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County Borough of Wolverhampton.



ANNUAL REPORT
UPON THE
Health of Wolverhampton
For the Year
1928,

BY

R. H. H. JOLLY, M.D., B.S. (LOND.) D.P.H.,

*Medical Officer of Health,**Medical Superintendent of the
Borough Infectious Hospital,
etc., etc.*

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BRISTOL CHILD AND YOUTH WELFARE
COMMITTEE

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HEALTH AND MATERNITY AND CHILD WELFARE COMMITTEE.

THE MAYOR (Councillor A. E. WOOD).
Alderman T. A. HENN (Chairman).
Alderman F. A. WILLCOCK.

Councillors :

M. CHRISTOPHER.	R. E. PROBERT.
A. DAVIES.	L. W. HAMP.
J. DAVIES.	J. W. KENNEDY.
J. J. O'BRIEN.	W. A. GRAHAM.
B. E. HUNT.	MISS PERRY.

With the addition of ||Mrs. BOWYER and ||Mrs. TOMLINS

Staff of the Health Department.

Medical Officer of Health :

R. H. H. JOLLY, M.D., B.S., (Lond.) D.P.H.

Deputy Medical Officer of Health :

B. C. HALLER, M.A., L.R.C.P., L.R.C.S., D.P.H.

Assistant Medical Officer (M. & C.W.) :

(Mrs.) C. J. J. WINTER, M.B., Ch B.

Analysts :

* E. V. JONES, F.I.C.

* A. E. JOHNSON, B.Sc., F.I.C., A.R.C.S.I

Veterinary Inspector :

* J. E. CARTWRIGHT, M.R.C.V.S.

Chief Sanitary Inspector :

† JOHN PEERS.

Inspector under the Sale of Food and Drugs Act :

† G. S. REEMAN.

Inspector for Factories and Workshops, and Inspector under the Rag Flock Act :

† H. MORTON.

District Sanitary Inspectors :

† E. R. BROCK.	† F. W. DUNSTAN.	† W. E. NORWELL.
† A. DICKIN.	† H. MATTHEWS.	† C. E. DEAKIN.
	† R. MAIR.	

Disinfecting Officer :

H. BURROWS.

Clerks :

J. J. MORRIS.	R. E. WYNN.	H. B. COLEY.
A. H. HUDSON.	G. JONES.	Miss N. W. HUGHES.
F. CADDICK.	E. PRICE.	Miss D. BAYLEY.

Borough Infectious Hospital :

Matron : Miss M. BORTON.

Inspector of Midwives :

† Miss M. CARTER.

Lady Health Visitors :

†† Miss D. E. TONKS.	† Miss D. HADLEY.	† Miss L. G. SWEETMAN.
† Mrs. W. M. HUTT.	† Miss B. HIGGS.	† Miss A. E. MILLER.
† Miss H. V. GOODWIN.	† Miss M. JASPER.	† Miss A. HOMER.

Sales Clerk :

Miss P. MEGGITT.

Infant Welfare Clerks :

* Miss BENTLEY. * Miss TONKS. * Mrs DALE.

* Part time. † Holder of Certificates of the Royal Sanitary Institute. ‡ Certified Midwives.
|| Maternity and Child Welfare Committee only.

EXTRACTS FROM VITAL STATISTICS OF THE YEAR.

AREA OF BOROUGH	.. .. .	7,105 Acres.
POPULATION (Registrar-General's estimate)	..	133,900
(Census 1921)	..	102,373
NUMBER OF INHABITED HOUSES (1921)	..	21,609
NUMBER OF FAMILIES or separate occupiers (1921)		22,905
Correction—RATEABLE VALUE should be	..	£777,645
Sum represented by a Penny Rate	.. .. .	£2,948
LIVE BIRTHS	<div> <div> <div>Total</div> <div>Male</div> <div>Female</div> </div> <div> <div>Legitimate - 2,554</div> <div>Illegitimate - 90</div> <div>... 1,439</div> </div> </div>	<div> <div>BIRTH RATE</div> <div>DEATH RATE</div> </div> <div> <div>19·7</div> <div>10·7</div> </div>
NATURAL INCREASE OF POPULATION	..	1,205
(Excess of births over deaths in the year)		
Number of women dying in, or in consequence of childbirth	<div> <div>From Sepsis ...</div> <div>From other causes ...</div> </div>	<div>2</div> <div>1</div>
DEATHS OF INFANTS UNDER ONE YEAR PER 1,000 BIRTHS	<div> <div>Legitimate ...</div> <div>Illegitimate ...</div> <div>Total... ..</div> </div>	<div>60</div> <div>100</div> <div>61</div>
DEATH RATE from Measles (14)	.. .. .	0·10
" " Whooping Cough (2)	.. .. .	0·01
" " Diarrhoea and Enteritis (27)		
(under 2 years per 1,000 births)	..	10·21
" " Cancer (153)	.. .. .	1·14
" " Phthisis (77)	.. .. .	0·57
" " all other forms of Tuberculosis (106)	.. .. .	0·70

HEALTH OFFICES,

TOWN HALL,

WOLVERHAMPTON,

May, 1929.

