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BOROUGH OF NEWCASTLE-UNDER-LYME.

ANNUAL REPORT

ON THE

HEALTH OF THE BOROUGH,

FOR THE YEAR 1913,

BY

JOHN FORTUNE, M.D., D.P.H.,

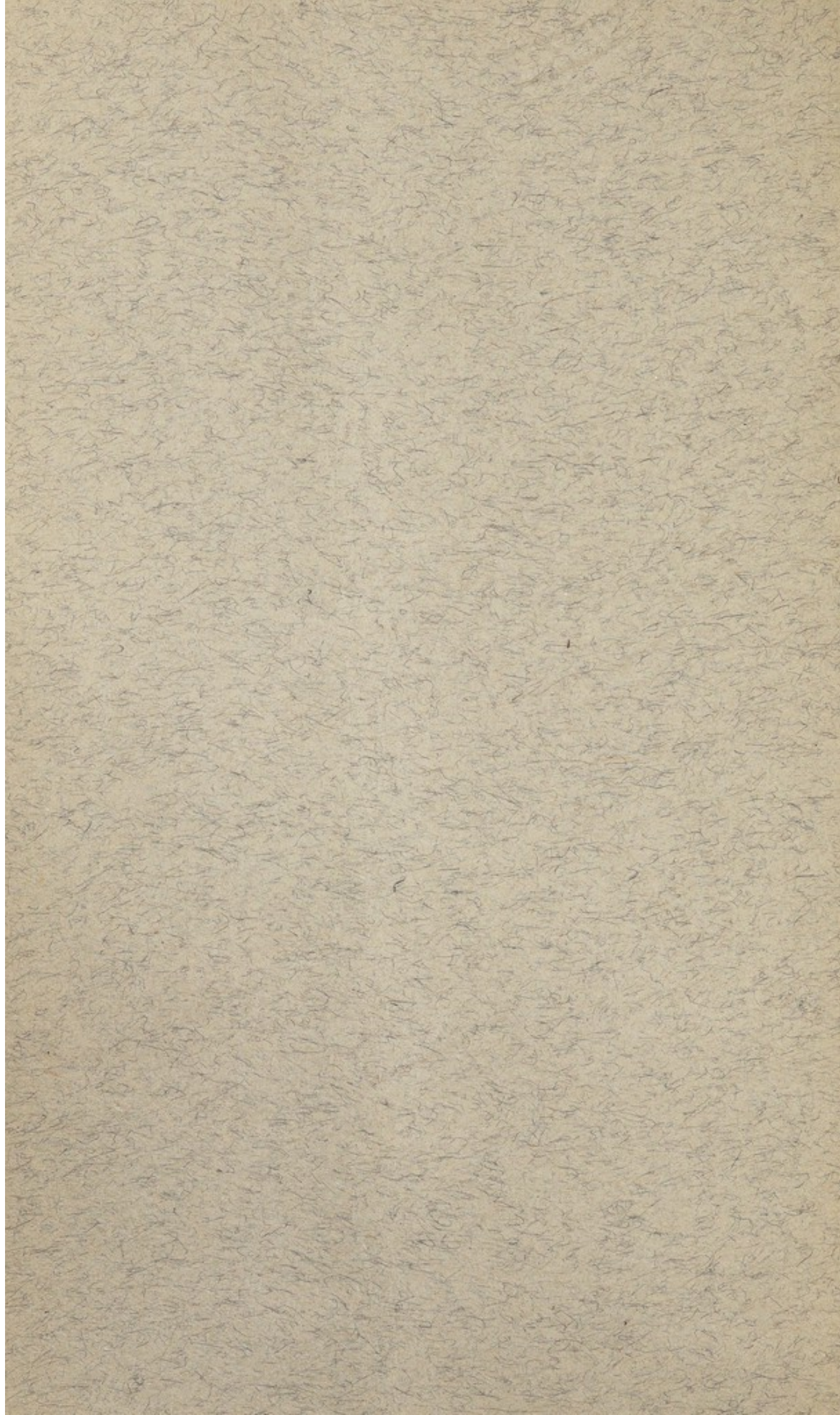
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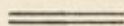
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February, 1914.

Gentlemen,

*I have the honour to present to you the Annual Report
on the Health of the Borough for the year 1913.*

*I desire to express my thanks to the Members of the
Health Committee for the support they have accorded me.*

*I wish, also, to record my appreciation of the support of
the Members of the Staff.*

I am, Gentlemen,

Your obedient Servant,

JOHN FORTUNE.

February, 1912.

I have the honor to acknowledge the receipt of your letter of the 12th inst.

in relation to the proposed change in the name of the Society.

I have also received your letter of the 14th inst. in relation to the same matter.

I have also received your letter of the 15th inst. in relation to the same matter.

I have also received your letter of the 16th inst. in relation to the same matter.

I have also received your letter of the 17th inst. in relation to the same matter.

I am, Sir, Very Respectfully,
Your obedient servant,

JOHN FORTUNE.

REPORT.

SUMMARY OF THE VITAL STATISTICS FOR 1913.

Population of the Borough estimated to middle of 1913	20,270
Area of the Borough in acres	671
Density of population: Persons per acre	30
Births—Number 560; rate per 1000 living	27·6
Deaths—Number 309; rate per 1000 living	15·2
Deaths of Infants under 1 year of age	64
Infantile death-rate per 1000 births	114
Zymotic death-rate per 1000 living	1·03
Phthisis death-rate per 1000 living	1·03
Cancer death-rate per 1000 living	1·8
Respiratory death-rate per 1000 living	3·1

NATURAL AND SOCIAL CONDITIONS.

Newcastle is principally a residential town for all classes of the community. It is situate on both sides of a valley, the soil being mainly clay on the east side, and red sandstone on the west. There is therefore a considerable amount of water in the subsoil.

The chief industries in the Borough are—a large clothing factory, a bone works, a paper mill, and seven fustian cutting mills.

The larger proportion of artisans are, however, employed outside the Borough in the coal, iron, tile and pottery industries.

The census return for 1911 showed the population of the Borough to be 20,201. In 1901 the population was 19,914, so that the increase in 10 years was only 287.

The natural increase of population in that time—that is, the excess of births over deaths—amounted to 2,521, so that instead of an annual increase of population of 250, there is only 28 as evidenced by the census returns. This difference can only be accounted for by emigration from the district.

It is noticeable that in Newcastle the employment of women is in greater demand than that of men. The tendency, therefore, is for the young men to leave the Borough, leaving the old people with the younger children.

Even though the clothing and fustian cutting mills have been the means of keeping girls and young women in employment in the Borough, these on marriage naturally move to where their husbands are employed. The area of the Borough is small, and only by means of maintaining an adequate number of artisans' houses can the existing state of affairs be remedied, as after all Newcastle is a residential town.

SANITARY CIRCUMSTANCES OF THE DISTRICT.

WATER SUPPLY.—Only 1 house remains which obtains the water supply from a well. This is a deep well supply. The remainder of the Borough obtains its supply from the Staffs. Potteries Water Co. This is a satisfactory supply on the constant system.

STREAM POLLUTION.—No instance occurred during the year.

DRAINAGE AND SEWERAGE.—Provision for this is adequate and satisfactory. 330 yards of 9-inch and 240 yards of 6-inch new sewers were relaid during the year.

There is a total of about 18 miles of sewer in the Borough. The work of connecting up house drains with proper sewers is pursued wherever the discharge into blind pipes is discovered. With regard to house drainage 82 houses have been re-drained, and 54 partially re-drained. All new drains are subjected to the water-test. Sewage disposal is efficiently dealt with by the sewage works, and without offensive smell. The methods adopted are quite effectual and adapted to the needs of the town.

