.
1896	..	..	·40	" "
1897	..	..	·32	" "
1898	..	..	·35	" "
1899	..	..	·24	" "
1900	..	..	·17	" "
1901	..	..	·33	" "
1902	..	..	·24	" "
1903	..	..	·23	" "
1904	..	..	·18	" "

The greatest number of cases occurred in the Newport and Grove Hill Wards. See Tables VII and IX.

Of the 67 cases notified 42 occurred in houses with Pan Closet accommodation.

17 „ „ Ashpit „

8 „ „ Water Closet „

the relative proportion of Ashpits to Pan Closets in the Borough being about one-seventh.

The following Sanitary defects were found on the premises where cases of Enteric Fever occurred :—

Dirty House	1
Dilapidated back yards ..	3
Dilapidated gully ..	1
Defective sinkwaste-pipe ..	1
Dilapidated privy floor ..	1
Dilapidated privy riser ..	1
Foul sink drain ..	1
Overcrowding	1
Dilapidated ashpit ..	1

Ages of those attacked.					Ages of those who died.	
Under 1 year	Nil.					Nil.
1 and under 5 years	4					1
5 and under 15 years	19					3
15 and under 25 years	18					7
25 and under 65 years	24					5
65 years and over	2					2
Total	67					18

They occurred in the following districts :—

North of the Railway	East of Linthorpe Road	West of Linthorpe Road.
7	22	38
The following were removed to Hospital :—		
3	9	22

The following were the occupations of those attacked by Enteric Fever :—

Attending School	18
Household Duties and Infants	14
Labourers	10
Bricklayers' Labourers ..	3
Farm Labourer	1
Brass Moulder	1
Steelworker	1
Shipwright	1
Fitter	1
Plater	1
Painter	1
Gas Producer	1
Mine Filler	1
Cement Worker	1
Coal Dealer	1
Stonemason	1
Sampler	1
Fruit Salesman	1
Clergyman	1
Waitress	1
Occupation not known ..	6

67

Scarlet Fever.—612 cases were notified. In the previous year there were 252 cases notified. 10 cases proved fatal, the death rate being 1.5 per cent.

499 of the 612 cases—81.5 per cent., were removed to the Isolation Hospital for treatment. In the previous year the percentage of cases removed being 79.7.

Ages of those attacked.					Ages of those who died.
Under 1 year	8	Nil.			
1 and under 5 years	182	6			
5 and under 15 years	378	3			
15 and under 25 years	31	1			
25 and under 65 years	13	Nil.			
65 years and over	Nil.	Nil.			
Total	612	10			

They occurred in the following districts :—

North of the Railway.	East of Linthorpe Road.	West of Linthorpe Road.
24	189	399
The following were removed to Hospital :—		
21	125	353

338 of the children who contracted Scarlet Fever attended School. Of these :—

62 attended the Newport School.

45	„	Victoria Road School.
40	„	Grange Road School.
38	„	Fleetham Street School.
34	„	Ayresome School.
30	„	St. Paul's School.
27	„	Denmark Street School.
21	„	Marton Road School.
20	„	Southend School.
16	„	St. John's School.
14	„	Wesleyan School.
12	„	Linthorpe School.
11	„	St. Patrick's School.
9	„	St. Mary's School.
6	„	St. Hilda's School.
6	„	High School.
3	„	Miss Collingwood's School.
2	„	Miss Shepherd's School.
1	„	Convent School.
1	„	Miss Dalston's School.

Diphtheria.—79 cases were notified during 1904, being a great decrease in number compared with the two previous years. 11 of these cases proved to be fatal.

The following have been the number of notifications of Diphtheria and the deaths per annum for the past 6 years;—

Diphtheria	1899	1900	1901	1902	1903	1904
Cases Notified ..	30	25	68	164	117	79
Deaths	9	3	19	58	32	11

The rate of mortality during 1904 being 13·9 per cent., compared with 27·3 per cent. in the previous year.

27·8 per cent. of the 79 cases were removed to the Isolation Hospital.

Ages of those attacked.					Ages of those who died.	
Under 1 year	..	..	..	3	2	
1 and under 5 years	..	..	..	24	4	
5 and under 15 years	..	..	..	40	5	
15 and under 25 years	..	..	..	5	Nil.	
25 and under 65 years	..	..	..	7	Nil.	
65 years and over	..	..	..	..	Nil.	
Total					79	11

They occurred in the following districts :—

North of the Railway.	East of Linthorpe Road.	West of Linthorpe Road.
23	28	28
The following were removed to Hospital:—		
9	8	5

Cases occurred amongst children attending the following schools :—

St. Hilda's School	..	11	Fleetham Street School	..	3
Marton Road	..	5	Grange Road	..	2
Victoria Road	..	4	Wesleyan	..	2
St. John's	..	3	Ayresome	..	2
St. Mary's	..	3	Lower East Street	..	1
Newport	..	3	Southend	..	1
St. Patrick's	..	3			

Measles.—Caused 39 deaths during 1904, against 67 in the previous year.

The deaths occurred in the following districts :—

North of the Railway	..	16
East of Linthorpe Road	..	17
West of Linthorpe Road	..	5
Public Institutions	..	1
		—
		39

The ages at death being :—

Under 1 year	..	7
1 and under 5 years	..	31
5 and under 15 years	..	1
		—
		39

Whooping Cough.—Caused 25 deaths. In the previous year there were 15.

They occurred in the following districts :—

North of the Railway	..	7
East of Linthorpe Road	..	7
West of Linthorpe Road	..	11
		—
		25

The ages at death being :—

Under 1 year	..	12
1 and under 5 years	..	12
5 and under 15 years	..	1
		—
		25

Erysipelas.—82 cases were notified and one case proved fatal.

Puerperal Fever.—7 cases were notified, 4 of which were fatal.

1	occurred	North of the Railway.
1	„	East of Linthorpe Road.
5	„	West of Linthorpe Road.

In 3 of these cases the confinement was conducted by the same woman, who is an unregistered Midwife, 2 others were conducted by Midwives.

Infantile Mortality.—612 Infants under 1 year of age died during 1904, a mortality of 170 per 1,000 births.

The deaths under one year of age were 31·74 per cent. of the total deaths.

In the previous year there were 650 deaths under 1 year, being 31·3 per cent. of the total deaths and representing a mortality of 186 per 1,000 births.

The chief causes of death being :—

	1902.	1903.	1904.
Marasmus, &c.	151 deaths	124 deaths	113 deaths
Convulsions	72 „	68 „	45 „
Premature Birth	69 „	77 „	57 „
Pneumonia	59 „	88 „	64 „
Diarrhœa	39 „	77 „	109 „
Enteritis	41 „	27 „	37 „

The Infantile Mortality of the Borough is dealt with in a special report. See Appendix C.

Diseases of the Respiratory System.—409 deaths were caused by diseases of the Respiratory System, during the previous year there were 484.

Of the above deaths, 265 were from Pneumonia and 109 were from Bronchitis.

Deaths from Respiratory diseases were 21·2 per cent. of the total deaths.

During 1899 the mortality from Pneumonia per 1,000 of the population living was	4·2
„ 1900 „ „ „ „	5·5
„ 1901 „ „ „ „	3·1
„ 1902 „ „ „ „	3·1
„ 1903 „ „ „ „	3·6
„ 1904 „ „ „ „	2·7

Tubercular Diseases caused 218 deaths, of these :—

18 were from Tabes Mesenterica.

25 „ Tubercular Meningitis.

123 „ Pulmonary Tuberculosis.

52 „ other Tubercular Diseases.

218

76 of the above deaths were those of children under 5 years of age.

54 deaths occurred East of Linthorpe Road.

102 „ „ West of Linthorpe Road.

43 „ „ North of the Railway.

and 21 „ „ in Public Institutions.

The following have been the number of deaths yearly from all Tubercular diseases for the past 10 years :—

1895	1896	1897	1898	1899	1900	1901	1902	1903	1904
156	175	177	198	215	247	225	204	210	218

Diarrhœal Diseases.—There were 139 deaths from Diarrhœal diseases during 1904, in the previous year there were 119.

Of the 139 deaths during 1904 :—

16 occurred	East of Linthorpe Road.
89	„ West of Linthorpe Road.
34	„ North of the Railway.

The death rate from these causes being 2·2 per 1,000 of the population North of the Railway. The death rate from these causes being 1·2 of the population South of the Railway.

109 of the deaths were infants under 1 year of age.

29 were between 1 and 5 years of age.

1 was over 65 years of age.

139

Still-Born Children.—During the year 1904 there were 167 bodies of children buried who were stated to have been still-born. Of these, 145 certificates as to still-birth were from Medical Practitioners and 22 were from Midwives. In the previous year there were 139 certificates from Medical Practitioners and 25 from Midwives.

The following have been the number of burials of still-born children in the Middlesbrough Cemetery during the past 8 years :—

1897	..	137	1901	..	198
1898	..	139	1902	..	164
1899	..	163	1903	..	164
1900	..	181	1904	..	167

Illegitimate Children.—115 of the births registered during 1904 were those of illegitimate children. Of these 60 were boys

55 were girls.

The numbers of such births in previous years were :—

1898	..	96	1902	..	104
1899	..	114	1903	..	117
1900	..	108	1904	..	115
1901	..	131			

I have been unable to ascertain the proportion of deaths to births amongst illegitimate children during the past year, but hope to be able to give this information in the future.

Marriages.—The number of marriages of persons, one or both of whom were residents in the Borough of Middlesbrough, during the year 1904 was 861. Of these :—
460 were in the Church of England
and 401 were in the Nonconformist Places of Worship and the Registrar's Office.

Vaccination.—2,523 certificates of successful vaccination were received by the Vaccination Officer during 1904.

The number of certificates granted to persons claiming exemption being 2.

Female Sanitary Inspector and Health Visitor.

During the year ending December 31st, 1904, Miss E. Bentham reports that she has made 3,525 visits to houses in the worst localities. Of these, 1,052 were first visits and 2,473 were re-visits.

In addition to the above house to house visits, the following inspections and visits have been made :—

- 287 visits for the purpose of investigating Infantile mortality.
- 667 Factory and Workshops Inspections.
- 272 Domestic Workshops Inspections.
- 172 Shop Hours Act Inspections.
- 122 Shop Assistants Seats Act Inspections.
- 86 Outworkers Inspections.
- 84 Workplaces visited.
- 9 Laundry Inspections.
- 6 investigations of cases of Puerperal Fever.

The total number of visits made during the year being 5,230.

Many special cases have been referred to the Health Visitor, during the past year 267 such visits have been made, these cases being reported by Relieving and School Board Officers, School Teachers, the N.S.P.C.C. Society, and by Agents, Landlords and Tenants of houses.

785 systematic house to house visits were made in the following districts, viz. :—

- 460 in the Marsh Ward
- 178 in the Cannon Ward and
- 147 in the Newport Ward.

785

The following were the streets in these districts visited with the number of visits per street :—

The streets were as follows :—

Innes Street ..	27	William Street ..	18
Aislaby Place ..	5	Silker Street ..	10
Holling's Yard ..	2	Suffield Street ..	44
Walton's Yard ..	2	Richmond Street ..	66
Beadnall Yard ..	2	John Street ..	6
Malthouse Yard ..	2	Danby Place ..	7
Byer's Yard ..	6	Graham's Yard, Richmond	
Graham's Yard ..	3	Street ..	4
Ironwarehouse Yard	5	Goschen Street ..	18
Henderson's Yard	2	Hardman Street ..	28
Stockton Street ..	110	Stansfield Street ..	20
Victoria Yard ..	5	Monsell Street ..	22
Ingledew's Buildings	11	Coleridge Street ..	8
George Street ..	12	Hartington Street ..	24
Wellington Street	46	Nixon Street ..	14
York Tavern Yard	8	Northumberland Street	14
Wesley Place ..	8	Thorpe Street ..	14
Marlborough Street	17	Raby Street ..	20
Nelson Place ..	10	Queen Mary Street ..	55
Mill Lane ..	3	Spencer Street, part of it	30
Robert Street ..	20	Prince Charles Street ..	58

785

Of the above houses there were :—

48 rooms sub-let.

98 houses had badly ventilated bedplaces.

263 houses were dirty.

14 were filthy.

306 had no facility for washing clothes.

442 had unventilated dark pantries unsuitable for keeping food in.

Resulting from the house to house visits, 516 Sanitary defects were referred to the Sanitary Department, and 90 rooms were limewashed or papered.

Factory and Workshops.—Miss Bentham has paid visits to 175 Workshops, 12 Factories, 3 Steam Laundries and 3 Hand Laundries, employing a total of 1,112 women and girls and 326 men.

Workplaces.—42 have been visited, a total of 84 visits being made, they are reported to be improving in cleanliness. These workplaces for the most part consist of kitchens of Hotel, Restaurants, Tea Rooms and Theatres.

Domestic Workshops.—There are 246 to which 272 visits were paid, they consist of ordinary living rooms used for the purposes of dressmaking, needlework, alterations, quilting, baking, etc.

Outworkers.—86 visits were made to houses where outworkers were engaged upon the following occupations, viz. :—shirtmaking, tailoring, alterations, hemming sheets and towels, knitting, slipper making, etc.

On the whole the work was found to be carried out under favourable conditions.

The following Sanitary defects and contraventions of the above Acts were dealt with :—

Workshops to Limewash	..	..	4
No Abstract of Fct shown	..	..	9
Unregistered Workshops	..	..	8
Outworkers' List not supplied	..		9
Dirty Workshops	..	..	5
Dirty Sanitary Accommodation	..		6
Structural Defects	..	..	5
Defective Sanitary Accommodation	..		2
No separate Sanitary Accommodation			2
Defective Pan Closets	..	..	4

During the months of June, July, August and September, the greater part of Miss Bentham's time was occupied in making investigations into the various causes leading to Infantile Mortality, the deaths of all Infants under two years of age were inquired into and very complete information was obtained and tabulated, for this purpose 287 visits were made, the information and statistics obtained are incorporated in a special Report on Infantile Mortality included in this Report. See Appendix C.