*To the Mayor, Aldermen and Councillors of the
County Borough of Wolverhampton.*

Madam and Gentlemen,

I have the honour to present to you my Eighth Annual Report on the health conditions and health services of Wolverhampton. The present report has been prepared in accordance with the requirements of the Ministry of Health and necessarily contains a considerable amount of detail which has to be repeated from year to year in order to preserve continuity of these records.

If the improvement in the health of a town is to be judged by its Vital Statistics, Wolverhampton has made considerable progress during the past few years. This progress is well demonstrated by the graphs included in this Report. In particular it should be noted that the Death Rate and the Infant Mortality Rate of the Town for the year 1928 are the lowest on record.

The chief obstacle in the way of further sanitary reforms is still the shortage of houses suitable for working class families. It is true that many people live under conditions of overcrowding because they are unable to afford the rent of new houses but there are many others living in rooms or sharing a house who could afford a home of their own and who would make decent, clean, respectable tenants. Apart from the clearance of slums, the demolition of individual unfit houses is another urgent reform which is being held up because of the lack of accommodation for the displaced tenants. These two evils—overcrowding and unhealthy dwellings—have both existed for a very long time but they must not, on that account, be regarded as inevitable. It is of the utmost importance that comprehensive schemes should be formulated for dealing with both of them.

It is a pleasure to be able to report that the Maternity and Child Welfare work in the Borough continues to make steady progress. A

detailed inspection of the Corporation's activities in this direction was made by a representative of the Ministry of Health in November, 1928, and a communication was subsequently received from the Minister in which he expressed his appreciation of the extensions which had been made in the work and of the success which had attended the new arrangements.

I have pleasure in reporting that the entire Staff of the Department continue to display a most keen interest in their work and have carried out their various duties in a most efficient manner during the year.

My acknowledgments are due to the Borough Treasurer, the Borough Engineer, the Water Engineer and the Cleansing Superintendent for certain information published in this Report, and for the courtesy with which they always treat any request of mine.

I again desire to take this opportunity of expressing my sincere thanks to the Chairman and all the Members of the Health and Maternity and Child Welfare Committees for the support and ready assistance that have always been accorded to me in every direction.

I have the honour to be,

Your obedient servant,

R. H. H. JOLLY,

Medical Officer of Health.

SOCIAL CONDITIONS OF THE AREA.

Wolverhampton is a town of considerable contrasts. On the East side it is almost entirely industrial and merges with similar areas in Willenhall and Bilston. With the exception of one or two Municipal Housing Estates, most of the dwellings are small, crowded together and generally lacking in modern conveniences.

The middle of Wolverhampton is rapidly being transformed into an up-to-date shopping and business centre. To the West and South West lies the residential quarter which is steadily getting built up.

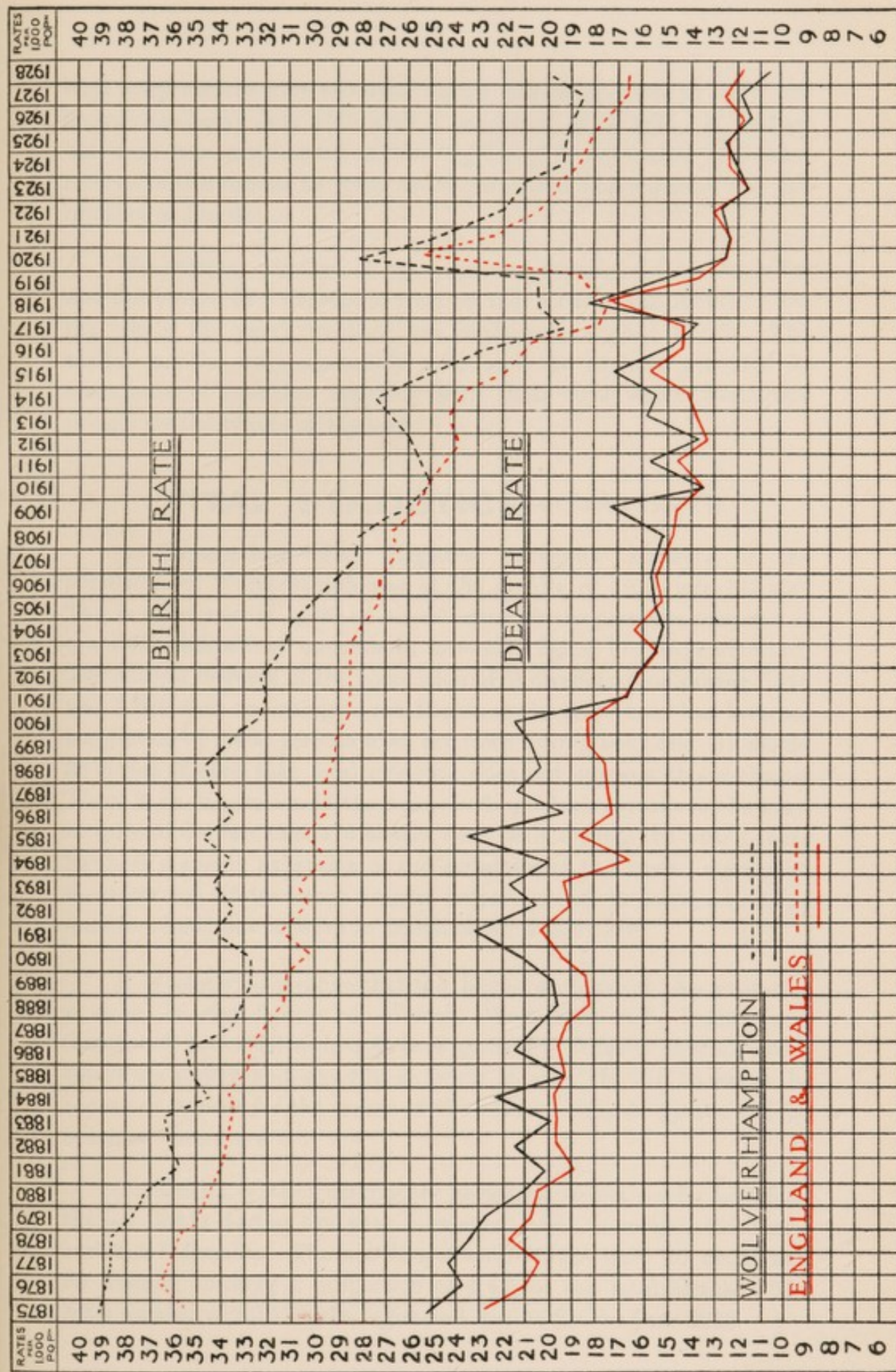
Although Wolverhampton is almost entirely an industrial town it is also the shopping and amusement centre of an increasing area in the south of Staffordshire and attracts a large number of visitors, particularly on Market Days. Mention must also be made of the Open Market held on Wednesdays and Saturdays at which garden produce and poultry from the surrounding country districts are offered for sale. Wolverhampton is thus a Market Town as well as a progressive and rapidly growing industrial town.