PREMISES AND OCCUPATIONS CONTROLLED BY BYE-LAWS.—There are two fell-mongers in the Borough, and part of the bone-works falls within the boundary. The common lodging-houses are under the supervision and inspection of the police. There are 15 common lodging-houses on the register, providing accommodation for 276 beds.

There are no "Houses let in Lodgings" in the Borough.

With regard to the Common Lodging Houses, the Chief Constable informs me that these houses have been frequently visited at irregular intervals. In several instances cautions have been administered, and in three instances where cautions proved ineffective, proceedings were taken.

SCHOOLS.—The sanitary conditions of the schools in the area are now entirely satisfactory. It has been unnecessary to recommend the closure of any of the schools during the year on account of infectious

disease. Under the provisions of the "Memorandum on Closure and Exclusion from School," the school teachers are provided with forms on which they notify the cases absent from school on account of infectious disease. During the year 46 notifications were received as follows :

Whooping Cough	...	...	2
Mumps ...	...	...	1
Chicken Pox	...	...	6
Measles ...	...	...	37

MEASLES.—There were no deaths from Measles in 1913, and out of the 37 reported cases, 31 which were visited were not cases of measles, but 26 proved to be rubilla. Apart from these cases, individual exclusion on account of infectious disease was carried out from the inspection clinic as follows :

Scarlatina	...	...	1
Diphtheria	...	...	2
Rubilla ...	...	...	12
Chicken Pox	...	...	8

No cases of Measles were seen amongst school children either at the clinic or in schools. As there was a similar freedom from this disease in 1912, one may presume the likelihood of an outbreak in 1914.

Further reference to the subject of exclusion from school may be found in the School Medical Officer's Report.

FOOD.

MILK.—The milk supply of the town may be regarded as satisfactory. The bulk of the milk sold comes in from farms in the country, and outside the area. There are 3 dairies in the Borough where the dairy-keeper is also a cow-keeper. There are 48 purveyors of milk on the register. The condition of the milkshops and cowsheds is satisfactory.

52 visits were made to dairies and milkshops, and 35 to cowsheds.

OTHER FOODS.—76 visits of inspection were made to bakehouses. There are 25 bakehouses on the register, all of which are kept clean. There are no underground bakehouses. An increasing proportion of the bread sold is baked in neighbouring towns.

MEAT.—There is no public abattoir in the Borough, but there are 15 private slaughter-houses, 4 being licensed and 11 registered.

345 visits of inspection were made in the year, visits being made at the time of slaughtering as well as at irregular hours.

The inspector, who possesses the Meat Inspector's Certificate, has, when required, the opinion of the Medical Officer or the Veterinary Inspector for support.

During the year there were condemned and destroyed :—

Pigs ...	...	...	3		
Beef ...	{	Carcase ...	2	Udders ...	5
		Fore quarters	3	Hearts ...	5
		Hind quarters	1	Lungs ...	22
		Heads ...	9	Spleens ...	16
		Livers ...	17	Bellies ...	19

All the above were tuberculous.

Very little friction can occur by this department of the work, as the butchers voluntarily send for inspection where they are suspicious of the condition.

It seems unfortunate that meat, fish, and fruit classes of food-stuffs that are readily decomposed in summer weather, should be exposed to contamination by the prevalent fashion in exhibiting. The total withdrawing of the shop window allows free access to dust from the streets and to flies.

The whole subject of food supply, in relation to its purity and wholesomeness, and the safeguarding of these until delivered to the consumer, is a national question of high value in relation to the public health, and deserves more attention from legislators. For instance, for supervision to be complete, and to insure that all meat sold is fit for human consumption, public abattoirs are a necessity, but the difficulties in the way are too great for the majority of Boroughs, large or small.

SALE OF FOOD & DRUGS ACT.

60 samples were taken, 26 of these being formal, and 34 informal.

Milk ...	18	Flour ...	6
Butter ...	15	Baking Powder...	2
Margarine	2	Oatmeal ...	1
Lard ...	3	Arrowroot ...	3
Cream ...	5	Cream of Tartar	2
Coffee ...	1	Cornflour ...	1
Cheese ...	1		

Of the 18 milk samples, one was separated milk.

MILK & CREAM REGULATIONS (1912.)

Report for the year ended 31st December, 1913.

1. MILK ; AND CREAM NOT SOLD AS PRESERVED CREAM.

	(a) Number of samples examined for the presence of a preservative.	(b) Number in which a preservative was reported to be present.
Milk	18	0
Cream	0	0

2. CREAM SOLD AS PRESERVED CREAM.

(a) Instances in which samples have been submitted for analysis to ascertain if the statements on the label as to preservatives were correct.

Correct statements made...	...	...	5
Statements incorrect	...	...	0
		TOTAL	5

(b) Determinations made of milk fat in cream sold as preserved cream.

Above 35 per cent.	...	...	5
Below 35 per cent.	...	...	0
		TOTAL	5

(c) Instances where (apart from analysis) the requirements as to labelling or declaration of preserved cream in Article V (1) and the proviso in Article V (2) of the Regulations have not been observed, 0.

(d) Particulars of each case in which the Regulations have not been complied with, and action taken, 0.

3. THICKENING SUBSTANCES.—Any evidence of their addition to cream or to preserved cream. Action taken where found, 0.

4. OTHER OBSERVATIONS, IF ANY.—Cream cannot be brought in this area unless previously ordered.

HOUSING.

Considerable progress has been made in the year in dealing with insanitary property.

Number of dwelling houses inspected	545
„ „ dwelling houses unfit for habitation	11
Representations to Local Authority with a view to closing orders	11
Closing orders made	11

3 dwelling-houses were put into a fit state for human habitation after the making of closing orders. During the year 16 houses have been demolished.

Great improvement has been effected during the year in the Higherland, by the demolition of property and opening up of new spaces.

The Borough is unfortunate in that close grouping of houses with little yard space has left the Sanitary Authority with many unsatisfactory areas to be dealt with. These have been largely reduced in the past 2 years, the demolitions alone amounting to 42.

In an old Borough like Newcastle, those houses of an old date of construction necessarily do not conform to modern ideas of sanitation, and a decided improvement in the town itself has been effected by demolition.

The problem of the provision of houses for the working classes in the place of those houses done away with has been tackled by the Corporation, and the building scheme adopted for the area on the Lower Green will help to remedy the existing state of affairs. During the year 17 houses were built, and on 31st December 4 houses were in course of erection.

The bye-laws in force are amply sufficient in supervising the satisfactoriness of new dwellings proposed.

Three cases of overcrowding were discovered and dealt with.

One prosecution was taken for the obstruction of the Inspector by the tenant, who refused admission for inspection. A conviction was obtained and a fine imposed with costs. Under the Housing and Town-Planning Act, 28 notices were served.

Closing Orders were made in respect of the 11 houses as follows :

5, Mill Hole
47, Lower Street
1, 3 and 5, Castle Hill Street
59 and 61, Fletcher Street
74 and 76, Lower Green
7 and 9, Paradise Street.

The following 16 houses have been demolished :

2 and 3, Court 3, Hassell Street
 8 and 10, Goose Street
 2 to 6, Nelson Bank
 16 to 30, Higherland
 2, Ford's Yard.

With reference to these, the houses 8 and 10, Goose Street, and Nos. 2 to 6 Nelson Bank and Nos. 16 to 30 Higherland were purchased by the Corporation. This admitted of considerable street improvement.

No. 2 Ford's Yard was pulled down voluntarily after notice to repair.

The houses in Nelson Bank and Higherland were purchased by the Corporation for the carrying out of the improvement scheme already referred to.