I have the honour to be, Gentlemen,

Your obedient Servant,

CHARLES V. DINGLE, M.D.,

The Health Department,
Middlesbrough,
February, 1905.

Medical Officer of Health.

TABLE I.—Giving the Annual Death Rates (Uncorrected) in the various Districts of the Borough for the past 20 years.

YEARS.	Death Rate per 1,000 West of Boundary Road.	Death Rate per 1,000 East of Boundary Road.	Death Rate per 1,000 North of Railway.
1884 ..	21·57	19·76	15·09
1885 ..	20·47	19·69	18·38
1886 ..	19·38	19·64	19·46
1887 ..	19·12	19·09	16·48
1888 ..	19·26	22·50	21·71
1889 ..	20·33	16·23	17·54
1890 ..	21·96	16·09	20·90
1891 ..	21·46	19·34	20·51
1892 ..	21·46	15·97	20·02
1893 ..	19·40	15·89	16·82
1894 ..	17·30	13·04	19·41
1895 ..	18·06	14·86	18·46
1896 ..	19·58	14·56	20·09
1897 ..	19·23	13·49	20·55
1898 ..	19·31	15·37	20·53
1899 ..	19·84	15·65	26·31
1900 ..	23·74	17·14	27·26
1901 ..	West of Linthorpe Road. 19·62	East of Linthorpe Road. 15·64	North of Railway. 23·38
1902 ..	16·57	16·02	21·32
1903 ..	19·77	15·62	22·38
1904 ..	15·48	14·71	24·23

TABLE II.—Summary of Monthly Death and Birth Rates during 1904.

1904,	Death Rates North of the Railway.	Death Rates East of Linthorpe Road.	Death Rates West of Linthorpe Road.	Deaths in Public Institu- tions.	Total Deaths.	Monthly Death Rates for Borough.	Births.	Monthly Birth Rates for Borough.	Monthly Death Rates corrected by eliminating Deaths of Non- Residents.
January ..	22.52	15.21	18.16	32	155	18.87	325	39.56	17.89
February ..	27.53	17.27	16.46	27	143	19.17	266	35.79	18.46
March	36.52	15.59	19.35	39	173	21.05	410	49.92	20.82
April	26.41	18.81	15.84	21	148	18.61	277	34.86	18.49
May	31.83	11.52	15.09	22	137	16.68	306	37.25	16.56
June	28.92	13.82	15.60	19	140	17.61	292	36.73	16.98
July	28.72	11.87	12.27	24	124	15.10	293	35.67	14.72
August ..	41.93	16.35	21.96	23	194	23.62	270	32.88	23.25
September ..	33.74	16.13	18.76	22	163	20.51	278	34.97	20.25
October ..	25.62	16.70	16.52	18	153	18.62	308	37.50	18.01
November ..	36.91	20.74	19.02	26	181	22.77	300	37.75	22.39
December ..	43.52	20.80	23.60	30	217	26.42	264	32.15	23.80

TABLE III.—Monthly Births and Deaths for 1904.

BIRTHS DURING 1904.				DEATHS DURING 1904.		
Months.	Male.	Female.	Totals.	Male.	Female.	Totals.
January ..	173	152	325	88	67	155
February ..	133	133	266	77	66	143
March ..	257	153	410	104	69	173
April ..	141	136	277	85	59	148
May ..	149	157	306	79	58	137
June ..	160	132	292	90	50	140
July ..	158	135	293	80	44	124
August ..	136	134	270	109	85	194
September ..	150	128	278	94	69	163
October ..	146	162	308	83	70	153
November ..	154	146	300	103	78	181
December ..	137	127	264	108	109	217
Totals ..	1,894	1,695	3,589	1,100	824	1,928

TABLE IV.—Summary of the Ages at Death in the Four Quarters of 1904.

AGE PERIODS	1st Quarter.				2nd Quarter.				3rd Quarter.				4th Quarter.				Totals
	East of Linthorpe Road	West of Linthorpe Road	North of Railway	Public Institutions	East of Linthorpe Road	West of Linthorpe Road	North of Railway	Public Institutions	East of Linthorpe Road	West of Linthorpe Road	North of Railway	Public Institutions	East of Linthorpe Road	West of Linthorpe Road	North of Railway	Public Institutions	
Under 1 year of age ..	30	79	24	7	28	65	29	4	33	94	44	1	50	89	27	8	612
1 year and under 5 years ..	15	32	16	7	17	22	8	1	22	37	16	5	27	38	39	3	305
5 years and under 10 years ..	3	2	4	2	1	1	3	..	3	5	3	5	3	8	3	4	50
10 years and under 15 years ..	2	3	2	2	2	2	2	3	1	2	2	1	5	6	1	1	37
15 years and under 25 years ..	4	8	4	4	5	8	4	6	2	6	2	3	5	12	1	7	81
25 years and under 65 years ..	40	46	22	47	31	53	29	34	22	38	27	30	38	52	26	28	563
65 years and over ..	17	16	4	29	21	24	8	14	22	22	9	24	17	22	8	23	280
Totals ..	111	186	76	98	105	175	83	62	105	204	103	69	145	227	105	74	1,928

551

481

425

471

TABLE V.—Deaths in Public Institutions of Middlesbrough during the year 1904.

Institutions.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.
The Work-house ..	21	17	25	16	14	16	15	14	12	11	17	22	200
Infirmary ..	10	8	8	4	8	3	6	6	8	7	7	7	82
Sanatorium	1	2	6	1	..	..	3	3	2	..	2	1	21
Totals ..	32	27	39	21	22	19	24	23	22	18	26	30	303

48 of these were removed from East of Linthorpe Road.
 92 " " West of Linthorpe Road.
 119 " " North of the Railway.
 44 were Non-residents.

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TABLE VI.—Notifications received from Medical Practitioners during the various months of 1904.

MONTH	Small Pox	Scarlet	Diphtheria	Enteric	Continued	Typhus	Puerperal	Mem. Croup	Erysipelas	Totals
January	2	21	10	7	..	..	..	..	10	50
February	5	22	11	8	..	1	..	..	4	51
March .. ..	..	29	8	5	..	..	2	1	6	51
April	1	23	2	4	..	..	1	1	4	36
May .. ..	..	24	6	..	..	..	..	..	5	35
June .. ..	..	30	7	5	..	..	..	..	4	46
July	1	40	4	1	..	..	..	..	4	50
August .. ..	..	66	5	3	..	..	1	..	4	79
September .. ..	..	64	6	17	..	..	1	..	6	94
October .. ..	..	127	6	8	..	..	..	..	10	151
November	3	93	10	4	..	..	..	1	15	126
December	3	73	4	5	..	..	2	1	10	98
Totals	15	612	79	67	..	1	7	4	82	867

TABLE VII.—Showing the Wards in which Notifiable Diseases occurred during 1904.

WARD	Small Pox	Scarlet	Diphtheria	Enteric	Continued	Typhus	Puerperal	Croup	Erysipelas	Total
Ayresome	1	162	9	4	..	..	1	..	13	190
Acklam	3	71	8	6	..	..	..	..	4	92
Cannon .. ..	..	39	2	6	..	..	2	1	6	56
Cleveland .. ..	..	24	3	8	..	..	1	..	7	43
Exchange	1	34	7	8	..	..	..	..	8	58
Grove Hill .. ..	..	86	12	10	..	..	..	..	8	116
Linthorpe .. ..	..	83	2	1	..	..	..	..	4	90
Marsh	5	22	20	6	..	1	1	..	14	69
Newport	4	79	7	14	..	..	1	2	9	116
Vulcan	1	12	9	4	..	..	1	1	9	37
Totals	15	612	79	67	..	1	7	4	82	867

TABLE VIII.—Deaths from the principal Zymotic Diseases during 1904.

DISEASES.	East of Linthorpe Road	West of Linthorpe Road	North of Railway.	Public Institutions.	Totals.
Measles	17	5	16	1	39
Scarlet Fever ..	3	2	..	6	11*
Diphtheria	3	4	3	4	14*
Enteric Fever ..	..	5	3	10	18
Diarrhœa	16	89	34	..	139
Whooping Cough ..	7	11	7	..	25
Totals ..	46	116	63	21	246

*Including deaths of Non-Residents.

TABLE IX.—Showing the number of Enteric Fever Cases and the various Wards in which they occurred during the year 1904.

MONTH	Ayresome	Acklam	Cannon	Cleveland	Exchange	Grove Hill	Linthorpe	Marsh	Newport	Vulcan	Total
January	2	..	1	..	..	2	..	1	1	..	7
February .. .	..	..	3	..	..	3	..	1	1	..	8
March .. ..	..	..	..	1	..	1	..	..	3	..	5
April	1	1	..	1	..	1	..	..	..	..	4
May	Nil.	..	..	..	..	..	..	..	..	..	Nil.
June .. ..	..	1	1	..	..	..	..	1	1	1	5
July .. ..	..	..	..	..	..	..	..	..	1	..	1
August	1	..	..	1	..	..	..	..	1	..	3
September ..	..	2	..	1	7	1	1	..	4	1	17
October .. ..	..	1	..	2	1	1	..	1	..	2	8
November ..	..	1	..	2	..	..	..	..	1	..	4
December ..	..	..	1	..	..	1	..	2	1	..	5
Totals ..	4	6	6	8	8	10	1	6	14	4	67

TABLE X.—Showing the number of Enteric Fever Cases in the various Wards and the kind of Closet in use.

WARDS.					Ashpits.	Ashpans.	W.C.'s.	Totals.
Ayresome	..	..	..	..	..	3	1	4
Acklam	..	..	..	..	1	4	1	6
Cannon	..	..	..	..	2	4	..	6
Cleveland	..	..	..	..	3	5	..	8
Exchange	..	..	..	..	6	1	1	8
Grove Hill	..	..	..	..	..	8	2	10
Linthorpe	..	..	..	..	..	..	1	1
Marsh	..	..	..	..	..	4	2	6
Newport	..	..	..	..	1	13	..	14
Vulcan	..	..	..	..	4	..	..	4
Totals	..	..	..	..	17	42	8	67

TABLE XI.—Showing Causes of Death and Ages at Death of Persons dying in the Borough, but not belonging thereto.

AGE PERIODS	Appendicitis	Nephritis	Pneumonia	Bronchitis	Marasmus, &c.	Old Age	Accidental Injuries	Diphtheria	Stricture of Oesophagus	Bright's Disease	Scarlet Fever	Rheumatism	Heart Disease	Phthisis	Other Tubercular Diseases	Cancer	Meningitis	Enteritis	Disease of Arteries	Apoplexy	Syphilis	Totals
Under 1 year ..	..	..	..	1	3	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	5
1 and under 5 years	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	2
5 and under 10 years	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	2
10 and under 15 yrs.	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
15 and under 25 yrs.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	2
25 and under 65 yrs.	..	..	2	1	..	1	..	..	1	..	..	..	3	1	1	1	..	1	1	..	..	13
65 years and over ..	..	1	1	1	..	11	1	..	..	1	..	1	1	..	..	..	..	..	..	1	..	19
Totals ..	1	1	3	3	3	12	1	3	1	1	1	1	4	1	2	1	1	1	1	1	1	44

Belonging to the following Places :—

Thornaby ..	15	South Bank	7	Grange town	2	Normanby ..	1	Sunderland	1	Leith	..	1
North Ormesby	8	Eston ..	3	West Hartlepool	1	Guisbrough ..	1	Stockton ..	1	Stockton ..	..	—
		Redcar ..	1	Skelton ..	1	Newcastle ..	1	Newcastle ..	1	Total ..	44	

TABLE XII.—Deaths of Residents occurring in Public Institutions outside the Borough.

AGES AT DEATH	Senile Decay	Organic Brain Disease	General Paralysis of the Insane	Epilepsy	Melancholia	Phthisis	Pericarditis	Dermoid Cyst	Accidental Injuries	Cancer	Appendicitis	Pneumonia	Heart Disease	Tubercular Disease	Disease of Urinary System	Empyœma	Bright's Disease	Abscess	Disease of Intestines	Necrosis	Diabetes	Hæmorrhage	Congenital Malformation	Bronchitis	Totals
Under 1 year ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
1 and under 5 years ..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	2
5 and under 10 years ..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	2
10 and under 15 years ..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
15 and under 25 years ..	..	..	..	2	..	2	..	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	7
25 and under 65 years ..	..	7	7	..	1	1	1	1	3	1	1	1	1	..	..	1	..	1	1	1	1	1	..	..	30
65 years and over ..	3	..	..	..	1	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	7
Totals ..	3	8	7	2	2	3	1	1	4	2	1	3	1	2	1	1	1	1	1	1	1	1	1	1	50

The Public Institutions in which the above died, were :—
The Cleveland Asylum 25
and The North Ormesby Cottage Hospital 25
— 50

TABLE XIII.—Vital Statistics of Whole District during 1904 and Ten Previous Years.