A list of the main occupations of the employed population was given in the annual report for 1925 but this list will now need considerable revision on account of the new factories established in the town and particularly those of Courtaulds and Goodyears.

There is no evidence to show that any of the industries of Wolverhampton exert a prejudicial effect on the health of the workers. Certain processes of the metal and other trades give rise to fumes which are irritant to an individual with a predisposition to respiratory affections but it has not been shown that these fumes cause any ill effects in the person with normal health.

Meteorology.—(Table I.)—Although the total rainfall for the year (27·07) was within one-hundredth of an inch of the mean, the summer of 1928 will be described as a fairly dry one. With the exception of June all the summer months had a rainfall below the average, the converse being the case in the Winter. January and October were the wettest months, over 4 inches of rain or snow being recorded in each. May was by far the driest month of the year with only ·36 inches of rain whilst the total rainfall for September was ·90 inches, all of which fell in the latter half of the month. Abnormally

CHART SHOWING DECLINE OF WOLVERHAMPTON BIRTH RATE AND DEATH RATE SINCE 1875.





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high temperatures were recorded during the third week in July, the hottest day being July 15th with a maximum of 86·2°F. A further hot spell was experienced at the beginning of September but exact records of this cannot be given as the maximum Thermometer was out of order at the time.

The severest weather of the year was experienced in December and there were 13·5 degrees of frost on the 15th of the month. On the whole the year's weather was conducive to good health. The earlier months were reasonably mild and the summer provided an abundance of sunshine together with those rays which warm and invigorate the tissues of the body.

VITAL STATISTICS.—(Tables II—VI).

(a) **Population.**—The Registrar General's estimate of the population of Wolverhampton as at the middle of 1928 was 133,900. This is a decrease of 1,200 on his estimate for the previous year and it is a little difficult to understand how this figure has been obtained. The natural increase of the population of Wolverhampton during 1928 was 1,205, thus according to the Registrar General there has been an emigration of 2,405 persons from the town during the year. It should be stated at once that local evidence does not support this estimate. There is no diminution in the overcrowding which prevails in the town in spite of the fact that 476 houses were built during the year; there has been a steady expansion of the industries of the town; unemployment has not attained such serious proportions as to cause any large number of citizens to leave in search of work elsewhere.

It is somewhat strange that the Registrar General also estimates a drop in the figures of Walsall, West Bromwich, Dudley and Smethwick for 1928 although it is generally believed that all these towns are slowly and steadily growing in size. It will therefore be necessary to wait for the census of 1931 before reliable figures can be obtained once more.

(b) **Births.**—After making the necessary corrections for transfers, the net Births during the year numbered 2,644, namely 1,327 males and 1,317 females. The net Illegitimate Births were 40 males and 50 females, forming a proportion of 3·4% of the total births. The total number of Still Births registered was 98 for the year 1928.

The Birth Rate was 19·7 per 1,000 population, as compared with 18·2 in 1927. In 1928 the Birth Rate for the whole of England and Wales was 16·7 and for the 107 Great Towns was 16·91.

(c) **Deaths.**—There were 1,439 (net) deaths in Wolverhampton during the year of which only three were uncertified.

Although the yearly Death Rate of a town will show fluctuations as a result of abnormal climatic conditions or of the occurrence of epidemics of Influenza, Whooping Cough and other infectious diseases, the general Death Rate is steadily decreasing. This result is due in the main to two causes (a) the improved environment of the people which has been brought about as a result of the attention paid by Health Authorities to drainage, sewerage, refuse disposal, water supplies, housing, disinfection, the isolation of cases of infectious diseases and the sanitary supervision of food supplies, and (b) by the spread of knowledge among the people of the causes of diseases and the laws of health.