The following houses have been altered satisfactory after notice being given :

98, Hassell Street
 7 and 9, Upper Green

The paving of back passages and yards is being carefully attended to, this work being of great value in the prevention of soil pollution.

CLOSET ACCOMMODATION.—During the year 164 privies and 40 pail closets have been converted into water closets. This work is of the greatest import from the sanitary point of view. As regards disposal of excreta, it is the prime object to have these removed from the vicinity of the dwelling houses with as much expedition as possible, and this can be done efficiently only by the water carriage system.

At the end of 1913 there were existing :—

Privies with fixed receptacles	...	85
„ „ moveable „	...	28
Fresh water closets ...	...	3884
Waste „ „ ...	...	58

Total number of privies and pail closets converted during 1913, 204. Two waste water closets were also converted.

SCAVENGING.—The need for expeditious removal of refuse and garbage from the vicinity is as great as in the case of excreta, as

flies breed in those collections, and the infection of milk and food-stuffs in the house is readily effected.

All bins are emptied once weekly, and oftener when necessary. In 1913, there were 2,500 dust bins in use—an increase of 400 on the previous year. The collection and disposal of household and trade refuse, and of nightsoil costs 2s. 9d. per load. 615 loads of refuse were burnt at the destructor.

WORKSHOPS AND WORKPLACES.—12 visits of inspection were made to factories, 95 to workshops and 3 to workplaces.

There are 143 workshops on the register, 12 of these being workshop bakehouses.

During the early part of the year I conducted an investigation into the labour conditions of the fustian-cutting industry, the home circumstances of the workers, and the effect of the industry on health. This branch of labour gives employment to a large number of girls and women in the Borough, and is interesting because of its almost unique demand on the locomotive powers.

It may be stated that the condition of the mills as regards the provision of ventilation and heating is highly satisfactory. As usually the mills have been converted from other purposes, *e.g.* a skating rink and a religious meeting hall are now fustian cutting works—the provision of air-space is more than ample.

It is rare however to find cross-ventilation in use, this being entirely due to the workers themselves, who have a deep-rooted objection to draughts, though other reasons for their fashion of closed windows were advanced. Where the mill abuts on the street the dust that enters falls on the cloth and the edges of the knives are much more quickly blunted. Again I was informed that the entrance of damp air affected the dressing used to stiffen the cloth and rendered the work of cutting more difficult.

With regard to dust, this is mostly lime and cotton threads. The cloth receives a special dressing of size before being sent from the makers, but some classes of fustian need again to be dressed with a mixture of lime and soft soap. When this class of material is being cut there is a certain amount of dust in the air, and should all the cutters be employed in this work, the dust is quite visible in the air of the room. Constant disturbance by the continual walking tends to prevent its being settled.

The cutters themselves are satisfied that this lime dust is not deleterious—the current idea being that it is beneficial to the health,

one worker actually describing it as "nourishing." Inhalation of the dust seems to be quite non-irritating though it causes a recurrent tendency to cough or sneeze where one is suffering from coryza or catarrh.

As the heating and ventilation are at the discretion of the workers themselves, it is perhaps fortunate that the air provision is so ample as to belittle the effects of the absence of actual cross ventilating. It is obvious that fixed ventilators alone could remedy this condition, and in some mills such provision is made. But in any case the removal of several window panes and their substitution by wire guaze would be sufficient, and the covering of these with a piece of muslin would do away with the fear of dust. As it is lung troubles are very rare in the cutters. The occupation itself seems to have a beneficial effect on health, and on the physique, the selective action of the work playing a large part in determining this, by weeding out those constitutionally unfit, and at the same time the physical exercise involved--not in essence differing greatly from training for a walking tour--greatly benefits those recruits to the work who get over the first few months. However average in health the newcomers are, older hands seem to be guarded against many common complaints. They have been made or kept healthy by the physical training which discards those unsuited to its rigour.

The following table shows the administration of the Factories and Workshops Act :—

I.—INSPECTION OF FACTORIES AND WORKSHOPS AND WORKPLACES.

Premises.	Number of		
	Inspection	Written Notices	Prosecutions
Factories (including Factory Laundries) ...	12	2	
Workshops (including Workshop Laundries)...	95	11	
Workplaces (other than Outworkers) ...	3	Nil.	
Total ...	110	13	Nil.

II.—DEFECTS FOUND IN FACTORIES, ETC.

Particulars.	Nature of Work.			
	Found	Remied.	Ref.	Prosec
Want of Cleanliness	7	7		
Other Nuisances	2	2		
Sanitary } insufficient	1	1		
Accommodation } unsuitable or defective ...	1	1		
Breach of special sanitary requirements for bakehouses	2	2		
Total	13	13	Nil.	Nil.

III.—HOME WORK—OUTWORKERS' LISTS.

	Lists received from Employers sending once in the year.	
	Lists,	Contractors.
Wearing Apparel—making, &c. ...	1	1

IV.—REGISTERED WORKSHOPS.

Workshops	131
Bakehouse Workshops	12
Total	<u>143</u>

V.—MATTERS NOTIFIED TO H.M. INSPECTOR OF FACTORIES.

Failure to affix Abstract of the Factory and Workshop Act	2
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act	1
Notified by H.M. Inspector...	1
Reports (of action taken) sent to H.M. Inspector	1
Other	6
Certificates granted during the year	Nil.

CANAL BOATS.—Newcastle is not a registration centre for canal boats, but 13 were inspected during the year. 3 contraventions of the Canal Boats Act and Regulations were found. There was no case of infectious disease on board any boat.

SANITARY INSPECTIONS.—In accordance with Article XX. of the Sanitary Officers Order, 1910, I have received the report of the Inspector of Nuisances, with regard to the work of inspection during the year. This work is excellently carried out and a large amount of supervisory work is also thrown on Mr. Holden.

Much has been referred to already, under the different heads. Attention may be drawn to —

1. The progressive substitution of water closets for privies.
2. The further introduction of ash-bins.

In respect to this the Inspector states:—"During the year 4,785 loads of ashes were removed, 8,414 ashpits cleansed, which dealt with 11,121 houses, also 120,744 dust-bins were emptied. You will remember that the Corporation decided to maintain dust-bins after the first one had been provided by the owner, subject to the dust-bin being of a standard type (D shape, 2 bushels, 28 lbs. weight.) The rapid displacement of ashpits by bins is no doubt due to the action of the Corporation. I may say that property-owners are in agreement with the system, and there is little difficulty in getting dust-bins provided even when the ashpits comply with the bye-laws."

3. The inspection of workshops, bakeshops, dairies, and cow-sheds. These premises are regularly inspected and on the whole are kept in a fairly good condition.
4. The inspection of meat and other foods, and the supervision of slaughter-houses.
5. Food and Drugs Acts.

"Of the 18 samples of milk taken, one was separated skimmed milk. Excluding this sample the average percentage of milk fat was 3·75, and the total solids as 8·7. One sample of milk was found on analysis to be 41% deficient in milk fat, but the vendor was let off with a caution."

6. The Inspection of Canal Boats.

"13 canal boats were inspected. There were three contraventions of the Canal Boats Acts and Regulations, viz.:—1 boat leaking and dirty cabin. The captains of 2 boats not in possession of certificates. No infectious disease occurred on any of the boats inspected."

7.—House Inspection.

“I have served 574 preliminary notices, 22 statutory notices, and 30 notices under the Housing and Town Planning Act,—also 220 letters were sent out in respect of work not completed after notice.”

8. General Sanitary Work.

“A large amount of re-drainage has been carried out during the year. 95 sinks have been fixed in houses with water supply over each sink. At one time a considerable number of houses were without sinks and a water tap was placed in the yard to serve several houses. Since 1907 this matter has received attention with very satisfactory results.”