YEAR	Population estimated to middle of each Year	BIRTHS.		TOTAL DEATHS REGISTERED IN THE DISTRICT				Total Deaths in Public Institutions in the District	Deaths of Non-Residents Registered in Public Institutions in the District	Deaths of Residents Registered in Public Institutions beyond the District	Net Deaths at all Ages belonging to the District	
		Number	Rate*	Under 1 Year of Age		At all Ages					Number	Rate*
				Number	Rate per 1,000 Births Registered	Number	Rate					
1	2	3	4	5	6	7	8	9	10	11	12	13
1894	83,399	2,637	35.76	381	144	1,449	17.65	162	..	..	..	..
1895	84,962	2,758	32.91	536	194	1,615	19.31	217	..	..	..	..
1896	86,991	2,747	31.70	467	170	1,686	19.64	183	..	..	..	..
1897	88,124	2,956	33.35	509	172	1,706	19.16	197	..	..	..	..
1898	89,246	2,904	32.52	566	199	1,967	22.04	369	..	..	..	..
1899	93,515	3,130	33.45	575	183	2,058	22.00	269	33	49	2,074	22.17
1900	97,007	3,343	34.46	663	198	2,407	24.81	337	39	72	2,440	25.15
1901	91,317	3,328	36.44	657	197	1,995	21.84	262	40	45	2,000	21.90
1902	93,354	3,370	36.09	616	182	1,912	20.48	309	45	45	1,912	20.48
1903	95,013	3,489	36.72	650	186	2,072	21.80	282	52	49	2,069	21.77
Averages for years 1894-1903.	90,292	3,066	34.34	562	182	1,886	20.87	258	41	52	2,099	22.29
1904	96,684	3,589	37.12	612	170	1,928	19.94	303	44	50	1,934	20.0

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

NOTE.—The deaths to be included in Column 7 of this Table are the whole of those registered during the year as having actually occurred within the district or division. The deaths to be included in Column 12 are the number in Column 7, corrected by the subtraction of the number in Column 10 and the addition of the number in Column 11.

By the term "Non-residents" is meant persons brought into the district on account of sickness or infirmity, and dying in public institutions there; and by the term "Residents" is meant persons who have been taken out of the district on account of sickness or infirmity, and have died in public institutions elsewhere.

The "Public Institutions" to be taken into account for the purposes of these Tables are those into which persons are habitually received on account of sickness or infirmity, such as hospitals, workhouses and lunatic asylums.

Total population at all ages	91,317	} at Census of 1901.
Number of inhabited houses	..	..	..	17,633
Average number of persons per house	..	..	..	5.17
Area of District in acres (exclusive of area covered by Water)	2,824				

The following Institutions within the district receive sick persons from outside the district, viz.:—The North Riding Infirmary and the Corporation Sanatorium for Infectious Diseases.

The Institutions outside the district receiving persons from the district are the North Ormesby Cottage Hospital and the Cleveland Asylum. The Union Workhouse is in the district.

TABLE XIV.—Vital Statistics of separate Localities in 1904 and previous years.

Names of Localities.	Whole District.				North of Railway.				East of Boundary Road				West of Boundary Rd			
	Population esti- mated to middle of each Year	Births registered	Deaths at all Ages	Deaths under 1 year	Population esti- mated to middle of each Year	Births registered	Deaths at all Ages	Deaths under 1 year	Population esti- mated to middle of each Year	Births registered	Deaths at all Ages	Deaths under 1 year	Population esti- mated to middle of each year	Births registered	Deaths at all Ages	Deaths under 1 year
1898 ..	89,246	2,904	1,967	566	17,842	..	368	131	41,428	..	663	200	29,976	..	574	224
1899 ..	93,515	3,130	2,074	575	17,859	..	470	138	43,503	..	681	205	32,153	..	638	227
1900 ..	97,007	3,340	2,440	663	17,859	..	578	117	44,733	..	853	233	34,415	..	903	314
1901 ..	91,317	3,328	2,000	657	15,139	..	450	127	29,083	..	507	143	47,095	..	1043	373
1902 ..	93,354	3,370	1,912	616	15,142	..	430	109	29,956	..	534	173	48,256	..	948	332
1903 ..	95,013	3,489	2,069	645	15,142	..	451	120	30,918	..	521	155	48,953	..	1085	370
Averages of Years 1898 to 1903	93,242	3,260	2,077	620	1,497	..	457	123	36,603	..	626	184	40,141	..	865	306
1904 ..	96,684	3,589	1,934	608	15,142	..	494	124	31,673	..	528	141	49,869	..	912	327

(b) Deaths of residents occurring in public institutions beyond the district are included in sub-columns a of this table, and those of non residents registered in public institutions in the district excluded.

(c) Deaths of residents occurring in public institutions, whether within or without the district, are allotted to the respective localities according to the addresses of the deceased.

TABLE XV.—Cases of Infectious Diseases notified in Middlesbrough during the year 1904.

INFECTIOUS DISEASE.	CASES IN WHOLE DISTRICT.							TOTAL CASES NOTIFIED IN EACH DISTRICT.			TOTAL CASES REMOVED FROM EACH DISTRICT.		
	At all Ages	At Ages						E.	W.	N.	E.	W.	N.
		Under 1	1 to 5	5 to 15	15 to 25	25 to 65	65 & over						
Small-Pox ..	14	..	..	1	3	10	..	1	8	5	1	8	5
Scarlet Fever	612	8	182	378	31	13	..	189	399	24	125	353	21
Enteric Fever	67	..	4	19	18	25	1	22	38	7	9	22	3
Diphtheria ..	79	3	24	40	5	7	..	28	28	23	8	5	9
Membranous Croup ..	4	1	3	..	..	..	..	..	3	1	..	..	1
Puerperal Fever	7	..	..	..	4	3	..	1	5	1	..	..	..
Erysipelas ..	82	2	..	9	13	53	5	23	29	20	..	..	..
Typhus Fever (doubtful)	1	..	..	1	..	..	..	..	..	1	..	..	1
Small-Pox (doubtful)	1	..	..	..	..	1	..	1	..	..	1	..	..
Totals ..	867	14	213	448	74	112	6	265	520	82	144	388	40

557 Cases removed to the Sanatorium.

15 Cases of Small-Pox removed to Hemlington.

TABLE XVI.—Causes of, and Ages at, Death during Year 1904.

CAUSES OF DEATH.	Deaths in whole District at subjoined Ages.							Deaths in Localities (at all ages)			Deaths in Public Institutions
	All Ages.	Under 1 Yr.	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards	East of Linthorpe Road	West of Linthorpe Road	North of the Railway	
Small-Pox .. ..	..	..	..	..	..	..	..	..	..	..	..
Measles	39	7	31	1	..	..	..	17	5	17	1
Scarlet Fever ..	10	..	6	3	1	..	..	4	6	..	6
Whooping Cough ..	25	12	12	1	..	..	..	7	11	7	..
Diphtheria and Membranous Croup	11	2	4	5	..	..	..	3	4	4	4
Croup	5	..	5	..	..	..	..	1	3	1	..
Fever { Typhus .. ..	..	..	..	..	..	..	..	..	..	..	..

Enteric .. ..	..	..	..	..	..	..	..	..	..	..	..
Other continued ..	18	..	1	3	7	5	2	3	11	4	10
Epidemic Influenza ..	4	..	..	..	..	..	..	..	..	..	..
Cholera .. ..	..	..	..	..	..	3	1	1	2	1	..
Plague .. ..	..	..	..	..	..	..	..	..	..	..	..
Diarrhoea	139	109	29	..	..	..	1	16	89	34	..
Enteritis	57	37	14	1	1	2	2	19	25	13	3
Puerperal Fever ..	4	..	..	..	3	1	..	..	4	..	..
Erysipelas	1	..	..	..	..	1	..	1	..	..	..
Other Septic Diseases	5	..	..	1	2	2	..	2	2	1	2
Phthisis (Pulmonary Tuberculosis) ..	124	1	5	10	24	80	4	41	51	32	16
Other Tubercular Diseases	96	34	36	14	3	8	1	18	57	21	5
Cancer, Malignant Disease	71	..	..	..	1	50	20	22	32	17	16
Bronchitis	107	33	19	..	..	32	23	36	45	26	13
Pneumonia	265	64	79	9	16	85	12	71	116	78	28
Pleurisy	8	..	1	1	1	4	1	3	3	2	1
Other Diseases of Respiratory Organs ..	23	2	..	3	1	10	7	9	11	3	3
Alcoholism .. ..	..	..	..	..	..	..	..	..	..	..	..
Cirrhosis of Liver ..	16	..	..	..	..	12	4	3	6	7	2
Venereal Diseases ..	16	13	1	..	..	1	1	2	9	5	1
Premature Birth ..	57	57	..	..	..	..	..	14	36	7	..
Diseases and Accidents of Parturition	13	1	..	..	3	9	..	4	5	4	2
Heart Disease	131	1	..	4	4	85	37	45	56	30	24
Accidents	53	5	6	8	5	27	2	15	18	20	27
Suicides	3	..	..	..	..	2	1	..	3	..	..
All other Causes ..	633	231	54	24	13	162	149	171	302	160	139
All Causes	1934	608	304	88	85	581	268	528	912	494	303

TABLE XVII. RETURN OF DEATHS FOR THE YEAR 1904.

CAUSE OF DEATH.	South of Railway—East of Linthorpe Road.							South of Railway—West of Linthorpe Road.							North of Railway.							Public Institutions.							Grand Totals						
	Under 1 Yr.	1 Yr. and under 5.	5 Yrs. and under 10.	10 Yrs. and under 15.	15 Yrs. and under 25.	25 Yrs. and under 65.	65 Yrs. and upwards.	Total.	Under 1 Yr.	1 Yr. and under 5.	5 Yrs. and under 10.	10 Yrs. and under 15.	15 Yrs. and under 25.	25 Yrs. and under 65.	65 Yrs. and upwards.	Total.	Under 1 Yr.	1 Yr. and under 5.	5 Yrs. and under 10.	10 Yrs. and under 15.	15 Yrs. and under 25.	25 Yrs. and under 65.	65 Yrs. and upwards.	Total.											
I.—Specific, Febrile, or Zymotic Diseases.																																			
1. Miasmatic Diseases.																																			
1.—Measles ..	4	13	..	..	..	..	..	17	2	3	..	..	..	..	..	5	1	14	1	..	..	..	..	..	..	16	..	1	..	..	..	1	39
2.—Scarlet Fever (Scarlatina) ..	..	2	..	1	..	..	..	3	..	1	..	..	1	..	..	2	..	..	..	..	..	..	..	..	..	..	1	3	2	..	..	6	11
3.—Diphtheria ..	..	1	2	..	..	..	..	3	1	2	..	..	..	..	..	4	1	..	1	..	..	..	..	..	..	3	..	3	1	..	..	4	14
4.—Whooping Cough ..	4	3	..	..	..	..	..	7	3	8	..	..	..	..	..	11	5	1	1	..	..	..	..	..	7	..	..	..	..	..	..	25	
5.—Enteric or Typhoid Fever ..	..	..	..	..	..	..	..	..	..	..	..	1	2	1	1	5	..	1	..	1	1	..	..	..	3	..	..	1	4	1	10	18	
6.—Influenza ..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	4	
2. Diarrheal Diseases.																																			
1.—Diarrhoea, Dysentery	13	3	..	..	..	..	..	16	7	14	..	..	..	..	1	89	22	12	..	..	..	..	..	..	..	34	..	..	..	..	..	..	139
3. Venereal Diseases.																																			
1.—Syphilis ..	1	1	..	..	..	..	..	2	7	..	..	..	..	1	1	9	5	..	..	..	1	..	..	..	..	5	..	..	..	..	1	17	
4. Septic Diseases.																																			
1.—Erysipelas ..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
2.—Pyæmia, Septicæmia..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	5	5
3.—Puerperal Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	3	1	..	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	
II.—Dietic Diseases.																																			
1.—Chronic Alcoholism, Delirium Tremens ..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	..	..	..	..	..	..	5	

Return of Deaths—continued.

CAUSE OF DEATH.	South of Railway—East of Linthorpe Road.								South of Railway—West of Linthorpe Road.								North of Railway.								Public Institutions.								Grand Totals			
	Under 1 Yr.	1 Yr. and under 5	5 Yrs. and under 10	10 Yrs. and under 15	15 Yrs. and under 25	25 Yrs. and under 65	65 Yrs. and upwards	Total	Under 1 Yr.	1 Yr. and under 5	5 Yrs. and under 10	10 Yrs. and under 15	15 Yrs. and under 25	25 Yrs. and under 65	65 Yrs. and upwards	Total	Under 1 Yr.	1 Yr. and under 5	5 Yrs. and under 10	10 Yrs. and under 15	15 Yrs. and under 25	25 Yrs. and under 65	65 Yrs. and upwards	Total												
III.—Constitutional Diseases.																																				
1.—Rheumatic Fever and Rheumatism of the Heart	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
2.—Rheumatism	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5
3.—Gout	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
4.—Rickets	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3
5.—Cancer, Malignant Disease	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	69
6.—Tabes Mesenterica	3	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	18	
7.—Tubercular Meningitis, Hydrocephalus	1	5	1	3	8	25	..	7	3	8	1	2	10	28	..	12	2	3	1	1	3	2	15	..	..	..	..	..	..	..	..	..	..	1	25
8.—Phthisis	1	..	..	..	..	..	..	38	..	3	1	..	..	..	..	46	..	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	16	123
9.—Other Tubercular and Scrofulous Diseases	1	1	1	3	11	11	4	2	2	5	..	35	2	1	4	3	4	52
10.—Purpura, Hemorrhagic Diathesis	1	..	..	..	..	..	1	2	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	
11.—Anæmia, Chlorosis, Leucocythæmia	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	3	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	
12.—Glycosuria, Diabetes, Mellitus	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	
IV.—Developmental Diseases.																																				
1.—Premature Birth	14	..	..	..	..	..	..	14	36	..	..	..	..	..	..	36	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	57
2.—Atelectasis	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	
3.—Congenital Malformations	2	..	..	..	..	..	..	2	8	..	..	..	..	..	..	8	2	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	15
4.—Old Age	..	..	..	..	..	3	24	27	..	..	..	..	..	..	5	19	24	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	73
																																			132	

Return of Deaths—continued.