Unless mankind is to become immortal, death must come to everyone sooner or later but it is the aim of the Sanitarian to postpone the age of death as long as possible. Still there must be some figure below which it will be impossible to reduce the Death Rate and this figure cannot be an arbitrary and fixed one but will depend on the mean age of the population under review.

A low Birth Rate for a number of consecutive years will eventually lead to a population largely composed of persons of middle age, among whom a high Death Rate must be the natural order of things.

In dealing with a Table of causes of, and ages at death, it is necessary to examine critically (1) the number of deaths that have occurred from diseases classified as preventable such as Tuberculosis, Measles, Diphtheria and (2) the number of lives that have been cut short before they reached the mean age of death. It must not be forgotten that the deaths of the aged are frequently ascribed to the organ or tissues of the body whose functional efficiency first gives out (whether it be the lungs, kidneys, heart or arteries) and are not so commonly certified as due to Senile Decay.

The Heart Disease or Bronchitis of persons around 70 years of age are more often than not terminal affections in a body the tissues of

which are almost worn out. For instance, it is not sufficient to say that 20% of all the deaths in Wolverhampton last year were due to heart disease. From the standpoint of Preventive Medicine we should ask first of all how many persons were cut off in childhood or in their prime as a result of diseases of the heart, and secondly how many of these cardiac lesions were the result of Rheumatism or other affections which might have been cured even if not avoided. There were 87 persons under the age of 65 who died from some form of heart disease last year. Of these persons 41 died from disease of the heart which had primarily affected one or more of the valves. (Aortic Valve 5, Mitral Valve 9, Combined Aortic and Mitral Valve 5, unspecified Valvular Disease 22). In addition there were 7 cases of Endocarditis, so that in over 50 % of these 87 cases death was due to disease affecting the lining membrane of the heart, *i.e.* inflammatory in origin.

When the deaths from heart disease at the average age of 65 are considered, a different state of things is found. Out of 122 deaths there were only 31 (25 %) ascribed to diseases of the valves and 75 of the deaths were stated to be caused through degenerative changes in the heart muscle.

Whilst recognising the oscillations in the curve of the Death Rate from year to year it is a matter of considerable interest to find that **Wolverhampton's Death Rate for 1928 was far and away the lowest ever recorded, namely 10·7 per 1,000 population.** This compares very favourably with the rate of 11·7 for England and Wales for the same period, and of the rate of 11·6 for the 107 Great Towns. Wolverhampton's previous lowest rate was 11·3 per 1,000 population in 1926.

With a Death Rate that is steadily falling throughout the country as a whole it is often possible in an Annual Report to claim that the Death Rate is the lowest on record, but a drop such as that which took place last year (nearly one whole point below the previous lowest record) is very remarkable.

The year 1928 was one which was very free from epidemics of any severity, but another factor which has undoubtedly had some influence is the extension of Wolverhampton and the inclusion in the new population of some 25,000 persons, most of whom are living in areas which are relatively sparsely populated.

Cancer.—The Death Rate from this disease showed a further increase last year, when it reached the figure of 1.37 per 1,000. On comparing Table VII. with that for 1927 it is found that the increase in the number of deaths has been practically confined to cancer of the digestive organs and has affected males and females in almost the same proportion. On the other hand, cancers peculiar to women have very materially decreased. May it not be that the propaganda in relation to the early treatment of Cancer which has been carried on particularly in connection with our Infant Welfare work, has been partly responsible for this?

The Royal Hospital, Wolverhampton, finds itself handicapped in the treatment of Cancer by lack of Radium. A Special appeal is now being made for funds for the purchase of this valuable substance.

Infant Mortality.—The general causes of the deaths of infants under the age of one year are given in Table 6. The net deaths amounted to 161 of which the major portion (52 %) occurred under the age of 4 weeks. As usual the greater proportion (39 % of the total) were in the first week of life. By far the largest number of these deaths under the age of one week were ascribed to Prematurity.