A summary of the work done in the Inspector's Department is given in Table V.

		Number of		Abatement Notices		Nuisances Abated after Notice by	
		Inspections and Observations made	Defects found	Inform'd by Inspector	Formal by Authority	Inspector	Authority
Dwelling-houses and Schools	Foul Conditions ...	85	46	46	...	44	...
	Structural Defects ...	98	58	43	...	47	...
	Overcrowding ...	6	3	3	...	3	...
	Unfit for Habitation ...	11	11	...	11	...	11
	Dairies and Milkshop	52	...	...	...	...	...
	Cowsheds ...	35	1	1	...	1	...
	Bakehouses ...	76	6	6	...	6	...
	Slaughterhouses ...	345	3	3	...	3	...
	Canal Boats ...	13	3	...	3	...	3
	Ashpits and Privies...	737	445	445	2	354	2
	Deposits of Refuse & Manure	40	9	9	...	9	...
	Water Closets ...	4	2	2	...	2	...
House Drainage	Defective Traps ...	...	...	...	...	...	...
	No Disconnection ...	...	...	...	...	...	...
	Other Faults ...	94	47	47	...	39	...
	Water Supply ...	12	6	4	...	6	...
	Animals improperly kept	15	7	7	...	6	...
	Other Nuisances ...	288	182	121	...	115	...
	Sinks provided and Water Supply over Sinks	95	62	50	...	49	...
Total ...		2006	891	787	16	584	16

Cases of Infectious Disease notified during year 1913.

NOTIFIABLE DISEASE.	Number of Cases Notified.										Total Cases Notified in each Locality.		Total Cases Removed to Hospital.
	At all Ages	At Ages—Years.						Under 1	East Ward	West Ward			
		1 and under 5	5 and under 15	15 and under 25	25 and under 45	45 and under 65	65 and upwards						
Diphtheria (including Mem. Croup	32	0	14	14	3	1	0	0	24	8	19		
Erysipelas	8	0	1	2	0	4	1	0	3	5	0		
Scarlet Fever... ..	16	0	6	8	1	1	0	0	12	4	11		
Enteric Fever	6	0	0	0	2	3	1	0	3	3	3		
Poliomyelitis	1	0	0	1	0	0	0	0	1	0	0		
Pulmonary Tuberculosis	69	0	3	18	12	26	10	0	35	34	0		
Other forms of Tuberculosis	8	0	1	5	0	2	0	0	4	4	0		
Ophthalmia Neonatorum	5	5	0	0	0	0	0	0	3	2	0		
Totals	145	5	25	48	18	37	12	0	85	60	43		

Isolation Hospital :—Newcastle Joint Isolation Hospital—within the Borough—jointly maintained with Newcastle R. D. Council.

Unwhole- some Food	{	Number of Seizures	...	...	...	...	26
	{	Condemned by Magistrates	...	...	...	...	1
	{	Prosecutions for exposing for sale	...	...	...	...	0
	{	Convictions	"	"	...	...	0
Food and Drugs Act	{	Samples taken for Analysis	...	...	...	...	60
	{	Number found adulterated, &c.	...	...	...	...	1
	{	Proceedings taken	...	...	...	...	0
	{	Number of Convictions	...	...	...	...	0

PRECAUTIONS AGAINST INFECTIOUS DISEASE.

Houses Disinfected after Infectious Disease	...	...	82
Schools	"	"	0

SANITARY ADMINISTRATION.

STAFF.—There has been no change in the staff during the year. The Health Visitor, in addition to her duties under the Notification of Births Act, visits the homes of consumptives and distributes the leaflets on prevention. As she is also the School Nurse, there is no overlapping of work, or possible friction entailed by visits of several officials to the same dwelling.

ISOLATION HOSPITAL.—This is a joint hospital, dealing with cases from the Newcastle Rural District, as well as from the Borough.

There are 42 beds available, and scarlatina, diphtheria and enteric fever may be treated at the same time.

During 1913, 72 cases were admitted and treated, viz.:—45 of diphtheria, and 27 of scarlet fever. There were 3 deaths from diphtheria, and on the 31st December, there remained in hospital 6 cases, 5 being diphtheria cases and 1 scarlatina. The remainder were discharged during the year convalescent.

Of the 72 cases admitted, 28 were from the Borough, 38 from the Rural District, and 6 from Chesterton. These were composed as follows:—

Diphtheria	...	17 from Newcastle Urban District
	28	" " Rural "

Total 45

Scarlet Fever	11 from Newcastle Urban District
	10 " " Rural "
	6 " Chesterton

Total 27

In one case tracheotomy was performed. This patient recovered. 2 cases of enteric fever were removed for treatment to the North Stafford Infirmary, and 2 cases of diphtheria belonging to the Borough were treated in Bucknall Isolation Hospital, one of them dying there.

The Isolation Hospital was never closed during the year, the epidemic in the Rural District being responsible for keeping the wards and staff occupied. The accommodation is ample for the general needs of the district, a permanent staff being maintained to deal with scarlet fever and diphtheria cases, additional nurses being employed when necessary.

Summary of cases treated :

	Scarlet Fever	Diphtheria	Total
Remaining 1st January, 1913 ...	0	0	0
Admitted	27	45	72
Discharged	26	37	63
Died	0	3	3
Remaining 31st December, 1913	1	5	6

In a small hospital like this, the difficulties of administration are immensely increased by the occurrence of two varieties of infectious disease at the same time. I must express my thanks to Mrs. Holden, the matron, for her valued co-operation.

LIST OF ADOPTED ACTS IN FORCE IN THE BOROUGH.

Infectious Diseases Notification Act, 1889.

Infectious Diseases Prevention Act, 1890.

Public Health Amendment Act (Parts 2, 3, 4 and 5).

Notification of Births Act, 1907.

Public Health Amendment Act (Parts 2, 3, 4, 5, and Section 86 of Part 7), 1907.

With regard to the acute Infectious Diseases, many contacts were examined during the year and means taken to obtain bacteriological examination to aid or confirm the diagnosis. The arrangement between the County Council and the University of Birmingham allows of prompt confirmation or otherwise of the diagnosis of Diphtheria, Enteric Fever, Cerebro-Spinal Fever or Tuberculosis. Bacteriological examination is of the greatest value in tracing infection, and during the year use was made of the arrangements as follows :

		Specimens examined.
Enteric Fever ...	Widal reaction	5
Phthisis ...	Sputum	7
Diphtheria ...	Throat Swabs	115

Cases in Hospital :

From the Rural District Swabs ... 52

Total specimens sent from Newcastle ... 179

PREVALENCE & CONTROL OVER ACUTE INFECTIOUS DISEASES.

From its geographical position, the Borough would seem likely to share in any epidemic occurring in the neighbouring County Borough or Rural District, but Newcastle remains fortunate in its comparative freedom from serious epidemics. The following table shows the notifications since 1891, the quinquennial periods being averages :

Year	Scarlet Fever	Diphtheria	Erysipelas	Enteric	Continued	Puerperal Fever	Small Pox	Ophthalmia	Poliomyelitis	TOTALS	Phthisis	Other Tuber.	All Tuberculous
1891 to 1895	91	7	34	14	4	3	...	...	...	153	...	...	...
1896 to 1900	115	17	15	23	1	2	...	...	...	173	...	...	...
1901	28	14	13	8	...	1	...	...	...	64	...	...	...
1902	28	6	17	18	...	6	...	...	...	75	...	...	...
1903	23	4	12	26	...	1	4	...	...	70	...	...	...
1904	212	5	18	10	...	1	8	...	...	254	...	...	...
1905	138	11	11	33	...	2	...	...	...	195	...	...	...
1906	80	13	20	21	...	2	...	...	...	136	...	...	...
1907	38	9	11	5	...	...	...	...	...	63	...	...	...
1908	11	6	9	9	...	...	...	...	...	35	...	...	...
1909	59	12	11	7	...	1	...	4	...	94	18	...	...
1910	49	9	9	14	...	1	...	10	...	92	20	...	...
1911	55	16	11	16	...	1	...	6	...	105	21	...	...
1912	14	7	5	3	...	...	...	2	1	32	50	...	...
1913	16	32	8	6	...	...	...	5	1	68	69	8	77

SCARLET FEVER.—16 cases were notified during the year, none of which proved fatal. This is in accordance with the milder type of scarlet fever which is now existent. 11 of the cases were removed to hospital. There were no "return" cases.