CAUSE OF DEATH.	South of Railway—East of Linthorpe Road.								South of Railway—West of Linthorpe Road.								North of Railway.								Public Institutions.								Grand Totals			
	Under 1 Yr.	1 Yr. and under 5	5 Yrs. and under 10	10 Yrs. and under 15	15 Yrs. and under 25	25 Yrs. and under 65	65 Yrs. and upwards	Total	Under 1 Yr.	1 Yr. and under 5	5 Yrs. and under 10	10 Yrs. and under 15	15 Yrs. and under 25	25 Yrs. and under 65	65 Yrs. and upwards	Total	Under 1 Yr.	1 Yr. and under 5	5 Yrs. and under 10	10 Yrs. and under 15	15 Yrs. and under 25	25 Yrs. and under 65	65 Yrs. and upwards	Total												
V.—Local Diseases.																																				
1. DISEASE OF NERVOUS SYSTEM.																																				
1.—Inflammation of Brain or Membranes	7	5	2	..	14	13	10	1	1	..	4	..	29	1	6	1	2	10	1	..	1	2	..	10	..	14	67		
2.—Apoplexy, Softening of Brain, Hemiplegia, Brain Paralysis	..	..	..	..	..	6	6	12	..	..	..	..	..	13	10	23	..	..	..	..	1	..	..	2	3	..	..	..	..	2	2	4	42	
3.—Epilepsy	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	
4.—Convulsions	11	3	..	1	1	..	..	16	20	3	1	..	..	..	..	24	14	2	..	..	..	1	..	..	17	..	..	..	..	..	..	..	57	
5.—Laryngismus Stridulus (Spasm of Glottis)	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1		
6.—Paralysis Agitans, Paraplegia, Disease of Spinal Cord	..	..	..	..	..	1	..	1	..	..	..	..	..	1	..	1	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	3		
7.—Other Diseases of Nervous System	..	..	..	..	..	3	..	3	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4		
2. DISEASES OF ORGANS OF SPECIAL SENSE.																																				
1.—(e.g. Ear, Eyes and Nose)	..	1	..	..	..	..	..	1	..	2	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3		
3. DISEASES OF CIRCULATORY SYSTEM.																																				
1.—Pericarditis	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2		
2.—Diseases of Heart	..	1	..	1	..	24	12	38	..	..	1	..	..	25	18	46	..	..	1	..	1	18	2	23	..	..	..	..	..	18	6	24	131	
3.—Aneurism	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	..	..	..	..	..	2	..	2	..	..	..	..	..	1	..	1	5	
4.—Embolism, Thrombosis	..	..	..	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	4	
5.—Other Diseases of Blood Vessels	..	..	..	..	..	3	1	4	..	..	1	..	..	..	..	1	1	..	..	..	..	..	..	..	1	..	..	..	..	1	..	1	7	

Return of Deaths—continued.

CAUSE OF DEATH.	South of Railway—East of Linthorpe Road.								South of Railway—West of Linthorpe Road.								North of Railway.								Public Institutions.								Grand Totals
	Under 1 Yr.	1 Year and under 5	5 Yrs. and under 10	10 Yrs. and under 15	15 Yrs. and under 25	25 Yrs. and under 65	65 Yrs. and upwards	Total	Under 1 Yr.	1 Yr. and under 5	5 Yrs. and under 10	10 Yrs. and under 15	15 Yrs. and under 25	25 Yrs. and under 65	65 Yrs. and upwards	Total	Under 1 Yr.	1 Yr. and under 5	5 Yrs. and under 10	10 Yrs. and under 15	15 Yrs. and under 25	25 Yrs. and under 65	65 Yrs. and upwards	Total									
4. DISEASES OF RESPIRATORY SYSTEM.																																	
1.—Croup ..	1							3	1							1																	
2.—Laryngitis ..	1							1																									
3.—Bronchitis ..	13	10						34	6							20	3																
4.—Pneumonia ..	16	22	2	1	4	17	5	67	32	2	2	1	6	31	4	108	16	24	1	1	2	15	2	3	62								
5.—Pleurisy ..								3	1							2																	
6.—Emphysema, Asthma ..								4						3	3	6																	
7.—Other Diseases of Respiratory System ..			1					2					1	2		3																	
5. DISEASES OF DIGESTIVE SYSTEM.																																	
1.—Dentition ..								6	4							10	1																
2.—Disease of Stomach ..	3		1					5	2					2	1	10																	
3.—Enteritis ..	12	2						17	5							25	5	7			1												
4.—Peritonitis ..								3	1							1	1																
5.—Obstructive Disease of Intestines ..																																	
6.—Cirrhosis of Liver ..								2						4	2	6																	
7.—Jaundice and other Diseases of Liver ..	1							1	2	1				1		4																	
8.—Other Diseases of Digestive System ..																																	
6. DISEASES OF LYMPHATIC SYSTEM.																																	
1.—(e.g. of Lymphatics and of Spleen) ..																																	

Return of Deaths—continued.

CAUSE OF DEATH.	South of Railway—East of Linthorpe Road.								South of Railway—West of Linthorpe Road								North of Railway.								Public Institutions.								Grand Totals		
	Under 1 Yr.	1 Yr. and under 5	5 Yrs. and under 10	10 Yrs. and under 15	15 Yrs. and under 25	25 Yrs. and under 65	65 Yrs. and upwards	Total	Under 1 Yr.	1 Yr. and under 5	5 Yrs. and under 10	10 Yrs. and under 15	15 Yrs. and under 25	25 Yrs. and under 65	65 Yrs. and upwards	Total	Under 1 Yr.	1 Yr. and under 5	5 Yrs. and under 10	10 Yrs. and under 15	15 Yrs. and under 25	25 Yrs. and under 65	65 Yrs. and upwards	Total	Under 1 Yr.	1 Yr. and under 5	5 Yrs. and under 10	10 Yrs. and under 15	15 Yrs. and under 25	25 Yrs. and under 65	65 Yrs. and upwards	Total			
I.—Violence.																																			
ACCIDENT, NEGLIGENCE, &c.																																			
Burn and Scald																																			
Drowning																																			
Suffocation	1							1	2																										
Hernia																																			
Accidental Injuries		1	1	1				5	1																										
II.—VICIPE.																																			
Hanging																																			
Otherwise																																			
III.—Deaths from Ill- nesses.																																			
Dropsy																																			
Debility, Atrophy, Inanition	27						1	28	52	3								24	2																
Mortification																																			
Tumour								1																											
Abscess								2										1																	
Hæmorrhage								5	2																										
Found Dead (cause not stated)																																			
Other Causes not Specified or Ill- defined																																			
Total	141	81	10	10	16	131	77	466	327	129	16	13	34	189	84	792	124	79	13	7	11	104	29	367	20	16	11	7	20	139	90	303	1928		

**ANNUAL REPORT OF THE CHIEF SANITARY INSPECTOR
FOR THE YEAR 1901.**

Sanitary Department,
Municipal Buildings,

To the Chairman and Members of the Sanitary Committee. Middlesbrough.

Gentlemen,—I have the honour to lay before you my Eighteenth Annual Report on the operation of the Sanitary Department.

During that period there were 5,911 Notices served on Owners to abate the undermentioned Nuisances :—

Back Yards Relaid with Scoriæ Bricks, Concrete, &c...	..	272
Back Yards Repaired .. .. .	..	158
Back Passages Relaid with Scoriæ Bricks .. .. .	..	17
Back Passages Repaired .. .. .	..	42
Dilapidated Ashpits and Privies .. .. .	..	673
Old Ashpits Abolished .. .. .	..	49
Pail Closets Substituted .. .. .	..	86
Pail Closets Abolished .. .. .	..	7
Water Closets Substituted .. .. .	..	8
Old Ashpits Abolished .. .. .	..	4
Water Closets Substituted .. .. .	..	6
Dilapidated Ashpans (Renewed) .. .. .	..	1,910
Foul Drains Cleansed .. .. .	..	602
Defective Drains, New Gullies Refixed .. .. .	..	166
Sink Drains Disconnected from Sewers and Trapped .. .. .	..	126
Dilapidated Spouting and Fallpipes .. .. .	..	486
Ashpit Doors Off (New Ones Fixed) .. .. .	..	152
Pail Closet Doors Off (New Ones Fixed) .. .. .	..	779
Privy Doors and Seats Off (New Ones Fixed) .. .. .	..	673
Defective Pail Closets Reduced to Size of Ashpans .. .. .	..	80
Offensive Deposits .. .. .	..	15
Dilapidated Yard Walls .. .. .	..	34
Dilapidated Dwellinghouse Roofs .. .. .	..	264
Foul Cellar Drains Cleansed .. .. .	..	13
Foul W.C. Drains .. .. .	..	8
Water Closets Repaired .. .. .	..	7

New Water Closets Fixed	..	..	..	..	..	4
Offensive Yards, Fowls Removed	..	..	..	..	..	60
Dilapidated Stable Floors, Relaid with Concrete	..	..	..	..	..	2
Foul Stable Drains	..	..	..	..	..	3
Horses kept in Back Yards	..	..	..	..	..	2
Dilapidated Sinkstones Renewed	..	..	..	..	..	46
Inadequate Water Supply	..	..	..	..	..	27
Dilapidated Kitchen and Scullery Floors	..	..	..	..	..	121
Dirty and Filthy Premises	..	..	..	..	..	17
Overcrowding	..	..	..	..	..	7
Dilapidated Brickwork over Gullies	..	..	..	..	..	19
Dilapidated Fireplaces	..	..	..	..	..	7
Damp Bedroom Walls	..	..	..	..	..	10
Dilapidated House and Scullery Walls	..	..	..	..	..	75
Dilapidated Bedroom Floors	..	..	..	..	..	5
Dilapidated Windows	..	..	..	..	..	48
Dilapidated Ceilings	..	..	..	..	..	32
Cellar Filled up	..	..	..	..	..	1
Offensive Wells Filled up	..	..	..	..	..	2
Dilapidated Back Doorsteps	..	..	..	..	..	6
Defective Set-pot Chimneys	..	..	..	..	..	5
Dilapidated Cellar Floors Relaid with Concrete	..	..	..	..	..	3
Filthy W.C. to Cleanse	..	..	..	..	..	1
Pigs to Remove	..	..	..	..	..	1
New Pail Closet Built	..	..	..	..	..	1
Premises Limewashed	..	..	..	..	..	2
Manure-pits Built	..	..	..	..	..	4
Dilapidated Cowshed Floor Relaid with Concrete	..	..	..	..	..	1
Grates Provided for Gullies	..	..	..	..	..	42
Dilapidated Gully Covers, New Ones Fixed	..	..	..	..	..	65
Dilapidated Workshop Roof	..	..	..	..	..	1
Public Health Notices	..	..	..	..	..	1,630
Whitewashing	..	..	..	..	..	190

The foregoing particulars only represent the cases where formal Notices have been served, and do not include Nuisances prevented or abated by the verbal request of your Inspectors.

One Notice frequently deals with several separate Nuisances.

It will be satisfactory for Members to learn that all the above work (with but two exceptions) have been executed without having to resort to legal proceedings.

One Property Owner disputed our right to compel him to limewash the public yards occupied by his tenants, and requested that Notices should be served upon his tenants. This would have been manifestly unfair, as in this class of property, the tenants often remain but a few weeks, and it is impossible to persuade them to limewash and cleanse what they describe as other people's dirt.

After every other means had failed, we were reluctantly compelled to institute legal proceedings, when the Magistrates decided in our favour, ordering the work to be done within seven days, and Defendant to pay the costs of the case.

In the other case, a widow, who managed her own property, simply ignored our authority, and refused to abate the Nuisances that existed on her cottage property. An order was also made in this case, and the Defendant mulcted in costs.

MAIN DRAINS.

In addition to the above, our Staff have cleared 8,114 yards of Main Drains in back passages, and relaid 633 yards with proper gradients.

189 yards of Glazed Stoneware Sanitary Pipes have also been relaid, in lieu of old broken land tiles, segment, etc.

2 New Flushing and Examination Chambers have been constructed, 5 new Gullies and 17 Grates and Frames have also been fixed.

100 Manholes (in the old parts of the town) have been regularly emptied and cleansed as often as found necessary.

1,211 Choked Drains have also been cleared by the aid of Cooper's Patent Vacuum Pump, free of charge to the owners.

DISEASED AND UNWHOLESOME FOOD.

During the year 39 seizures of Diseased and Unwholesome Food were made, as shown in the undermentioned Table :—

Number of Seizures.	Article.	Weight.
11	Beef	4,230 lbs.
6	Mutton	181 „
11	Pork	980 „
3	Veal	250 „
2	Pears	304 „

Number of Seizures.	Article.	Weight.
2	Bananas	172 lbs.
1	Potatoes	323 „
1	Grapes	10 boxes.
1	Cherries	20 baskets.
1	Strawberries	70 pecks.

In every case the articles of food were destroyed with the consent of the owners, notice to inspect the same having been previously given to your Inspector.

SLAUGHTER HOUSES.

Number on Register	..	..	..	(Private)	39
Do.	..	..	..	(Public)	1
					<u>40</u>

The past year has been an uneventful one with regard to private Slaughter Houses. Butchers evidently recognising the Committee's unwillingness to increase the number of these undesirable licenses, have, at any rate for the present, ceased to agitate for additional facilities being granted for slaughtering.

The income from the public Slaughter Houses is far below what might reasonably have been expected, when we consider the spirited manner in which the trade have protested in previous years their inability to secure accommodation to carry on their business. The income this year is less than last, although the population has steadily increased.

However, the truth is, that the butchers objection to the public Slaughter House, is not so much its position, or structure, but their desire to be free and unfettered. They absolutely object to slaughter under direct supervision.

Many of the SO-CALLED private Slaughter Houses are in reality simply miniature public ones, into which a number of butchers crowd and suffer any inconvenience in their anxiety to avoid municipal control. In numerous instances the fortunate holders of these licenses largely augment their incomes, whilst the public Slaughter House fails to pay its way, and has to be supported by the rates.

So long as this state of affairs continues it is difficult to understand what arguments can be urged to induce this Committee to grant additional private licenses. I am of opinion that less slaughtering is done in Middlesbrough now than there was twenty years ago, owing to the quantity of frozen, Colonial, and tinned meat that is now sold.