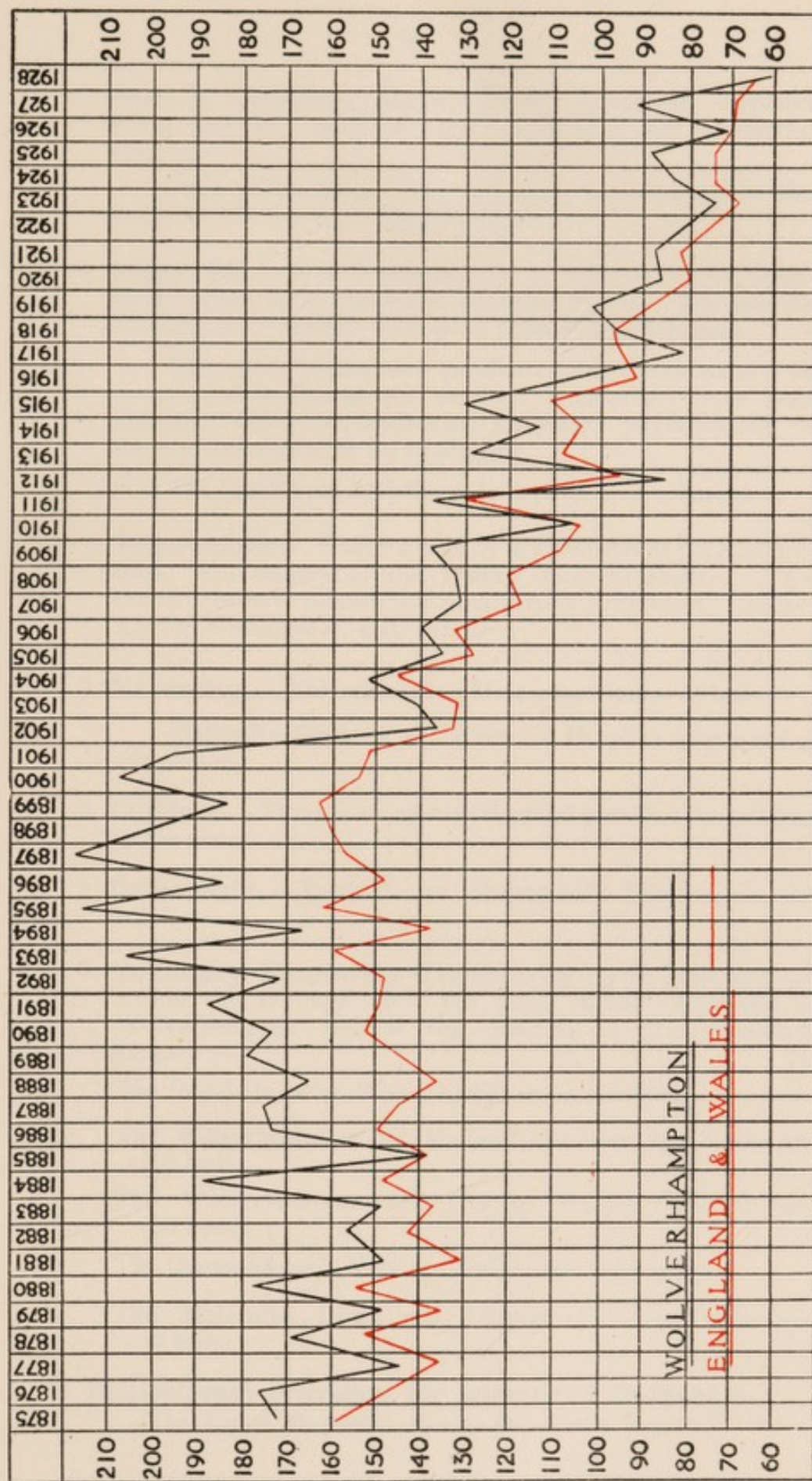
The actual Infant Mortality Rate of 1928 is such a surprisingly low figure that it deserves special comment. As recently as 10 years ago it was considered satisfactory for an industrial town to record an Infant Mortality Rate of about 100 deaths per 1,000 Births. In 1918 Wolverhampton's Infant Mortality Rate was 97, in 1923 it fell to 76, but **for the year under review the Infant Mortality Rate is only 61.** The comparable figure for England and Wales is 65 and that for the 107 large Towns 70. The steady increase in Maternity and Child Welfare work since the war; the multiplication of Infant Welfare Clinics; the various measures taken to assist mother and baby—all these must have played their part in this very satisfactory record which will at any rate, set a standard that will take some beating.

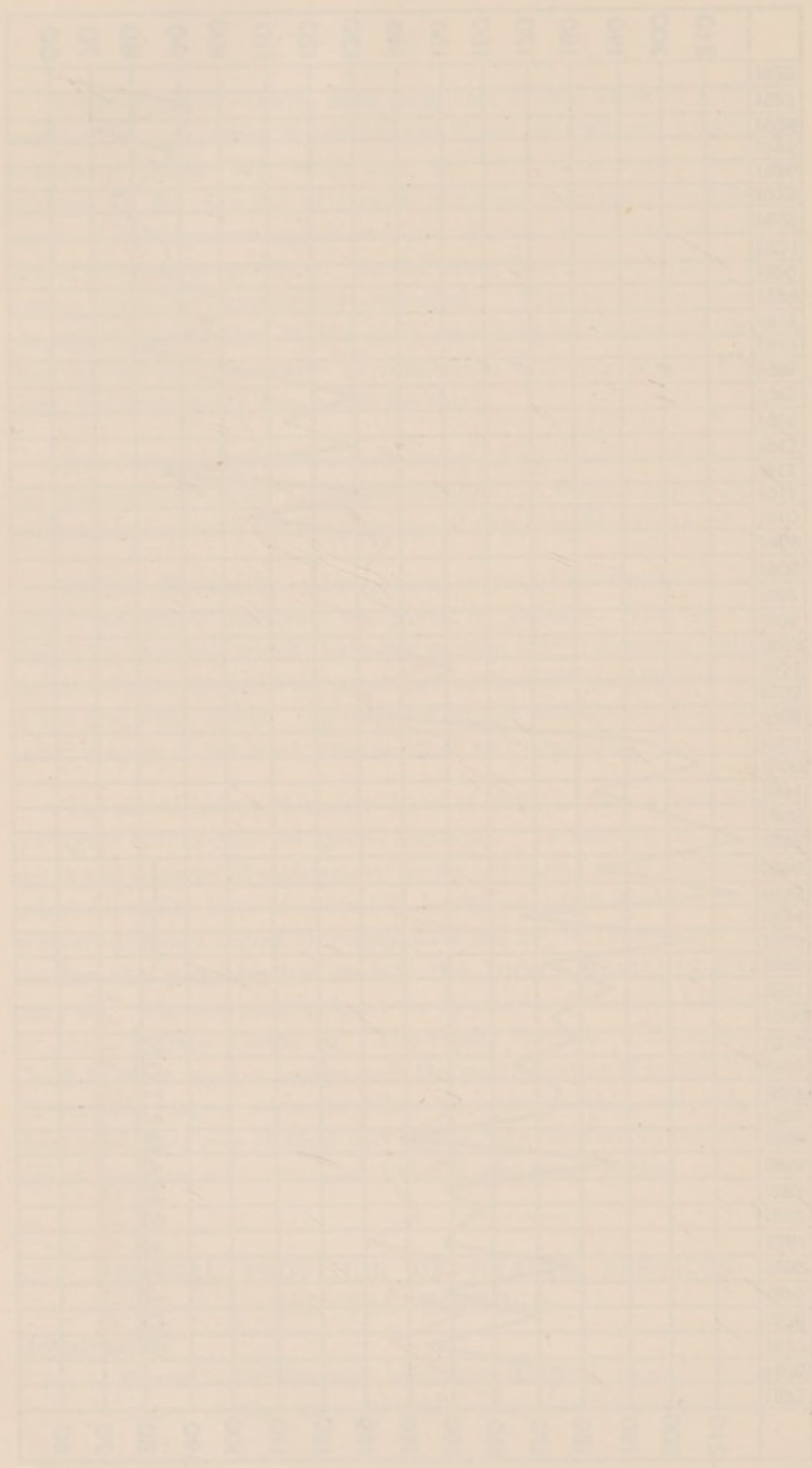
GENERAL PROVISION OF HEALTH SERVICES FOR THE BOROUGH.