DIPHTHERIA.—32 cases were notified, 4 of which proved fatal. 17 cases were treated in the Newcastle Isolation Hospital, and 2 at Bucknall. The latter occurred in the North Staffordshire Infirmary at Hartshill, in the County Borough of Stoke-on-Trent.

Experience shows that this disease is spread by persons, and not by infected media as a rule, and the facilities that exist for bacteriological, as apart from clinical, diagnosis should simplify the work of the practitioner in assisting the health authorities to prevent the spread of this disease. Owing to the isolation of patients with the clinical signs of diphtheria, the spread is almost entirely due to "carriers," *i.e.* persons harbouring the germ and capable of infecting others, while not exhibiting signs of sore throats and illness..

In all notified cases, the procedure has been to have other inmates of the house swabbed, while this has been extended to other contacts in the case of school children. No patient is discharged from the hospital unless 2 consecutive swabs give a negative result on bacteriological examination. This test should be applied to all cases of diphtheria.

ERYSIPELAS.—8 cases were notified, but none were removed to hospital.

ENTERIC FEVER.—6 cases were notified, 2 of which were fatal. 5 of these cases gave a negative widal re-action. As in 1912, only 3 cases were notified, one may state that enteric fever, as an infectious disease, is practically non-existent in the Borough. Of the 6 cases notified, 3 occurred in institutions. 2 others were removed to the North Stafford Infirmary.

PUERPERAL FEVER.—There have been no cases notified for the past 2 years.

OPHTHALMIA.—5 cases were notified. The arrangement for the treatment of those cases has been described in previous reports, all were successfully treated. This disease is now compulsorily notifiable.

POLIOMYELITIS.—One case was notified. This disease, along with cerebro-spinal meningitis, was made notifiable in 1912. The case notified was an importation, the disease exhibiting itself 7 weeks previously in another area. No human source of infection could be traced, and though the child is still disabled, the affected group of muscles seem to be improved by treatment.

The acute infectious diseases notified during the year do not amount to an unsatisfactory figure. There is an excess in the diphtheria notifications, but the fact that this disease was prevalent in the rural district, and that several cases were contracted outside the Borough, mitigates the conclusions to be drawn. At no time during the year could the disease be regarded as prevalent, or in the nature of an epidemic.

PREVALENCE OF, AND CONTROL OVER, TUBERCULOSIS.

This is the chief preventible disease affecting the human race, being responsible for 1 out of every 10 deaths in England. Since the last report, steps have been taken to grapple with the ravages of this disease, the constitution of the Joint Committee in the County Area having occurred during the year. The work of prevention is none the less the duty of the local authority. During the past year, 77 cases of Tuberculosis were notified, 69 being Tuberculosis of the lungs, and 8 of other forms.

Of these 62 were notified by practioners on Form A.

8	,,	,,	by the School Medical Officer on Form B.
4	,,	,,	on Form C.
3	,,	,,	on Form D.

The 62 A. included 54 cases of Tuberculosis of the Lungs and 8 of other forms.

The cases, when notified, have been visited by the Health Visitor, and a printed card of instructions to the patient, containing directions how to prevent infection of others, was left. The names of the children attending school were obtained, and these children were examined at frequent intervals by the School Medical Officer. Reference to this work is to be found in the Report to the Education Authority, under Tubercule Contacts. In addition, a number of children examined at school had a family history showing that these had at one time or other been contacts of consumption cases in the same household. These were included with the others as Tubercule Contacts, and re-examined frequently during the year.

The appointment of a Tuberculosis Officer, who is now in active duty, is an immense boon to the community. The compulsory notification of tuberculosis amongst all classes came into force on the 1st February, 1913, and while every effort is now being made to cure and ameliorate the extent of the disease, it must be borne in mind that the function of prevention is not one whit less important.

In spite of the notification of tuberculosis being compulsory, 9 cases died of this disease during the year, without previous notification.

The following table shows the deaths from Consumption and other tuberculous diseases, during the past 11 years, along with the number of notifications received :—

	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
Deaths from Phthisis ...	7	10	18	22	21	20	21	23	22	26	21
Rate per 1,000 living ...	·35	·5	·89	1·09	1·05	·99	1·04	1·1	1·08	1·2	1·03
Deaths from other Tub. diseases...	9	6	10	5	9	5	2	5	12	10	11
Rate at 1,000 living ...	·45	·3	·49	·24	·44	·24	·09	·24	·54	·49	·54
Notifications ...	...	...	...	...	...	...	18	20	21	50	77

On analysing the notifications I found that of the Poor-Law cases notified in 1909 and 1910, half were dead within 2 years of notification. Of the 21 notifications received in 1911, 8 died within 2 years, while 13 of the 50 notifications received in 1912 are dead, and 6 of the 69 notifications received during 1913. Apparently therefore while 50% of the cases coming under the notice of the Poor Law died within 2 years of notification, this percentage does not hold good with all classes of case. The attempt is now being made to detect the disease in an early stage, and one can but hope that this scourge is on the way to being checked, and that in time, the waste of valuable lives, with the economic loss to the family and to the community involved, may be prevented.

DISINFECTION.—8 Houses have been disinfected by the Local Authority after every death from tuberculosis. A form is sent to every house, so that the time, etc. may be communicated and disinfection carried out. This disinfection is also carried out after removal of the case to an institution or other address.

ADMINISTRATION OF THE DUTIES UNDER THE TUBERCULOSIS REGULATIONS, 1912.

Since the compulsory notification of all cases of tuberculosis 67 visits were made to the home on receipt of the primary notification. The total number of houses thus visited was 58. 141 further visits were made during the course of the disease. In every case the other members of the household were informed of the advisability of having medical examination, and especially wherever there was the slightest symptom of ill-health.

As up to the end of the year, there was no Tuberculosis Officer on duty, it is doubtful to what extent this advice was followed on the part of adults, who were advised to consult their own doctor. In such matters the public are slow to educate, but when the tuberculosis dispensary is in full swing, there is little doubt that more attention will be attracted to tuberculosis and its infectivity, and that other members of the family in which there is a case will be quite eager to be re-assured or be diagnosed in the incipient stages.

Children at school are noted, and examined at intervals by the School Medical Officer. The holding of the inspection clinic has been of the greatest help in this direction, and cases of actual or suspected tuberculosis can thus be kept under supervision. Experience in the examination of school children is most valuable in determining the question of exclusion or otherwise of the child from school. During 1913, it was necessary to exclude 24 cases for phthisis. The number of contacts at school who were examined amounted to 59—these being additional to contacts examined in previous years, and exclusive of cases actually detected and notified as tuberculosis.

Arrangements will shortly be made for co-ordinating the work with that of the Tuberculosis Officer of the Joint Committee and it is hoped that the services of the nurse will be available to assist that officer as well as the Medical Officer of Health in dealing with the control of tuberculosis.