During the year, the Middlesbrough Co-operative Society have demolished their old Slaughter House and forfeited their perpetual license. In its place they have erected a thoroughly modern and well equipped abattoir, for which an annual license has been granted.

The buildings also include cold stores, and departments for tripe dressing, bone boiling, bacon curing, etc. ; all the appliances being of the most modern and elaborate description.

When the time arrives for this Committee to build a Municipal Abattoir, we shall not have to look beyond this building for a model.

OFFENSIVE TRADES.

Number on Register :—

Tripe Boilers	..	..	..	..	..	14
Tallow Chandler	..	..	..	..	..	1
Tallow Melter	..	..	..	..	..	1
Gut Scrapers	..	..	..	..	..	3
						<u>19</u>

The above have been regularly inspected, and, as far as the nature of the trades will allow, have been kept in a fairly clean condition.

PUBLIC BAKEHOUSES.

Number on Register 10
Situating as under :—

Adam Street (Back).
77, Stockton Street.
24, Stockton Street.
41, Milbank Street.
29, Durham Street.
40, Fleetham Street.
6, Vine Street.
101, Russell Street.
15, Elizabeth Street.
88, Denmark Street.

These have been regularly inspected during the past year, and found to be kept in a clean condition. A verbal notice is usually sufficient for the occupier to have any nuisance abated, or limewashing done.

FOOD AND DRUGS.

During the year 190 samples of Food and Drugs have been procured and submitted to the Borough Analyst (Mr. J. E. Stead) for analysis, with the undermentioned result;:—

Samples.	Number			Fat	
	Submitted.	Genuine.	Doubtful.	Extracted.	Adulterated.
Milk	57	54	..	3	..
Sterilized Milk ..	1	..	..	1	..
Condensed Milk ..	6	6	..	..	..
Butters	62	61	..	..	1
Cheese	26	24	..	..	2
Lard	20	20	..	..	..
Margarine ..	2	2	..	..	..
Sugar	1	1	..	..	..
Golden Syrup ..	1	1	..	..	..
Cocoa Extract ..	1	1	..	..	..
Potted Meat ..	1	1	..	..	..
Brandies	10	7	..	..	3
Disinfectants ..	2	2	..	..	..
Totals ..	190	180	..	4	6

Of the six samples returned adulterated, three were brandy. In each case your Inspector was asked by the Licensed Victualler to have the sample analysed at his cost. In two cases the brandy analysed had not been offered for sale; in the third case the brandy was immediately withdrawn from sale.

The sample of butter (?) returned adulterated was simply Margarine, containing as it did 97 per cent. of fats other than butter fats. This was purchased by Deputy unofficially in the public market late on a Saturday night. We kept a careful watch on the stall for several weeks afterwards, but he failed to display any butter for sale. We have since obtained samples but they have proved to be genuine.

Two samples of cheese upon analysis were found to be margarine cheese. In the first case the purchase was made from an old widow whom we were quite satisfied had paid the full price for the genuine article, and was unaware that she was breaking the law. We made enquiries and followed up the person who had supplied her, and had the satisfaction of having him convicted, and, in default of paying a fine of Ten Pounds, he was committed to prison for two months with hard labour.

Three samples of Milk were returned slightly below the Standard fixed by the Board of Agriculture, being deficient in cream. Owing to the great difficulty experienced in obtaining a conviction in former cases, the Committee decided not to prosecute. The sample of sterilized Milk was sent to the Analyst owing to the serious illness of a child that was fed entirely on this article; the Medical Attendant being of opinion that the Milk contained some preservative matter that was responsible for the mischief.

The Analyst reported the sample free from any extraneous matter but deficient in fat to the extent of 16·6. This could readily be accounted for, only about a fourth of the bottle being sent, the other three parts having been used.

FRIED FISH SHOPS.

There are 77 shops in the Borough for the sale of Fried Fish and Chipped Potatoes and their numbers are still increasing.

They are remarkably well fitted up, and the materials used for cooking are of the best quality.

The public now recognise them as a necessity, and, owing to the care taken in fitting up premises used for this purpose and the minimised smells they create, we rarely have any complaints regarding them.

They are chiefly established in the most populous districts, and as they undoubtedly offer to the working classes cheap, wholesome, nutritious food in a very convenient and appetizing form, they are greatly appreciated.

COWSHEDS, DAIRIES AND MILK SHOPS.

COWSHEDS.

Number on Register	..	..	..	..	27
Number of Cows	..	..	..	..	167

The floor of one Cowshed has been relaid with cement concrete, and improvements have been made to its lighting and ventilation.

The whole of the Cowsheds are limewashed each year.

DAIRIES.

Number on Register for year ending December					
31st, 1904	..	..	..	..	12
Number of applications for registration	..	..			2

MILK SHOPS.

Number on Register for year ending December	
31st, 1904	430
Number of applications for registration	64
Number of Milk Shops closed	29

The above have been regularly inspected and kept in a fairly clean condition.

INFECTIOUS DISEASE.

During the year 867 cases of Infectious Disease were notified to the Medical Officer of Health.

Enquiries were made into their cause or origin, necessitating 3,468 visits by your Inspectors. 557 Cases were removed to the Sanatorium for treatment.

15 Cases of Small-Pox were also removed to the Small-Pox Hospital at Hemlington.

When the Patients are treated in their own homes, a printed List of Instructions to be observed is left at each house ; all necessary Sanitary Appliances, Disinfectants and Antiseptic Oil are supplied free, and the rooms, bedding, clothes, etc., disinfected immediately on the recovery or death of the Patient.

787 Bedrooms have also been disinfected.

COMMON LODGING HOUSES.

There are 21 Common Lodging Houses in the Borough, all situated on the North Side of the Railway.

The Houses registered contain 176 rooms for sleeping purposes, and afford accommodation for 1,029 lodgers nightly.

They have been regularly inspected, and kept, as far as possible, in a clean state.

SMOKE OBSERVATIONS, 1904.

Time limit for Middlesbrough 15 minutes (black smoke) per hour.

No.	NAME OF FIRM.	ADDRESS.	No. of Observations taken (60 min.)	No. of Minutes Black Smoke per Hour.	
				Maximum	Average
1	Middlesbrough Guardians	Workhouse	6	1½	.25
2	Richard Hill & Co., Ltd.	The Marshes.. ..	1	..	0.00
3	Corporation Electricity Works	Snowdon Road ..	1	..	0.00
4	Tees-side Laundry ..	Parliament Road ..	1	2	2.00
5	Pacitto Brothers ..	Brentnall Street ..	1	1	1.00
6	Corporation Baths ..	Newport Crescent ..	1	4	4.00
7	R. Hill & Co.	Newport Wire Mills (No. 1 Chimney)	2	8	4.00
	Do. ..	(No. 2 Chimney)	3	26½	24.8
8	J. Crombie & Sons ..	West Marsh	4	14½	8.00
9	R. Craggs & Sons, Ltd. ..	The Marshes.. ..	2	6	5.75
10	W. Richards & Sons, Ltd.	Ormesby Road ..	3	28½	14.00

Total Number of Observations 25

We have drawn the attention of the owners of numbers 7 and 10 to the nuisance caused by the emission of black smoke from their chimneys, and they have each expressed their willingness to adopt any apparatus on the market that will successfully minimise or cure the nuisance. On this undertaking the Committee deferred taking action.

COLLECTION OF NIGHTSOIL 1904.

MONTH.			Total Loads Collected	Barged to Sea	Sent to Farmers.	Number of trips to Sea.
January	..	..	.. 3,771	2,398	904	7
February	..	..	.. 2,979	1,771	935	7
March	..	..	.. 2,808	1,426	1,260	5
April	..	..	.. 3,558	1,901	1,088	8
May	..	..	.. 2,795	Nil.	2,397	Nil.
June	..	..	.. 2,861	739	1,858	3
July	..	..	.. 3,455	2,298	496	9
August	..	..	.. 2,815	1,588	935	5
September	..	..	.. 2,873	1,173	1,670	3
October	..	..	.. 3,628	351	2,220	2
November	..	..	.. 3,032	257	2,272	2
December	..	..	.. 3,866	1,037	2,014	3
Totals	..	..	.. 38,441	14,939	18,049	54

During the months of May and June 1,617 tons of Nightsoil were given away, owing to the Hopper Barge being laid up for repairs and our inability to find a market for that amount.

Otherwise our sales have been very satisfactory and there has been a steady demand for this commodity. The dual system of selling to farmers and barging the remainder out to sea, has worked out admirably. It has enabled us to keep the Depot in Lloyd Street clear, and to realize a better price on our sales.

FACTORY AND WORKSHOPS ACTS.

I would respectfully direct the Committee's attention to the increasing demands made by the Legislature regarding the inspection of Factories and Workshops. Hitherto our energies have been directed to Workshops, Workplaces and Outworkers.

We are now held responsible for carrying out the various sanitary measures to all factories situate in the Borough. When it is remembered that the town is studded with Factories from Cargo Fleet to Newport, it will be realised that to carry out the duties efficiently, the whole time of an Inspector must be devoted to the work.

At present, one Inspector devotes a portion of his time to the special duty. It will, therefore, be necessary to appoint an additional Assistant Sanitary Inspector if this work is to be done in a thorough systematic manner.

CONCLUSION.

In conclusion, I have again great pleasure in recording the hearty co-operation I have at all times received from the Inspectors under my charge in carrying out the oft times difficult and dangerous duties imposed by the Public Health Acts, particularly to my Senior Assistant (Mr. Thomas McDonald) my special thanks are due, for his ready and willing assistance at all times.

I am, Gentlemen, your obedient Servant,

GEORGE H. ANDERSON,

Chief Sanitary Inspector.

APPENDIX A.

THE COUNTY BOROUGH OF MIDDLESBROUGH.

Infectious Diseases Hospitals—Report for the year 1904.

To the Chairman (Alderman J. McLauchlan) and Members of the
Sanatorium Committee.

Gentlemen,—During the past year 636 patients suffering from Infectious Diseases have been treated at the Sanatorium. Of these 587 were removed from the Borough of Middlesbrough and 49 were admitted from outside districts.

There were 21 deaths during the year equal to a death rate for the total cases treated of 3·3 per cent., the death rate the previous year being 8·2 per cent., the death rate for the past year being a most favourable one.

Scarlet Fever.—A severe outbreak of Scarlet Fever occurred during the second half of the past year, the admissions to the Hospital increasing month by month in the Autumn, as many as 117 cases of this fever being admitted during the month of October.

Of a total of 564 cases admitted during the year, 524 were from the Borough and 40 from outside districts. 555 recovered and 9 proved fatal, the death rate being 1·8 per cent.

The death rate amongst cases remaining at home being 4·4 per cent.

Enteric Fever.—41 cases were treated, of these 33 recovered and 8 proved fatal. The death rate being 19·5 per cent. In the previous year the death rate was 16·3 per cent. The death rate for cases treated at their own homes during 1904 was 30·3 per cent.

Diphtheria.—30 cases were treated, of these 26 recovered and 4 proved fatal. The death rate being 13·3 per cent. The death rate during the previous year being 31·6 per cent. The death rate for cases treated at home was 21·7 per cent.

Hemlington Small-Pox Hospital.

On January 1st, 1904, there were 5 patients under treatment. 18 have been admitted during the year, of whom 15 were resident in Middlesbrough and 3 were from outside districts. 3 cases remained under treatment on December 31st, 1904, the rest have been discharged cured.

Disinfection.—Owing to the large number of Scarlet Fever cases notified in the Borough during the past year there has been a corresponding increase in the number of articles disinfected, these having increased from 3,646 in 1903, to 9,170 during 1904. [For details of the articles disinfected see Table IV.

Hospital Staff.—Owing to the number of Scarlet Fever patients admitted during August, September, October and November, the Hospital was taxed to its utmost capacity, no less than 160 patients being under treatment at one time. The whole of the accommodation was required for Scarlet Fever cases and it was found necessary to refrain from admitting other diseases.

The Matron and Nursing Staff experienced an arduous and trying time and the very satisfactory low death rate points to the great care which has been exercised in dealing with the patients. Only one member of the staff contracted infectious disease during the year.

Buildings.—The extensions which have been urgently required during the past year are now completed and the furnishing of them is proceeding.

TABLE I.—The following cases were admitted to the Sanatorium during 1904.

DISEASES.		Remaining in Hospital Dec. 31st, 1903	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Scarlet Fever	..	24	16	19	27	14	21	30	37	65	70	117	73	51	564
Enteric Fever	..	4	4	6	5	1	..	4	1	2	6	6	..	2	41
Diphtheria ..	..	..	4	5	5	..	2	2	3	4	1	1	..	3	30
Typhus Fever	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
Totals ..	..	28	24	31	37	15	23	36	41	71	77	124	73	56	636

TABLE II.—The Admissions in Table I. after observation proved to be.

	Scarlet Fever	Enteric Fever	Diphtheria	Scarlet Fever and Whooping Cough	Scarlet Fever and Chicken Pox	Scarlet Fever and Measles	Syphilis	Tuberculosis	Septicemia	Influenza	Diphtheria and Scarlet Fever	Tonsillitis
Scarlet Fever	554	..	..	1	1	6	1	..	1	..	..	..
Enteric Fever	..	39	..	..	..	..	..	1	..	1	..	..
Diphtheria ..	..	..	27	..	..	..	..	..	..	..	2	1
Typhus Fever	..	..	..	..	..	..	..	1	..	..	..	..
Totals. ..	554	39	27	1	1	6	1	2	1	1	2	1

TABLE III.—The following Deaths occurred at the Sanatorium during the year 1904.