Hospitals.

- (a) 1. **Fever.**—The Borough Infectious Hospital, $1\frac{1}{2}$ miles from the centre of the town, provides adequate accommodation for

CHART SHOWING INFANTILE MORTALITY PER 1,000 BIRTHS IN WOLVERHAMPTON SINCE 1875.





cases of Diphtheria, Scarlet Fever, Erysipelas, Typhoid Fever and for occasional cases of Measles and Whooping Cough.

Cases of Puerperal Fever are at present nursed in the Isolation Ward of the Royal Hospital.

2. **Small Pox.**—Wolverhampton is a member of the South Staffordshire Joint Small Pox Hospital Board. The Board's Hospital is at Moxley, four miles from Wolverhampton.

The three permanent pavilions can accommodate 40 persons between them and concrete foundations have been laid upon which two additional temporary pavilions can be rapidly constructed in an emergency.

The Small Pox Ambulance is kept at Wolverhampton.

- (b) 1. **Tuberculosis.**—Wolverhampton is a member of the Staffordshire, Wolverhampton and Dudley Joint Committee. This Committee have established Sanatoria at Prestwood, Himley, Kinver, Groundslow, and Yarrfield.

2. **Maternity.**—Wolverhampton Maternity Home—9 beds.

Maternity Block at the Women's Hospital now nearing completion.

3. **Children.**—There is no special Hospital provided for children in the area.

4. **Orthopædic.**—There is no Orthopædic Hospital in the area.

5. **Voluntary Hospitals.**—The following Institutions situated within the Borough serve the needs of the inhabitants of Wolverhampton and of the districts in the immediate vicinity:—

The Royal Hospital, Wolverhampton. (210 beds).

The Wolverhampton and Midland Counties Eye Infirmary. (50 beds).

The Wolverhampton and District Hospital for Women. (30 beds).

The Queen Victoria Nursing Institution. (28 beds).

The Maternity Home and District Nursing Institution. (9 beds).

- (6) **Institutional Provision for unmarried Mothers:—**

The Legge Memorial Home, 89, North Road.

(7) Institutional Provision for Homeless Children :—

- (1) Royal Orphanage.
- (2) St. Jude's Orphanage.

(8) Ambulance Facilities :—

- (a) *For Infectious Cases*—1 Motor Ambulance at the Borough Fever Hospital.
- (b) *For Non-Infectious and Accident Cases*—1 Police Ambulance and 1 Ambulance at the Royal Hospital.

(9) Clinics and Treatment Centres :—

Name and situation	Accommodation	By whom provided
Child Welfare Centres :—		
(1) Lea Road Clinic.	3 sessions a week	Local Authority
(2) Ward Street Clinic.	3 " "	" "
(3) Cong. School, Stafford St.	3 " "	" "
(4) Old Council Offices, Heath Town	3 " "	" "
(5) Moseley Village Clinic ...	1 " "	" "
Ante-Natal Clinics :—		
Lea Road Clinic.	1 " "	" "
Ward Street Clinic.	1 " "	" "
Old Council Offices, Heath Town.	1 " "	" "
School Clinics :		
Education Offices, North St.	Open daily	" "
Old Council Offices, Heath Town. ...	4 sessions a week	" "
Artificial Sunlight Clinic :—		
The Royal Hospital. ...	Open daily	The Royal Hospital
V.D. Treatment Centre :—		
The Royal Hospital. ...	" "	" "
Tuberculosis Dispensary :—		
Bell Street... ..	" "	Joint Tuberculosis Committee

(10) Public Health Officers of Local Authority :—See page 2.**(11) Professional Nursing in the Home :—**

- (a) *General.* District Nursing Association co-operate with Local Sanitary Authority.
- (b) The Wolverhampton Corporation have an arrangement for the District Nursing Association to undertake the Home Nursing of necessitous cases of Measles, Whooping Cough, and Summer Diarrhoea in children under school age on payment of a fee of 1/3 per visit. All such cases are referred by medical men in the area and approved by the Medical Officer of Health.