In a Borough of this size, such an arrangement would be of great value on both sides, a large amount of clerical work and enquiries would be saved, and supervision of cases and the co-ordination of the work of detection and prevention would be simplified.

VITAL STATISTICS OF THE DISTRICT.

The population estimated to the middle of the year, is as follows :—

1901	...	19,921	
1902	...	19,950	
1903	...	19,979	At Census, 1901.
1904	...	20,008	Population=19,914
1905	...	20,037	Inhabited houses=4,000
1906	...	20,066	Av. No. of persons per house=4·9
1907	...	20,095	
1908	...	20,124	At Census, 1911.
1909	...	20,152	Population=20,201
1910	...	20,180	Inhabited houses=4,146
1911	...	20,208	Av. No. of persons per house=4·8
1912	...	20,236	
1913	...	20,270	

BIRTHS.

During 1913, 564 births were registered in the Borough. The corrections by the Registrar-General reduce this figure to 560 belonging to Newcastle, being equal to a birth-rate of 27·6 per 1000 living.

These are made up of :—

		Males	Females	Total
Legitimate	... ..	266	268	534
Illegitimate	... ..	12	14	26
Total	... ..	<u>278</u>	<u>282</u>	<u>560</u>

Thus 101 girls were born for every 100 boys. This is unusual.

The following table shows the quarterly, and also the distribution of the births according to locality.

	EAST WARD.			WEST WARD.			BOROUGH.		
	Males	F'males	Tot'l	Males	F'males	Tot'l	Males	F'males	Total
March quarter	26	26	52	36	35	71	62	61	123
June ,,	33	26	59	39	43	82	72	69	141
Sept. ,,	25	30	55	44	48	92	69	78	147
Dec. ,,	36	36	72	39	38	77	75	74	149
1913 ...	<u>120</u>	<u>118</u>	<u>238</u>	<u>158</u>	<u>164</u>	<u>322</u>	<u>278</u>	<u>282</u>	<u>560</u>

More births occurred in the West Ward than the East, and while the last 3 quarters of the year are almost constant, the March quarter shows a low birth-rate. In the following table is shown the birth and death-rate for a series of years.

Vital Statistics of whole District during 1913 and previous years.

YEAR	Population estimated to Middle of each year.	Births.		Total Deaths registered in the District.		Transferable Deaths		Nett Deaths belonging to the District.				
		Uncorrected Number	Nett	Number	Rate	of Non- residents registered in the District.	of Resi- dents not registered in the District.	Under 1 year of age.		At all ages.		
								Number	Rate		Number	Rate per 1000 nett Births
1908	20,124	611	30.3	333	16.5	8	10	98	160	335	16.5	
1909	20,152	579	28.7	364	18.6	25	14	81	145	353	17.5	
1910	20,180	545	27.0	280	13.8	10	10	50	97	280	13.8	
1911	20,208	591	29.2	385	19.0	10	10	106	179	385	19.0	
1912	20,236	604	29.7	278	13.7	14	24	58	96	288	14.2	
1913	20,270	564	27.6	292	14.4	16	33	64	114	309	15.2	

Area of District in Acres (land and inland water) 671.

Total population at all ages ... 20,201 }
 Number of inhabited houses ... 4146 } At Census 1911.
 Average number of persons per house 4.8 }

YEARLY BIRTH & DEATH RATES.

Year	No. of Deaths	Death Rate	Deaths (Zymot- ic.)	Zymotic Death Rate.	Infant Mortality		Births.	
					Total	Rate	No.	Rate
Aver. 1886- 1890	377	22·8	46	2·7	154	240	642	35·0
Aver. 1891- 1895								
Aver. 1896- 1900	374	20·7	49	2·7	166	253	657	32·6
Aver. 1901- 1905								
Aver. 1906- 1910	386	19·1	59	2·9	140	213	659	32·6
Aver. 1911- 1915								
1906	361	17·9	57	2·8	113	170	631	31·4
1907	369	18·3	60	2·9	88	150	585	29·1
1908	335	16·5	37	1·8	98	160	611	30·3
1909	353	17·5	46	2·2	84	145	579	28·7
1910	280	13·8	25	1·2	50	97	545	27·0
1911	385	19·0	97	4·8	106	179	591	29·2
1912	288	14·2	21	1·03	58	96	603	29·7
1913	309	15·2	27	1·3	64	114	560	27·6

It will be seen that the birth-rate is lower than in the past two years. The gradual decline since 1886 is apparent, and 1913 shares with 1910 the distinction of being below 28 per 1000.

The percentage of illegitimate births is 4·6, a decidedly low and satisfactory figure.

STILL-BIRTHS.—I am indebted to the Registrar for the information that during 1913, 16 still-births were interred in the cemetery.

NOTIFICATION OF BIRTHS ACT.—During the year 555 births or 99 per cent of the total were notified to the Medical Officer of Health.

DEATHS.

With regard to the other columns of the foregoing table I append the following definitions:

The birth-rate and death-rate are calculated per 1,000 living of the population.

The crude death-rate is the rate per 1,000 living, of all deaths registered in the Borough including non-residents.

The nett death-rate is the true death-rate calculated on inhabitants of the Borough only.

The infantile Mortality is the death-rate of infants under 1 year of age, calculated per 1,000 births.

The Zymotic death-rate is the rate per 1,000 living, of deaths from the seven principal zymotic diseases:—Smallpox, Scarlet Fever, Diphtheria, Enteric Fever, Measles, Whooping Cough, and Diarrhoea.

The crude death-rate in 1913 was	...	14·4
The nett ,, ,,	...	15·2

The corrected death-rate is obtained by multiplying the local recorded death rate by the standardizing factor for the district. In Newcastle this is '9887, and the death-rate becomes 15·02.

The purpose of a factor is to neutralise errors in death-rates caused by the disparity of age—and sex-distribution, and raises or lowers the local death-rate to what it would be if the age and sex-distribution of the town were the same as for England and Wales generally.

In 1913, 292 deaths were registered in the Borough. Of these 16 were of persons not belonging to Newcastle, leaving 276 deaths of inhabitants of the Borough.

To this number must be added 33 deaths of inhabitants dying outside the Borough, making a total of 309 deaths, and equal to a nett death-rate of 15·2 per 1,000 living, which compares favourably with previous years.

I have already referred to the age-distribution of the population of the Borough, and it is evident that the deaths from respiratory diseases which are dangerous to life more especially at the extremes of age must remain an important factor in the death-rate.

The following table shows the quarterly distribution of the deaths:—

	March	June	Sept.	Dec.	Total
No. of Deaths ...	75	74	66	94	309
Rate per 1000 living	14	14	12	18	15·2

The heaviest mortality was thus in the December quarter. This along with the March quarter forms the most inclement period of the year, and in the absence of epidemic disease the deaths must bulk largely during the season.

The deaths were distributed as follows :

				Males	Females	Total
East Ward	...	...	...	55	55	110
West Ward	...	...	...	68	63	131
Institutions	...	...	...	14	21	37
Total	...	...	...	137	139	276

The remainder, 33, died outside the borough.

The deaths in Institutions were as follows :—

Union Infirmary						Isolation Hospital						Total Deaths in Institutions		
Residents			Non-Residents			Resident			Non-Resident					
Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total
13	21	34	7	3	10	1	...	1	2	...	2	23	24	47

There were also 2 deaths of females in the Almshouses.

The death-rate of the Borough is a high one when compared with the average for England and Wales. It is of interest to note the ages at death.

Under									
1 year	1—2	2—5	5—15	15—25	25—45	45—65	over 65		
64	16	15	10	18	37	63	86		

Thus practically half the deaths occurred in the first year of life, or at ages of 65 and upwards. This proportion is nearly a constant one.