DISEASE	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Scarlet Fever .. ..	..	1	2	1	..	..	..	2	1	..	1	1	9
Enteric Fever	1	1	2	..	..	..	2	..	1	..	1	..	8
Diphtheria .. ..	..	1	..	..	..	..	1	1	..	..	..	1	4
Totals	1	3	4	1	..	..	3	3	2	..	2	2	21

Of these, 4 were deaths of cases admitted from outside districts, viz. :—

Diphtheria ..	3
Scarlet Fever ..	1
	<hr/>
	4
	<hr/>

TABLE IV.—The following Cases were admitted to the Sanatorium from Outside Districts.

DISEASES				January	February	March	April	May	June	July	August	September	October	November	December	Totals
Scarlet Fever	..	..	..	2	1	..	2	2	1	3	12	13	2	2	40
Enteric Fever	..	..	..	1	..	..	..	..	..	..	..	1	..	..	2
Diphtheria	..	..	1	..	..	..	..	..	..	1	1	1	..	3	7
Totals	..	..	1	3	1	..	2	2	1	4	13	15	2	5	49

These Cases were admitted from the following places :—

Thornaby	..	..	..	23
North Ormesby	..	..	..	3
Stokesley	..	..	..	8
Kildale	..	..	..	1
Picton	..	..	..	2
Great Ayton	..	..	..	8
Acklam	..	..	..	4
				<u>49</u>

TABLE V.—The following Articles were removed to the Sanatorium and Disinfected during the year 1904.

1904	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Totals
Beds	12	11	2	13	4	4	4	6	2	0	3	8	69
Mattresses	6	14	4	16	6	2	4	2	0	2	4	6	66
Blankets	47	76	34	87	36	22	55	69	71	130	108	59	794
Quilts and Sheets	63	97	56	49	44	42	74	111	139	154	164	95	1,088
Pillows	37	65	36	25	40	42	32	66	76	91	91	61	662
Bolsters	10	18	8	6	8	7	8	9	22	17	21	23	157
Bed Hangings	0	4	2	0	0	0	0	0	0	8	6	3	23
Carpets	0	2	4	2	0	0	0	0	0	1	1	3	13
Rugs and Mats	0	0	2	4	2	4	4	0	0	0	0	0	16
Cushions	6	4	4	6	4	3	0	6	10	11	7	13	74
Wearing Apparel	253	353	351	121	419	203	383	488	606	970	990	778	5,915
Sundry Articles	24	38	19	15	20	15	15	19	44	26	29	29	293
Totals	458	682	522	344	583	344	579	776	970	1,410	1,424	1,078	9,170

APPENDIX B.

FACTORY AND WORKSHOPS ACT, 1901.

REPORT ON THE ADMINISTRATION OF THIS ACT IN THE COUNTY BOROUGH OF MIDDLESBROUGH FOR THE YEAR 1904.

On January 1st, 1904, there were 444 Workshops on the Register, during the year 50 have been closed and 36 New Workshops have been registered, there being 430 registered Workshops at the end of the year.

1,371 visits have been paid to the above Workshops, and 95 defects noted and remedied.

The following list gives in detail the number and nature of the different trades and the persons employed therein :—

WORKSHOPS ON THE REGISTER, DECEMBER, 1904.

Nature of Trades and Number of Person Employed.

Nature of Trades.	Number of each.	Employing Males.	Females
Dress and Mantle Makers	103	..	362
Milliners	36	..	125
Tailors	48	58	155
Boot Repairers	53	137	..
Joiners and Cabinet Makers	48	302	4
Hosiery Knitters	10	..	49
Bakers	27	38	17
Plumbers	13	68	..
Blacksmiths	9	36	..
Watchmakers and Repairers	4	21	..
Tinsmiths	6	23	..
Coach Builders	5	20	..
Wheelwrights	1	2	..
Underclothing and Shirt Makers	1	..	13
Picture Framers	2	12	1
Upholsterers	6	10	7
Cycle and Motor Repairers	2	5	..

Nature of Trades	Number of each	Employing	
		Males	Females.
Slipper Makers	3	12	3
Sweet Boilers	6	13	31
Salt Packers	3	2	9
Beer Bottlers	3	15	3
Saddlers	2	9	..
Wood Carvers	1	2	..
French Polishers	2	6	..
Coopers	4	17	..
Compass Adjusters	2	12	..
Paper Bag Makers	3	..	15
Dentist	1	2	..
Leather Cutter	1	4	..
Mattress Maker	1	4	2
Scale Makers and Repairers	2	11	..
Bottle Washers	3	4	10
Glass Engravers	1	..	2
Book Binders	1	6	3
Lubricating Bag Makers	2	3	6
Marine Stores	4	1	25
Electrical Engineers	2	6	..
Engraver	1	2	..
Wireworkers	2	9	..
Clog Maker	1	2	..
Whitesmith	1	2	..
Brick Maker	3	33	..
Tallow Chandler	1	2	..
Totals	430	911	842

The following Workshops have been added to the Register during 1904 :—

List of Trades.	Number of each.	Employing	
		Males.	Females.
Dressmakers	8	..	24
Milliners	4	..	15
Tailors	5	8	15
Joiners	2	8	..
Cabinet Makers	1	8	..
Tea Packers and Blenders	1	2	..
Slipper Makers	1	2	..

Hosiery Knitters	..	..	..	..	1	..	2
Sweet Boilers	..	..	..	..	1	2	2
Plaster of Paris Modelling	..	..	..	..	1	3	..
Brush Makers	..	..	..	..	1	1	2
Boot Maker and Repairer	..	..	..	..	1	3	..
Umbrella Maker and Repairer	..	..	..	..	1	1	1
Beer Bottler	..	..	..	..	1	2	4
Plumber	..	..	..	..	1	5	..
Bakers	..	..	..	..	6	2	9
Totals					36	47	74

Workplaces.—There are 42 Workplaces on the Register, 84 visits have been made to these, they include such places as Kitchens of Hotels, Restaurants, Tea Rooms, &c. No cause for complaint was found.

Domestic Workshops.—246 Domestic Workshops have been visited, 272 visits having been paid to them. They are usually ordinary living rooms used for the purpose of dressmaking, alterations, quilting, baking, etc. The conditions under which this work is being carried out are fairly satisfactory.

Outworkers.—There are 34 firms employing 107 outworkers, 41 lists were received during the past year.

Many of the outworkers are employed by more than one firm, the total number of workers being 70, employed in the following trades, viz. :—

Tailoring and Alterations	..	..	..	..	27
Shirt and Underclothing Making	..	..	..	..	32
Hosiery Knitting	..	..	..	..	8
Boot Repairing	..	..	..	..	1
Mattress Repairing	..	..	..	..	1
General Sewing	..	..	..	..	1
					70

Much difficulty has been experienced during the year in getting firms to send in lists of outworkers.

Bakehouses.—There are 27 Bakehouses on the Register, 6 have been added during the year and 2 closed. No underground Bakehouse has been in use and only one is certified for as fit for use. 90 Inspections have been made to Bakehouses and 7 defects dealt with, viz. :—

Bakehouse to cleanse and limewash	2
Dilapidated Bakehouse floor	1
Drain opening inside Bakehouse	1
Defective sanitary convenience	1
Insanitary Bakehouse closed	2
	<hr/>
	7

Laundries.—There are 3 Factory Laundries employing 186 women and girls, in addition there are 3 Hand Laundries employing 8 women. The whole are conducted in a satisfactory manner, only one sanitary defect being reported.

The following Tables are added at the request of the Secretary of State :—

FACTORIES, WORKSHOPS, LAUNDRIES, WORKPLACES, AND HOMEWORK.

1.—INSPECTION.

Premises.	Number of Inspections.	Written Notices
Factories (including Factory Laundries)	16	3
Workshops (including Workshop Laundries)	1,371	95
Workplaces	84	Nil.
Homeworkers' Premises	111	Nil.
	<hr/>	<hr/>
Total	1582	98

2.—DEFECTS FOUND.

Particulars.	Number of Defects. Found.	Remedied.
Nuisances under the Public Health Acts :—		
Want of Cleanliness	25	25
Want of Ventilation	1	1
Overcrowding	2	2
Other Nuisances	18	18

Sanitary Accommodations :—

Insufficient	3	3
Unsuitable or Defective	11	11
Not separate for sexes	7	7

Offences under the Factory and Workshop Act :—

Illegal occupation of underground bakehouse (S. 101)	1	1
Breach of special sanitary requirements for bake- houses (SS. 97 to 100)	7	7
Failure as regard lists of outworkers (S. 107) ..	25	25
Giving out work to be done in premises which are infected (S. 110)	2	2
Total	<u>101</u>	<u>101</u>

3.—OTHER MATTERS.

Number.

Matters notified to H.M. Inspectors of Factories :—

Failure to affix Abstract of the Factory and Workshop Act ..	24
--	----

Action taken in matters referred by H.M. Inspectors as remediable
under the Public Health Acts, but not under the Factory Act

Notified by H.M. Inspector	13
Reports (of action taken) sent to H.M. Inspectors	12

Underground Bakehouses :—

In use during 1903	3
Certificates granted in 1904	1
In use at the end of 1904	Nil.

Number of

Homework :—

Lists. Outworkers.

Lists of Outworkers (S. 107) :—

Lists received	41	107
Addresses of Outworkers forwarded to other Authorities	4	

Workshops on the Register at the end of 1904 :— 430

APPENDIX C.

Special Report on Infantile Mortality.

In consequence of the decline in the birth rate which is taking place in this country, and also of the high death rate amongst Infants, the subject of Infantile Mortality has been widely discussed during the past year, and was a prominent feature of the Report of the Inter-Departmental Committee on Physical Deterioration issued in July, 1904.

In considering the question of Infantile Mortality and what effect any increased efforts on the part of the Sanitary Authority are likely to have upon it, it is necessary first to consider how many, if any, of these deaths are due to preventible causes and how many to inpreventible causes.

Taking the total number of deaths of children 1 year of age and under during the past year in this Borough, it will be seen in Table I. that out of a total of 616, one-third (207) occurred during the first 4 weeks of life, or at an age when the surroundings were not likely to be the determining cause of the Infant's death.

Of these 207 deaths, the greatest number, viz., 56, died from Premature Birth, and 45 from Debility, Atrophy, &c., pointing to some cause prior to birth which incapacitated the child as soon as it had a separate existence.

Looking at the subject from the Sanitary standpoint, it would appear that about one-third of the total deaths can be classed as inpreventible and the remainder as more or less preventible.

In the following Report the principal causes of deaths of Infants one year and under are classified into nine groups :—

In Group I. are included all deaths due to Immaturity and include deaths from Congenital Malformations, Premature Birth, Debility, &c., few of which are the result of causes acting upon the child after birth, and most of them are due to initial defects in vitality and are inpreventible in the sense that they do not come under the classified preventible causes of death. It is by no means certain that all Premature Births are inpreventible, as I have very little doubt that there are certain women only too anxious to be delivered of a Still Born or prematurely born child.

It is well-known that the use of certain drugs which are widely advertised is very common.

Premature Births and Immaturity in the child may also be induced by intemperance, by lack of care, or inefficiency of the dietary, on the mother's part.

Group II. includes deaths from Diseases of the Respiratory System, and affects children in the second half of the first year of life in greater proportion to the earlier months. Many of these deaths are due to improper clothing of the young infant, and it is no uncommon sight to see infants of from 6 to 12 months old sitting improperly clothed on the cold door steps outside the house, or again outside in the CARE of a child of only a few years of age.

Group III. includes deaths from Diseases of the Digestive System, the chief of which is Diarrhœa, and which carries off most children in the 3rd, 4th and 5th months' of their existence. Improper feeding is here the principal cause and is greatly preventible, especially such practices as giving infants food, which requires mastication, before the advent of teething.

Group IV.—In this group are included Diseases of the Nervous System, such as Convulsions, Meningitis, Fits, &c., many of which are probably the result of intestinal disorders or of Tubercular origin.

Group V.—Includes all the deaths from Tubercular Diseases, very few of which occur in the first 4 weeks of life. Undoubtedly children contract Tubercular Diseases very early in life, and it is presumable that they come in contact with the germs present in infected houses whilst crawling or playing on the floors. Milk is also another very fruitful source of infection. The majority of children attacked suffer from Tubercular Disease of the alimentary tract, rather than from Tuberculosis of the Lungs.

Group VI. is that of deaths from Infectious Diseases. Many of these deaths are preventible. Of 7 under 4 weeks of age 6 are from Hereditary Syphilis.

Measles and Whooping Cough are the causes which are most fatal to the older infants, and many of these deaths are due to want of proper care and nursing.

Group VII.—Deaths due to Suffocation, are all preventible.

Group VIII.—Accidental Deaths are few in number.

Group IX.—Includes deaths from all other causes, more than half of which occur during the first 4 weeks of life and are due to Accidents at Child Birth, Hæmorrhage and other inpreventible causes.

Table I.—Total Deaths of Children, 12 months of age and under, in the Borough of Middlesbrough during the year 1904.

			Deaths under 4 weeks of age.	Total Deaths 12 months of age and under.
Group	I...	..	126	184
"	II...	..	10	103
"	III...	..	31	169
"	IV..	..	18	65
"	V...	..	3	33
"	VI...	..	7	39
"	VII...	..	2	4
"	VIII.	..	2	3
"	IX...	..	8	16
			<u>207</u>	<u>616</u>

Of the 616 deaths of Infants 12 months of age and under, 357 were males and 259 were females.

The following Table shows the number of deaths in each group in the various Wards of the town :—

TABLE II.—Deaths in the various Groups in each Ward.