(12) Midwives.—See Page 34

Legislation in Force.—In addition to the Adoptive Acts, Bye Laws, and Local Regulations mentioned in the last Survey Report the following are now in force :—

Local Acts.

WOLVERHAMPTON CORPORATION ACT, 1928.

Part 6—Sanitary Provisions.

Section 54—Medical Practitioners to notify cases of Food Poisoning.

Section 55—Restriction on taking inedible fats into premises where food is prepared.

Section 56—Prohibition of tents, vans, etc., on any land within the Borough without the previous approval of the Corporation.

Section 57—The Corporation may require the conversion of existing Ash pits into receptacles in which Dust Bins can be placed.

Section 58—Corporation given power to take over all the Ash Bins in the Borough in use in connection with dwelling houses and thenceforth to maintain them in good condition and to make an annual charge on the owner or occupier for such maintenance.

Bye-Laws with respect to :—

Common Lodging Houses, 1927.

New Streets and Buildings, 1927.

Drainage of Existing Buildings, 1927.

Nursing Homes, 1928.

General Adoptive Acts :—

Public Health Act, 1925. Sections 14, 17, 22, 24, 26, 28, 29, 30, 32, 36, 37, 39, 40, 41, 42, 43, 45, 47, 49, 50, 53, 54 and 55.

INFECTIOUS DISEASES.

Tables VIII—XIV.

Small Pox.—Seven cases of this disease were notified during the year. All were removed to the Joint Small Pox Hospital at Moxley, and made good recoveries.

The first case was discovered in a house in Walsall Street on January 17th. This woman had been employed as a cleaner in a Common Lodging House in the town. On the morning that this case was reported an urgent message was received from the Medical Officer of Health, West Bromwich, to the effect that a family had been found in his area suffering from Small Pox and that they had been stopping at this same Common Lodging House in Wolverhampton from December 24th to January 12th. Careful enquiries at the Lodging House in question elicited the following information:—

“The wife of the Deputy Keeper had had some spots on her hands, arms and face about three weeks previously and these had been preceded by some slight illness accompanied by headache and backache.” When this second woman was examined a few scars were found on her face, arms and hands, the distribution of which was highly suggestive of Small Pox. A complete list of lodgers was obtained from January 1st onwards and the names and reported destinations were circulated to the Medical Officers of Health of surrounding districts. All immediate contacts of the patient were vaccinated with the exception of one old couple who refused,

The second case of Small Pox was discovered in this same area on March 8th. This patient worked alongside a direct contact of the previous case and it is possible that the infection was passed to him in this way. No other source could be traced.

The second series of cases occurred on the Municipal Housing Estate at Low Hill. On February 18th two members of a family—a male aged 32 and his son aged 10—were found to be suffering from mild Small Pox. The other inmates of the house were all interviewed and it was found that a girl aged 8 (unvaccinated) had been treated for pimples on the wrist on or about January 28th. This girl had about one dozen completely healed pock marks on her wrists and forearms. The source of infection in her case could not be discovered.

On March 5th a woman living next door to the above family developed a rash which subsequently proved to be Small Pox. Although a contact she had refused vaccination. Her first symptoms arose 13 days after exposure to infection.

The last case of this series was discovered on March 26th. This was a boy aged 11 years who attended the same school as the original

Low Hill case. It is probable that there was some missed case which would link him up with the little girl first discovered.

The other case of Small Pox notified last year was traced directly to Leicester. This woman had been in contact with a case of Small Pox at Leicester on October 1st, 2nd and 3rd. She came over to Wolverhampton for a short visit on October 20th and did not feel well on arrival. On October 22nd in consequence of a communication from the Medical Officer of Health, Leicester, a visit was paid to the address at which she was staying, when she was found to be suffering from Small Pox and removed to Hospital.

The vaccinal condition of the 7 notified cases of Small Pox was as follows :—

Sex.	Age	
F.	32	Unvaccinated.
M.	32	"
M.	10	"
M.	50	Vaccinated
F.	35	Unvaccinated.
M.	11	"
F.	24	"

The number of vaccinations performed by the Medical Officer of Health under the Public Health (Small Pox Prevention) Regulations 1917, were as follows :—

(1) Primary Vaccinations	-	14
(2) Revaccinations	-	56

On April 16th, 1928, by resolution of the Council the provisions of the Infectious Diseases Notification Act, 1889, were extended to Chicken Pox. This disease was then made temporarily notifiable in the Borough from the middle of April until the end of September. During that period there were 355 cases of Chicken Pox notified in addition to those brought to the notice of the Health Department through the Education Department.

Medical Men were invited to state on the Notification Form the vaccinal condition of the patient. This request was acceded to in

nearly every case and the information thus obtained proved very helpful.