The following table shows the principal causes of death in recent years.

	1907	1908	1909	1910	1911	1912	1913
Respiratory Diseases	83	68	88	42	63	63	64
Heart Diseases ...	33	32	32	33	16	22	27
Zymotic Diseases ...	60	37	46	25	98	21	27
Phthisis ...	21	20	21	23	22	26	21
Other Tuberculous Diseases	9	5	2	5	12	10	11
Cancer ...	10	10	10	17	15	15	22
Senility ...	41	46	37	32	34	16	22
Birth Debility...	11	15	11	8	33	27	27
Kidney Diseases ...	7	10	12	10	12	13	11
Others ...	94	92	96	85	80	75	77
Total ...	369	335	353	280	385	288	309

There is thus maintained an improvement in the case of the Zymotic diseases, which as a rule exact a large toll in infant life. Diseases which show no diminution in mortality are :—

I.—Respiratory.

II.—Cancer.

RESPIRATORY DISEASES.

Deaths from lung diseases, not including consumption, occupy the most prominent position in the mortality list of the Borough.

Sixty-four deaths or 20 per cent of all the deaths are due to this group.

The quarterly distribution was :

	March	June	Sept.	Dec.	Total
No. of deaths	24	16	9	15	64

The heaviest mortality was thus in the first quarter, a condition borne out year after year. This is due to the inclement months of the year, and the deaths occur largely amongst the infants, and those well advanced in years.

In all 27 deaths occurred in the first 5 years, and 17 deaths over 65 years of age, making a total of 68 per cent at the extremes of life.

DEATHS FROM RESPIRATORY DISEASES.

Year	Average 1901—5	Average 1906—10	1911	1912	1913
No. of deaths	76	69	63	63	64
Rate per 1,000	3·8	3·4	3·1	3·1	3·1
Per cent. of all deaths	21	20	16	22	20

The rate is thus a fairly constant one.

CANCER.

Twenty-two deaths from cancer occurred in 1913, 13 of the cases being females and 9 males. Provision for disinfection of the house is made after any case of cancer.

The site of the disease was as follows :—

DIGESTIVE SYSTEM.

Tongue ...	...	1 male	2 females
Oesophagus ...	...	—	1 „
Stomach ...	...	3 males	3 females
Intestine ...	...	3 „	1 „
Rectum ...	...	1 „	1 „
Total—16 deaths.		<u>8 males</u>	<u>8 females</u>

REPRODUCTIVE SYSTEM.

Breast ...	...	...	1 female
Uterus ...	...	...	3
Total ...			<u>4 deaths</u>

OTHER SITES.

1 male died from epithelioma involving lower jaw
1 female died from sarcoma of the humerus

The site in males was therefore practically confined to the alimentary canal, while in females cancer of the reproductive organs accounts for the excess in the number of deaths of females over that of males.

The age at death in the different sexes was as follows :—

	15-25	25-45	45-65	Over 65
Males ...	—	1	4	4
Females ...	1	2	3	7
Total ...	<u>1</u>	<u>3</u>	<u>7</u>	<u>11</u>

Thus half the deaths occurred at ages of 65 and upwards. The death-rate from cancer is equal to a mortality rate of 1·8 per 1,000 living.

INQUESTS.

17 inquests were reported during the year. There were also 8 inquests held on the deaths of inhabitants which occurred outside the Borough. Four of the 17 reported in the Borough were on deaths of non-residents.

ZYMOTIC DISEASES.

The following table shows the deaths from the seven principal zymotic diseases.

DEATHS FROM ZYMOTIC DISEASES.

YEAR	Small-pox	Measles	Scarlet Fever	Diphtheria	Diarrhoea and Enteritis	Enteric Fever	Whooping Cough	Total	Rate per 1000
Aver. 1891—95	11	5	2	15*	3	14	49	2·7
„ 1896—1900	13	4	6	27*	3	5	59	2·9
„ 1901—05	13	2	2	24	3	9	52	2·6
1906	4	1	46	3	3	57	2·8
1907	22	2	3	26	2	5	60	2·9
1908	25	1	11	37	1·8
1909	27	1	1	12	1	4	46	2·2
1910	5	...	2	12	1	5	25	1·2
1911	17	3	7	55	2	13	97	4·8
1912	3	1	1	11	2	3	21	1·03
1913	4	19	2	2	27	1·3

* Not including Enteritis. After 1901, Enteritis deaths are added to deaths from Diarrhoea—at all ages.

Measles, as is shown on the foregoing table, has a tendency to recurrence every two years. As the Borough escaped during 1913, a high figure may be expected for 1914, as there will be a much larger number of susceptibles.

DIARRHOEA.—This figure is not unsatisfactory. Only 15 children died under 1 year of age. Cartoons on the agency of the house-fly in the causation of diarrhoea in infants were distributed during the summer.

DIPHTHERIA.—As 32 cases were notified, the mortality per case during the year amounts to 12·5 per cent.

INFANT MORTALITY AND MEANS OF PREVENTION.

With regard to mortality in child birth, the Local Sanitary Authority is not the Administrative Authority under the Midwives Act. Under the Notification of Births Act, 555 births were notified to the Medical Officer, amounting to 99 per cent of all births registered during the year.

In 1913, the Health Visitor paid 1166 visits to 759 homes. These visits are made after the receipt of the notification, at intervals of three months. A printed card of advice is given to the mother on the feeding and bringing up of the child, and additional information and directions as to the preparation of milk and infant foods is given by the health visitor, as well as directions as to the storage of milk and its prevention from contamination.

Infants need protection from the assault of microbes, as they are less resistant and react less advantageously to their attack, and it is important that the giving of milk infected by flies or from any other source should be prevented.

The number of deaths under 1 year of age, and the infantile mortality—i.e.: the number of deaths per 1000 births—are given below:—

Year					Deaths under 1 year	Mortality per 1,000 births
Average	1886—1890	...	...	...	154	240
"	1891—1895	...	...	...	166	253
"	1896—1900	...	...	...	140	213
"	1901—1905	...	..	...	102	163
	1906	...	...	...	113	170
	1907	...	...	...	88	150
	1908	...	...	...	98	160
	1909	...	...	...	84	145
	1910	...	...	...	50	97
	1911	...	...	...	106	179
	1912	...	...	...	58	96
	1913	...	...	...	64	114

In 1913, therefore only 6 more deaths occurred than in 1912, but, unfortunately, this was sufficient to raise the mortality figure from 96—the best on record—to 114. This is due to the smaller number of births occurring in the year.

The chief causes of death being as follows:—

	1905	1906	1907	1908	1909	1910	1911	1912	1913
Measles	11	—	6	—	7	1	5	1	—
Whooping Cough	3	1	4	8	2	—	7	2	2
Diarrhœa and Enteritis	17	29	15	26	15	9	34	5	15
Bronchitis ...	12	4	12	10	12	3	7	5	6
Pneumonia ...	4	8	4	1	6	4	8	8	8
Congenital Malfor- mation, Debility and Marasmus	21	23	9	18	15	14	22	19	19
Prematurity ...	13	15	10	15	11	8	9	8	6
Suffocation ...	1	2	—	—	3	—	2	—	—
Convulsions ...	9	4	10	3	9	7	3	3	2
Others	36	27	18	17	4	4	9	7	6
Totals	107	113	88	98	84	50	106	58	64

From this it is apparent that the increased infantile mortality in 1913 is entirely due to the deaths from diarrhœa and enteritis. Nevertheless on only two occasions during the past 8 years have there been fewer deaths in infants from this cause. This disease is almost entirely due to infection of foodstuffs such as milk by flies, and a summer favourable to the breeding of flies is usually characterised by an increased infantile mortality. Improved sanitation such as is effected by the early removal of refuse from the vicinity of the dwelling is of the greatest value in the matter of life saving of infants.