WARDS.	Group I.	Group II.	Group III.	Group IV.	Group V.	Group VI.	Group VII.	Group VIII.	Group IX.	Total.		Totals.
										Male.	Fe- male.	
Ayresome ..	27	17	17	6	9	1	..	1	1	40	39	79
Acklam ..	12	3	14	6	3	1	..	..	..	21	18	39
Cannon ..	24	10	28	11	4	5	..	..	2	49	35	84
Cleveland ..	11	3	16	4	2	2	1	..	1	21	19	40
Exchange ..	12	5	10	6	1	4	..	1	1	27	13	40
Grove Hill ..	14	11	13	7	1	3	..	..	3	35	17	52
Linthorpe ..	9	6	5	4	1	3	1	..	2	18	13	31
Marsh ..	32	18	29	10	4	11	1	1	1	69	38	107
Newport ..	32	15	31	5	3	3	1	..	4	49	45	94
Vulcan ..	11	15	6	6	5	6	..	..	1	28	22	50
Totals ..	184	103	169	65	33	39	4	3	16	357	259	616

From the following Table it is seen that some Wards have much higher Infantile death rates than others. The percentage of deaths of Infants 1 year and under to total deaths in the Wards being :—

Ayresome	37.5	per cent. of total deaths in the Wards were 1 year of age and under.
Acklam	32.5	"
Cannon	44.2	"
Cleveland	37.0	"
Exchange	27.2	"
Grove Hill	30.4	"
Linthorpe	22.9	"
Marsh	29.3	"
Newport	38.5	"
Vulcan	25.5	"

This Table compared with the Table of death rates in the various Wards is very remarkable, showing as it does that some of the Wards with the lowest death rates in the Borough have the highest proportion of Infantile deaths and vice versa.

I am unable to give the Infantile Mortality figure for the various Wards, as the number of births per Ward is not available, the Infantile Mortality figures for the whole town during the past 12 years have been :—

Deaths of Infants one year of age and under per 1,000 births for the years 1893 to 1904 :—

1893	173	1899	183
1894	144	1900	198
1895	194	1901	197
1896	170	1902	182
1897	172	1903	186
1898	199	1904	170

In Middlesbrough, this Infantile Mortality figure is influenced to some extent by the extraordinary high birth rate, since there are necessarily a greater number of the population at an age period during which the expectation of life is low than in similar towns with a smaller birth rate.

During the past 7 years the ratio of deaths of Infants under one year of age to the total deaths has increased in Middlesbrough, at the same time the birth rate has also increased.

The percentage of deaths of Infants under 1 year to total deaths during the past 7 years being as follows :—

1898	1899	1900	1901	1902	1903	1904
28·77	27·93	27·51	32·93	32·21	31·37	31·74

The following Table gives the number of deaths during the years 1898 to 1903, arranged in similar groups of deaths as Table I.

TABLE III.

	1898	1899	1900	1901	1902	1903
Group I.— (Immaturity, &c.) ..	199	177	222	207	227	211
Group II.— (Respiratory) ..	58	90	96	92	91	126
Group III.— (Digestive)	129	130	140	165	98	120
Group IV.— (Nervous)	103	76	98	97	89	86
Group V.— (Tubercular)	33	36	34	42	28	33
Group VI.— (Infectious)	27	38	28	26	33	35
Group VII.— (Suffocation)	3	5	14	9	10	9
Group VIII.— (Accidental) .. ..	..	1	..	..	5	3
Group IX.— (All other Causes) ..	14	22	31	19	35	27
Totals	566	575	663	657	616	650

From this Table it will be seen that during the 4 years 1901 to 1903 there was very little variation in the number of deaths in the various groups with the exception of Group III., which includes deaths from Diarrhœa, and which shows a marked increase during the year 1901, the summer of which was a fine and warm one. The year 1902 had the lowest death rate from Diarrhœal Diseases and had a cold and wet summer.

During the summer months of 1904, from June to September, when summer Diarrhœa is very prevalent, and Infantile Mortality at its highest, an enquiry was made in Middlesbrough respecting the death of every child two years of age and under. During these four months there were 287 such deaths, being 46·2 per cent. of the total deaths, which numbered 621.

Of the 287 deaths,

56 occurred in the Newport Ward—65·1 per cent. of the total deaths in that Ward.

55	„	Marsh	„	—43·3	„	„	„
44	„	Cannon	„	—67·6	„	„	„
24	„	Exchange	„	—47·0	„	„	„
23	„	Ayresome	„	—29·1	„	„	„
22	„	Vulcan	„	—34·9	„	„	„
18	„	Acklam	„	—51·4	„	„	„
17	„	Linthorpe	„	—48·5	„	„	„
17	„	Grove Hill	„	—34·0	„	„	„
11	„	Cleveland	„	—28·2	„	„	„

In this Table, and also in the one giving these figures for the whole year, it is seen that the two worst Wards are the Cannon and Newport, and that the Marsh Ward, which has the highest death rate of any Ward in the town, takes a middle position amongst the Wards as regards Infantile death rate.

During these four months, the chief causes of death came under the 1st three groups of diseases.

In Group I. there were 34 deaths from Premature Birth, Debility, Atrophy, Marasmus and Immaturity.

In Group II. there were 47 deaths from Pneumonia and Bronchitis.

In Group III. there were 110 deaths from Diarrhœa and Enteritis.

35·1 per cent. of the 287 children were Breast fed.

32·6 per cent. of the 287 children were fed on Cow's Milk alone.

The remainder were fed on Nestle's Milk and various patent foods.

Breast Fed Children.—The mother's milk is the natural food of the infant and is that upon which it is most likely to thrive and be healthy, it is consequently disappointing to find that of 287 deaths there should be such a large proportion as 35 per cent. Breast fed. Upon investigation, it is found that 35 per cent. of these Breast fed children had delicate mothers' or were delicate children at birth, but by far the most striking fact is that during the 4 months over which these investigations extended there were no less than 22 of these Breast fed children who were slowly but surely being starved to death by being kept solely upon Breast Milk. The usual period for weaning the child is from the 9th to the 12th month, after which the mother's milk becomes poor in quality and insufficient in quantity for a healthy child. The following are the ages at death of 22 children who are said to have been fed upon nothing but breast milk :—

1 aged 23 months at death.

1	22	58 occurred in the Newport Ward—65.1	Marsh	55
1	21	43.3	..	..
3	18	67.0	Cannon	44
2	17	47.0	Exchange	24
5	16	29.4	..	23
3	15	31.0	..	22
6	14	51.4	..	18
..	..	42.5	..	17
..	..	34.0	..	17

Another very noticeable fact in reference to the deaths of children, said to have been Breast fed, is the previous loss of children in these families. The following are some instances :—

Number of births in family. Children living. Number of deaths.

17	6	11
14	6	8
14	8	6
13	6	7
12	3	9
11	5	6
10	4	6
9	5	4
6	2	4
—		
Total Births	106	Children living 45
		Deaths 61

or a death rate for these 9 families of 57.5 per cent. of the births. The cause of death in many cases is given as Premature Birth, and is accounted for partly by the mother being physically worn out and unfit for child bearing, owing to the short interval between each birth, e.g. :—

One woman had 9 children in 11 years.

17	23
6	8
11	14
7	10
12	15
15	25
9	14

These instances go to show that even amongst Breast fed children there are many causes at work which mitigate against the children starting life with a healthy constitution, such as is required in order to survive the first year or two of their existence.

Tubercular Disease is also a frequent cause of death, whether hereditary or not is problematic, but where the parents are phthisical it is only natural that the child should soon develop the disease.

Children fed upon Mixed Foods.—Of the remaining 186 deaths which were investigated, being 66.8 per cent. of the whole cases, 171 were fed on the Breast, Cow's Milk and other Foods, and 15 died before they were 12 hours' old. The food employed varied to a great extent and include nearly the whole of Infants' Patent Foods.

68 were fed on Cow's Milk solely.

19 were fed on Nestle's Milk solely.

The remainder having one or more of the various Foods.

28 were weaned and on solid Food.

Many of the above besides having the Infants' Food also had a bit-of-everything going in addition.

45 per cent. of these children were fed from the old-fashioned and highly dangerous long tubed feeding bottles, and 29.2 per cent. from the proper boat-shaped feeders.

Many of these children were brought into the world without any prospect whatever of living, as for example, one woman had 10 Still-born children in addition to which 4 more were born alive but did not live long. Another woman had 7 Still-born children and 1 born alive which only lived 3 days. Again, 8 children of a family of 13

died, all in infancy, and from *Tabes Mesenterica*, the mother being a very delicate woman. I could give more such instances, but sufficient has been written to show that it is little short of a criminal offence for parents to continue having families under such circumstances.

After considering the causes of Infantile Mortality, we see at once what a difficult and complex subject it is, and the apparent hopelessness of the remedy being found by means of Sanitary administration, the real solution must be a more serious feeling of the responsibilities pertaining to the duties of motherhood and child rearing amongst the populace of the towns. Many lives are lost no doubt from ignorance of the proper method of rearing children, and many from carelessness and neglect, but I venture to think that thoughtlessness also plays a very prominent part. It is a most frequent sight to see mere infants being carried about the streets late at night or taken to places of amusement. Again, the manner in which some children are exposed to changes of temperature, to exposure, whilst improperly clothed, to all conditions of weather, playing or crawling on damp grass or cold doorsteps, and even when a little older running about the streets with perhaps only one garment on, make it surprising that as many infants survive as do.

The care the mother takes of herself before the birth of her child is a very important question with regard to Infantile Mortality, and has a direct bearing upon the deaths in Group I., the group with the greatest death rate. Many women take no trouble to alter their conditions of life during the later months of pregnancy, and especially amongst women employed in factories and workshops we find a high Infantile death rate. This cause is not one affecting Middlesbrough, but from the high percentage of Premature Births it would appear that there are causes operating in this town which are not creditable to many who are expectant mothers.

The principal remedies which are usually advocated for the improvement of the Infantile Mortality are, educational—both of the present mothers, and of the future mothers during their school training—sanitary, better houses and better sanitation, dietary, and pure milk supply, together with the employment of Health Visitors and the formation of Ladies' Health Societies.

The recommendations of the Committee on Physical Deterioration do not seem to embrace any new principles, but suggest that the methods at present employed should be persevered with until the mothers become better educated. Considering that so little headway has been made in the past three or four years during which these methods have been employed, the prospect of any immediate improvement does not seem to be promising. Two points which require legislative consideration are the

Registration of Still-births, together with a proper enquiry necessitating a medical certificate in each case, and a shortening of the period within which births may be registered.

The Midwives' Act, if carefully and vigorously administered, will I feel sure be of great value in diminishing the number of Still-births.

The education of the present mothers in all matters dealing with the care, feeding and nursing of their infants is, I am afraid, too huge an undertaking to be successfully accomplished by the Sanitary Authority of a town, and must to a great extent be brought about by greater interest being taken in the lives of the poor and of the helpless infants by those who have the leisure and inclination for such work.

The following Tables give the causes of death, ages at death, and sex of all infants 12 months of age and under, who died in each Ward in Middlesbrough during the year 1904, the estimated populations of these Wards being :—

Ayresome ..	14,750	Grove Hill ..	12,900
Acklam ..	7,950	Linthorpe ..	7,660
Cannon ..	8,424	Marsh ..	10,858
Cleveland ..	7,355	Newport ..	10,134
Exchange ..	8,219	Vulcan ..	8,124

ACKLAM WARD.

CAUSES OF DEATH	AGES BY WEEKS						AGES BY MONTHS												Grand Totals																			
	1st		2nd		3rd		4th		Total		2nd		3rd		4th		5th		6th		7th		8th		9th		10th		11th		12th		Total					
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F				
I. IMMATURITY—																																						
(a) Premature Birth ..	5	3	..	..	1	1	..	..	6	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(b) Congenital Malformation ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(c) Atelectasis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(d) Atrophy, Debility, &c. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
II. DISEASES OF RESPIRATION	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
III. DISEASES OF DIGESTION—																																						
(a) Diarrhoeal ..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(b) Enteritis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(c) Dentition ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(d) Others ..	1	..	..	..	..	..	..	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
IV. DISEASES OF NERVOUS SYSTEM	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
V. TUBERCULAR DISEASES—																																						
(a) Tabes Mesenterica ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(b) Phthisis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(c) Other Tubercular ..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
VI. INFECTIOUS DISEASES—																																						
(a) Whooping-cough ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(b) Measles ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(c) Diphtheria ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(d) Syphilis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
VII. SUFFOCATION ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
VIII. OTHER ACCIDENTS ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
IX. ALL OTHER CAUSES ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	6	3	1	..	1	3	1	1	9	7	..	2	1	2	..	3	5	1	..	..	..	..	1	..	1	3	1	..	1	..	..	..	..	..	..	..	..
	16		16		16		16		16		16		16		16		16		16		16		16		16		16		16		16		16		16		16	
	39		39		39		39		39		39		39		39		39		39		39		39		39		39		39		39		39		39		39	

AYRESOME WARD.

CAUSES OF DEATH	AGES BY WEEKS										AGES BY MONTHS												Grand Totals											
	1st		2nd		3rd		4th		Total	2nd		3rd		4th		5th		6th		7th		8th		9th		10th		11th		12th		Total		
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F		M	F	M	F	M	F	M	F	M	F	
I. IMMATURE—																																		
(a) Premature Birth ..	3	5	2	1	1	1	1	1	6	5																							6	5
(b) Congenital Malformation ..	1	1	1	2	1	1	1	1	5	5																							5	1
(c) Atelectasis ..																																		
(d) Atrophy, Debility, &c. ..	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	8	
II. DISEASES OF RESPIRATION ..																																		
					</																													

CANNON WARD.

CAUSES OF DEATH	AGES BY WEEKS						AGES BY MONTHS												Grand Totals																	
	1st		2nd		3rd		4th		Total	2nd		3rd		4th		5th		6th		7th		8th		9th		10th		11th		12th		Total	M	F		
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F		
I. IMMATURE—	3	2	1	..	..	..	1	..	5	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	2	
(a) Premature Birth ..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	
(b) Congenital Malformation ..	1	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..		
(c) Atelectasis ..	1	..	..	..	..	..	2	1	3	1	..	..	1	..	..	..	..	..	..	2	..	..	..	1	1	..	..	..	..	..	7	3	10	4	
(d) Atrophy, Debility, &c. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	2	..	..	..	1	1	..	5	5	..	..
II. DISEASES OF RESPIRATION	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
III. DISEASES OF DIGESTION—	..	..	2	1	..	..	1	2	3	3	..	..	..	..	..	..	..	..	..	2	1	..	1	..	..	..	..	..	..	..	..	7	6	10	9
(a) Diarrhoeal ..	1	1	..	..	..	..	..	..	1	1	..	..	1	..	2	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	5	..	6	1	
(b) Enteritis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
(c) Dentition ..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(d) Others ..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
IV. DISEASES OF NERVOUS SYSTEM..	1	..	..	1	..	1	1	1	3	1	..	..	1	..	..	..	..	1	..	1	..	1	..	1	..	..	..	..	..	..	4	3	7	4	
V. TUBERCULAR DISEASES—	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2	1	
(a) Tabes Mesenterica ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(b) Phthisis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(c) Other Tubercular ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
VI. INFECTIOUS DISEASES—	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(a) Whooping-cough ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(b) Measles ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(c) Diphtheria ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(d) Syphilis	3	..	3	1	1	1	1	1	4
VII. SUFFOCATION
VIII. OTHER ACCIDENTS
IX. ALL OTHER CAUSES ..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	2	..	..
	7	3	3	2	2	1	6	7	18	13	1	1	2	1	4	2	2	..	2	1	5	1	5	1	1	5	3	4	4	2	2	31	22	49	35	
	31																															84				

CLEVELAND WARD.

CAUSES OF DEATH	AGES BY WEEKS							AGES BY MONTHS												Grand Totals							
	1st	2nd		3rd		4th		Total	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th		Total						
		M	F	M	F	M	F															M	F	M	F	M	F
I. IMMATURETY—																											
(a) Premature Birth	4	..	..	..	..	..	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	..
(b) Congenital Malformation		
(c) Atelectasis		
(d) Atrophy, Debility, &c.	1	..	..	2	..	..	2	1	..	3	..	1	..	..	..	..	..	..	..	..	1	3	..	3	4
II. DISEASES OF RESPIRATION																											
..	1	..	..	1	..	..	1	2	1	2	1	1		
III. DISEASES OF DIGESTION—																											
(a) Diarrhoeal	1	..	..	1	1	..	1	..	1	1	1	1	..	..	..	..	2	4	3	4	4	4		
(b) Enteritis	1	..	..	1	..	..	2	..	1	1	1	1	1	1	..	..	3	4	4	4	4	4		
(c) Dentition		
(d) Others	1	..	..	..	..	1	1	..	1	..	..
IV. DISEASES OF NERVOUS SYSTEM																											
..	1	1	..	..	1	1	1	..	..	..	..	2	2	2	2	2	2		
V. TUBERCULAR DISEASES—																											
(a) Tabes Mesenterica	1	..	..	..	..	..	..	..	1	..	1	..	1		
(b) Phthisis		
(c) Other Tubercular	1	..	..	1	1	1	..	..	..	..	..	1	1	1	1	1		
VI. INFECTIOUS DISEASES—																											
(a) Whooping-cough	1	..	..	..	..	1	1	1	1	1		
(b) Measles	1	..	..	..	1	1	1	1	1		
(c) Diphtheria		
(d) Syphilis		
VII. SUFFOCATION																											
..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	1
VIII. OTHER ACCIDENTS																											
..		
IX. ALL OTHER CAUSES																											
..	1	..	..	..	..	1	1	1	1	1	1		
4	1	1	4	..	9	1	1	1	1	3	2	2	2	3	..	2	2	1	1	12	18	21	19

EXCHANGE WARD.

[illegible]

GROVE HILL WARD.

CAUSES OF DEATH	AGES BY WEEKS												AGES BY MONTHS												Grand Totals										
	1st		2nd		3rd		4th		Total	2nd		3rd		4th		5th		6th		7th		8th		9th		10th		11th		12th		Total			
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F		M	F	M	F	M	F	M	F		
I. IMMATUREITY—																																			
(a) Premature Birth ..	4	1	..	..	..	..	1	4	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(b) Congenital Malformation ..	1	..	..	..	1	..	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(c) Atelectasis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(d) Atrophy, Debility, &c. ..	2	..	..	..	..	..	1	2	1	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
II. DISEASES OF RESPIRATION ..	..	..	..	..	1	..	..	1	..	2	1	..	..	..	..	1	..	..	..	1	1	2	..	..	..	..	..	..	..	..	..	..	..	..
III. DISEASES OF DIGESTION —																																			
(a) Diarrhoeal ..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(b) Enteritis ..	..	1	..	..	1	..	1	1	1	1	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..
(c) Dentition ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(d) Others ..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
IV. DISEASES OF NERVOUS SYSTEM..	1	..	..	..	..	..	..	1	..	2	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
V. TUBERCULAR DISEASES—																																			
(a) Tabes Mesenterica ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(b) Phthisis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(c) Other Tubercular ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
VI. INFECTIOUS DISEASES—																																			
(a) Whooping-cough ..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(b) Measles ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(c) Diphtheria ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(d) Syphilis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
VII. SUFFOCATION ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
VIII. OTHER ACCIDENTS ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
IX. ALL OTHER CAUSES ..	1	..	..	1	..	1	..	2	..	..	1	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	9	2	..	2	1	1	3	12	6	3	3	2	..	5	1	3	..	..	1	1	1	2	1	1	2	..	2	..	24	10	36	16		

LINTHORPE WARD.

[illegible]

NEWPORT WARD.

CAUSES OF DEATH	AGES BY WEEKS										AGES BY MONTHS												Grand Totals												
	1st		2nd		3rd		4th		Total		2nd		3rd		4th		5th		6th		7th			8th		9th		10th		11th		12th		Total	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F		M	F	M	F	M	F	M	F	M	F		
I. IMMATURITY—																																			
(a) Premature Birth ..	2	1	1	1	1	1	1	1	1	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
(b) Congenital Malformation ..	3	3	3	3	3	3	3	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
(c) Atelectasis ..	2	5	1	1	1	1	1	1	1	7	7	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		
(d) Atrophy, Debility, &c.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
II. DISEASES OF RESPIRATION																																			
III. DISEASES OF DIGESTION—																																			
(a) Diarrhoeal ..	1	1	1	1	1	1	1	1	1	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
(b) Enteritis ..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
(c) Dentition ..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
(d) Others ..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
IV. DISEASES OF NERVOUS SYSTEM																																			
V. TUBERCULAR DISEASES—																																			
(a) Tabes Mesenterica ..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
(b) Phthisis ..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
(c) Other Tubercular ..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
VI. INFECTIOUS DISEASES—																																			
(a) Whooping-cough ..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
(b) Measles ..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
(c) Diphtheria ..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
(d) Syphilis ..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
VII. SUFFOCATION ..																																			
VIII. OTHER ACCIDENTS ..																																			
IX. ALL OTHER CAUSES ..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
	5	10	1	4	3	3	6	1	15	18	4	6	2	3	3	2	8	1	1	5	4	1	2	1	2	3	2	4	3	1	3	27	49	45	

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MARSH WARD.

CAUSES OF DEATH	AGES BY WEEKS						AGES BY MONTHS												Grand Totals																
	1st		2nd		3rd		4th		Total		2nd		3rd		4th		5th			6th		7th		8th		9th		10th		11th		12th		Total	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F		M	F	M	F	M	F	M	F	M	F	M	F	M	F		
I. IMMATURITY—																																			
(a) Premature Birth ..	3	..	..	..	..	..	2	..	3	2	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	4	2				
(b) Congenital Malformation ..	..	1	..	..	..	2	1	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1				
(c) Atelectasis ..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	2	..					
(d) Atrophy, Debility, &c. ..	4	3	1	1	1	3	..	8	5	3	1	1	..	1	..	1	..	..	..	..	..	..	..	..	5	3	13	8					
II. DISEASES OF RESPIRATION	..	..	1	..	..	..	..	1	..	1	1	2	..	1	..	1	1	..	1	..	1	..	1	3	..	8	9	9					
III. DISEASES OF DIGESTION—																																			
(a) Diarrhoeal ..	..	..	1	..	..	2	..	3	..	1	..	2	..	3	2	..	..	..	..	..	..	..	..	1	1	9	6	12	6				
(b) Enteritis ..	..	..	..	1	..	1	..	2	..	1	..	1	..	1	1	..	1	..	1	..	1	..	..	..	5	1	7	1					
(c) Dentition ..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..					
(d) Others ..	1	..	1	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1					
IV. DISEASES OF NERVOUS SYSTEM	..	..	3	1	1	2	..	6	..	..	..	..	..	1	..	..	..	..	..	1	..	1	..	1	1	1	3	7	3				
V. TUBERCULAR DISEASES—																																			
(a) Tabes Mesenterica ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2				
(b) Phthisis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(c) Other Tubercular ..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	1	1	1	1					
VI. INFECTIOUS DISEASES—																																			
(a) Whooping-cough ..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	2	..	..	..	..	..	1	2	1	2					
(b) Measles ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	2	2	2	2					
(c) Diphtheria ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(d) Syphilis ..	..	..	..	..	2	..	2	..	2	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	..	4				
VII. SUFFOCATION ..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1				
VIII. OTHER ACCIDENTS	1	..	1	..	1	..	1						
IX. ALL OTHER CAUSES	1	..	1	..	1	..	1						
	9	4	6	2	2	1	12	2	29	9	7	2	6	2	5	3	2	2	4	2	2	4	2	4	6	3	40	29	69	38					

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VULCAN WARD.

CAUSES OF DEATH	AGES BY WEEKS										AGES BY MONTHS												Grand Totals												
	1st		2nd		3rd		4th		Total	2nd		3rd		4th		5th		6th		7th		8th		9th		10th		11th		12th		Total			
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F		M	F	M	F	M	F	M	F	M	F		
I. IMMATUREITY—																																			
(a) Premature Birth ..	1	2							1	2																									
(b) Congenital Malformation ..																																			
(c) Atelectasis ..	1	1							1	1																									
(d) Atrophy, Debility, &c. ..			1	1	1				1	2						1																			
II. DISEASES OF RESPIRATION									1						2	1																			
III. DISEASES OF DIGESTION—																																			
(a) Diarrhoeal ..																																			
(b) Enteritis ..																																			
(c) Dentition ..																																			
(d) Others ..																																			
IV. DISEASES OF NERVOUS SYSTEM																																			
V. TUBERCULAR DISEASES—																																			
(a) Tabes Mesenterica ..																																			
(b) Phthisis ..																																			
(c) Other Tubercular ..																																			
VI. INFECTIOUS DISEASES—																																			
(a) Whooping-cough ..																																			
(b) Measles ..																																			
(c) Diphtheria ..																																			
(d) Syphilis ..																																			
VII. SUFFOCATION ..																																			
VIII. OTHER ACCIDENTS ..																																			
IX. ALL OTHER CAUSES ..	1																																		
	3	3	1	1	1	1	1	3	5	8	1	2	2	2	3	2	1	2	2	3	2	3	1	4	2	1	2	2	14	23	14	28	22		
																															</				

Total Infantile Deaths 12 months and under during the year 1904.

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CAUSES OF DEATH	AGES BY WEEKS					AGES BY MONTHS												Grand Totals
	1st	2nd	3rd	4th	Total	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	Total	
I. IMMATURITY—																		
(a) Premature Birth ..	42	5	5	4	56	1	2	..	..	..	..	..	..	..	..	..	3	59
(b) Congenital Malformation ..	3	1	3	4	11	2	1	..	..	..	1	..	..	..	..	..	4	15
(c) Atelectasis ..	9	1	3	1	14	3	1	..	1	1	2	..	..	..	..	..	8	22
(d) Atrophy, Debility, &c. ..	18	6	4	17	45	10	4	5	6	3	4	2	4	1	1	3	43	88
II. DISEASES OF RESPIRATION	..	3	3	4	10	8	7	12	5	5	10	7	13	11	7	8	93	103
III. DISEASES OF DIGESTION—																		
(a) Diarrhoeal ..	..	6	4	6	16	6	10	11	13	7	10	9	3	6	5	3	83	99
(b) Enteritis ..	3	..	1	4	8	10	2	4	9	1	2	4	5	4	3	1	45	53
(c) Dentition ..	..	..	..	1	1	..	..	..	1	2	..	1	3	..	..	..	7	8
(d) Others ..	2	1	1	2	6	1	..	1	..	..	..	1	..	..	..	..	3	9
IV. DISEASES OF NERVOUS SYSTEM..	2	5	3	8	18	7	3	4	4	6	5	4	4	4	2	4	47	65
V. TUBERCULAR DISEASES—																		
(a) Tabes Mesenterica ..	..	..	..	1	1	..	..	1	1	3	..	..	1	3	1	..	10	11
(b) Phthisis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	1
(c) Other Tubercular ..	..	..	..	2	2	1	4	2	1	3	2	2	1	1	1	1	19	21
VI. INFECTIOUS DISEASES—																		
(a) Whooping-cough ..	..	..	..	1	1	1	1	..	1	..	2	..	1	3	1	..	10	11
(b) Measles ..	..	..	..	..	..	..	..	..	..	..	1	1	1	1	3	7	14	14
(c) Diphtheria ..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	1
(d) Syphilis ..	..	1	..	5	6	3	2	2	..	..	..	..	..	..	..	..	7	13
VII. SUFFOCATION ..	1	1	..	..	2	..	2	..	..	..	..	..	..	..	..	..	2	4
VIII. OTHER ACCIDENTS ..	1	..	..	..	1	..	..	..	..	..	1	..	..	..	1	..	2	3
IX. ALL OTHER CAUSES ..	5	..	3	1	9	1	1	1	..	1	1	1	..	..	1	..	7	16
Total ..	86	30	30	61	207	54	40	44	42	32	41	32	36	35	26	27	409	616