The quarterly distribution of the deaths was as follows:—

March	June	Sept.	Dec.,	Total
16	9	18	21	64

The largest proportion of the deaths was therefore in the December quarter, and as 8 of the 15 deaths from diarrhœa occurred in the two months, September and October, it is obvious that this disease is the determining factor. I would summarise the work of prevention of infantile mortality from diarrhœa.

I.—On the part of the Sanitary Authority:—

- 1.—The substitution of water closets for pail closets or privies. 204 were substituted in the year.
- 2.—The extension of the use of ashbins for privy middens and ashpits. 400 were so introduced.

II.—On the part of the householder:—

- 1.—Burning vegetable refuse rather than throwing among the ashes.
- 2.—Protecting food from flies.

INFANTILE MORTALITY.

CAUSES OF DEATH.	Under 1 Week.	1-2 Weeks	2-3 Weeks	3-4 Weeks	Total under 4 weeks	4 weeks and under 3 months	3 months and under 6 months	6 months and under 9 months	9 months and under 12 months	Total deaths under 1 year.
All causes—Uncertified ...	4	0	0	0	0	0	0	0	0	0
Whooping Cough ...	0	0	0	0	0	0	0	0	2	2
Tuberculous Meningitis ...	0	0	0	0	0	0	0	1	0	1
Abdominal Tuberculosis ...	0	0	0	0	0	0	1	0	0	1
Convulsions ...	0	0	0	0	0	1	0	1	0	2
Bronchitis ...	1	0	0	0	1	3	0	0	2	6
Pneumonia (all forms) ...	0	0	0	0	0	0	1	3	4	8
Diarrhoea ...	0	0	0	0	0	3	2	1	0	6
Enteritis ...	0	0	0	1	1	1	5	0	0	7
Gastritis ...	0	0	0	0	0	1	0	0	1	2
Congenital Malformation, ...	1	0	0	0	1	0	0	0	0	1
Premature Birth ...	6	0	0	0	6	0	0	0	0	6
Atrophy, Debility & Marasmus	7	3	1	2	13	4	1	0	0	18
Other Causes...	1	0	0	0	1	2	0	1	0	4
Totals ...	16	3	1	3	23	15	10	7	9	64

Nett Births in { Legitimate 534.
 the year { Illegitimate 26.
 Nett Deaths in { Legitimate Infants 58.
 the year of { Illegitimate " 6.

Causes of, and Ages at Death during the year 1913.

District	Net Deaths at the subjoined Ages of "Residents" whether occurring within or without the District.										Total	Whether residents in the District.
	Under 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 to 45	45 to 50		
1st	1	2	3	4	5	6	7	8	9	10	50	10
2nd	1	2	3	4	5	6	7	8	9	10	50	10
3rd	1	2	3	4	5	6	7	8	9	10	50	10
4th	1	2	3	4	5	6	7	8	9	10	50	10
5th	1	2	3	4	5	6	7	8	9	10	50	10
6th	1	2	3	4	5	6	7	8	9	10	50	10
7th	1	2	3	4	5	6	7	8	9	10	50	10
8th	1	2	3	4	5	6	7	8	9	10	50	10
9th	1	2	3	4	5	6	7	8	9	10	50	10
10th	1	2	3	4	5	6	7	8	9	10	50	10
11th	1	2	3	4	5	6	7	8	9	10	50	10
12th	1	2	3	4	5	6	7	8	9	10	50	10
13th	1	2	3	4	5	6	7	8	9	10	50	10
14th	1	2	3	4	5	6	7	8	9	10	50	10
15th	1	2	3	4	5	6	7	8	9	10	50	10
16th	1	2	3	4	5	6	7	8	9	10	50	10
17th	1	2	3	4	5	6	7	8	9	10	50	10
18th	1	2	3	4	5	6	7	8	9	10	50	10
19th	1	2	3	4	5	6	7	8	9	10	50	10
20th	1	2	3	4	5	6	7	8	9	10	50	10
21st	1	2	3	4	5	6	7	8	9	10	50	10
22nd	1	2	3	4	5	6	7	8	9	10	50	10
23rd	1	2	3	4	5	6	7	8	9	10	50	10
24th	1	2	3	4	5	6	7	8	9	10	50	10
25th	1	2	3	4	5	6	7	8	9	10	50	10
26th	1	2	3	4	5	6	7	8	9	10	50	10
27th	1	2	3	4	5	6	7	8	9	10	50	10
28th	1	2	3	4	5	6	7	8	9	10	50	10
29th	1	2	3	4	5	6	7	8	9	10	50	10
30th	1	2	3	4	5	6	7	8	9	10	50	10
31st	1	2	3	4	5	6	7	8	9	10	50	10
32nd	1	2	3	4	5	6	7	8	9	10	50	10
33rd	1	2	3	4	5	6	7	8	9	10	50	10
34th	1	2	3	4	5	6	7	8	9	10	50	10
35th	1	2	3	4	5	6	7	8	9	10	50	10
36th	1	2	3	4	5	6	7	8	9	10	50	10
37th	1	2	3	4	5	6	7	8	9	10	50	10
38th	1	2	3	4	5	6	7	8	9	10	50	10

III.—On the part of the mother, where the infant is not breast-fed :—

- 1.—Preparing the infants food as directed by medical advice.
- 2.—Protecting milk from infection by using a piece of muslin to cover the entrance.

INFANT DEATHS AMONG ILLEGITIMATE CHILDREN.—In connection with the infantile mortality one must assess the deaths among illegitimate children. These, as usual, were much more numerous in proportion.

There were 6 deaths under 1 year of age, 5 girls and 1 boy.

The boy died of abdominal tuberculosis.

3 girls died of diarrhœa and enteritis, 1 from birth debility, and 1 from prematurity.

The death-rate per 1000 births is therefore 230.

In reviewing the question of infant mortality, one may regard 1913 as a satisfactory year. While 1912 gave the lowest mortality figure per 1000 births, and 1913 is apparently much higher, it must be remembered that only 6 more deaths of infants occurred. The deaths from diarrhœa were not numerous, considering that the summer of 1913 was favourable to the incidence of that disease.

PREVENTION OF OPHTHALMIA NEONATORUM.

The provision of registered midwives with vouchers which they fill up and send to any practitioner in the Borough—the voucher being redeemed by the Corporation—is a distinct success.

REVIEW.

1913 must be regarded as a satisfactory year for the Borough from the point of view of public health. The incursion of infectious disease into a town situated as Newcastle is cannot be prevented, but the comparative absence of Enteric Fever speaks well for the sanitation, and the relatively small death-rate from Diarrhœa in a year when conditions were favourable for the extension of this disease, for the work of prevention.

III - On the part of the mother, when the infant is born, the following points should be noted:

- 1 - The mother's general health and condition.
- 2 - The mother's mental condition.
- 3 - The mother's physical condition.

These points should be noted at the time of delivery, and the mother should be kept under observation for some time after the birth of the child.

The first point to be noted is the mother's general health and condition.

This should be noted at the time of delivery, and the mother should be kept under observation for some time after the birth of the child.

The second point to be noted is the mother's mental condition.

This should be noted at the time of delivery, and the mother should be kept under observation for some time after the birth of the child.

REVIEW OF THE LITERATURE

The purpose of this review is to give a summary of the work of the various authors who have written on this subject.

REVIEW

The first point to be noted is the mother's general health and condition. This should be noted at the time of delivery, and the mother should be kept under observation for some time after the birth of the child.