Scarlet Fever.—There were 286 cases notified and the diagnosis was confirmed in all but five. The incidence of the disease was very low during the early months of the year but the cases increased rapidly in August and September and attained a maximum in October. During this latter month there were 65 cases admitted to Hospital. Quite a number of young women contracted the disease in August and September and suspicion fell upon a large factory in the town as the place where the infection was spread. Arrangements were made for a daily scrutiny of all the girls employed, as well as for the prompt notification of all cases of absence from work owing to illness, particularly sore throats. A baby sister of one of the employees was subsequently discovered to be peeling and appears to have acted as a medium for spreading the infection in several cases but there were undoubtedly other missed cases as well.

The percentage of notified cases removed to Hospital for isolation and treatment was 91%. There were no deaths. Table XII gives the effect of the density of persons per house on the recurrence of Scarlet Fever among other members of the family.

Diphtheria.—The incidence of this disease remains low. Sixty notifications were received and the diagnosis was confirmed in all but five. Fifty-five cases were removed to Hospital for treatment. Seven deaths occurred including one case previously unnotified.

Anti-Toxin is supplied free on request for Borough patients.

An Immunization Clinic was started at the Ward Street Infant Welfare Centre in October, 1928. Although the ground had previously been prepared by lectures, film displays and the distribution of leaflets, the response up to the end of the year had been disappointing. It is somewhat difficult to convince parents that the risk of Diphtheria occurring in their children can be prevented by two or three painless and harmless injections of a mixture of toxoid and anti-toxin under the skin.

In every case in which permission for immunization is obtained the parents are warned that the preventive effect of these injections

may not be complete for a period of about 6 months and that it is futile to wait until the Diphtheria is present in the district before getting children immunized.

Enteric Fever.—Only two cases of this disease were heard of. One was treated at the Borough Hospital and one at the Royal Hospital. Both made good recoveries.

In neither case was it possible to establish the source of infection. One of the patients was a workman employed in the Sewers Department.

Encephalitis Lethargica.—Two cases of this disease were notified during the year and both died. There were two other deaths certified as due to this disease which had not been previously notified, making a total of four deaths.

Malaria.—Four notifications of Malaria were received, three of which were in respect of disease which had been contracted abroad. The fourth notification was of Malaria induced for Therapeutic purposes and this patient subsequently died in Hospital but the Malaria was not the primary cause of death.

Pneumonia.—There were 106 cases of Primary Pneumonia notified and amongst these cases there were 16 deaths.

The total deaths ascribed to Pneumonia (Primary) on Death Certificates was 51. The notifications of Influenzal Pneumonia only amounted to 20 and 6 of these cases died.

Borough Hospital.—In Table XV will be found a summary of the cases dealt with at this Institution during the year.

The admissions include 293 cases of Scarlet Fever and 67 cases of Diphtheria. The severe cases of Scarlet Fever amounted to 16% of the total Scarlet Fever admissions and the severe Diphtheria cases were 19% of the total. This is a considerable reduction for both diseases on the figures for last year which were 25% and 36% respectively.

The average stay in Hospital was 30 days compared with 40 days last year.

All cases of undoubted Scarlet Fever now receive a dose of Scarlatinal Anti-Streptococcus Serum on admission and this routine treatment has undoubtedly been justified by the results obtained. Apart from the shorter stay in Hospital it appeared on analysis that of the cases detailed as mild or uncomplicated (238 in number) 28% were of the septic type on admission and would probably have developed complications in pre-serum days. Even in late or complicated cases the efficacy of serum treatment has been fully demonstrated. The normal period of Hospital isolation of uncomplicated cases of Scarlet Fever has now been reduced to 24 days. A very large number of the patients last year were discharged as early as this and only one return case was reported.

Out of the total of 65 cases of Diphtheria admitted to Hospital only 45 were persons resident in Wolverhampton.

An investigation has been made into the interval of time elapsing between the onset of the first symptoms of these 45 cases and their admission to Hospital. Three cases were admitted on the day that the first symptoms were noted, 5 came in on the day following the onset of illness, in 10 cases the interval was two days and in 11 cases it was three days. All the above received Anti-Toxin immediately on admission and none of them died. Cases admitted after the third day of illness amounted to 16 but seven of these had previously received Anti-Toxin whilst at home. Eight patients (6 of whom had not had Anti-Toxin) did not seek admission until they had been ill 4 days, in 4 cases the interval was 5 days, in three it was 6 days and in one case it was seven days. Two out of the three cases admitted on the 6th day of illness died, the other case had received Anti-Toxin before admission. The patient admitted on the 7th day also died.

Only 14 of the above 45 cases had been given Anti-Toxin before admission. None of the four fatal cases received any Anti-Toxin until they were in Hospital. In two of the four fatal cases the child was admitted the same day that it was first seen by a medical man but in the other two cases the interval was 48 hours and 72 hours respectively before the Doctor arranged for the child to be removed to Hospital.

To summarise briefly :—29 cases of Diphtheria were admitted to Hospital and received an appropriate dose of Anti-Toxin within 72

hours of being taken ill. Six of these cases were noted as severe but all recovered. In 7 cases institutional treatment was delayed until more than 72 hours after the onset of illness but Anti-Toxin had meanwhile been administered at home. Not one of these cases had Diphtheria in a severe form. The remaining 9 cases had neither Anti-Toxin nor Institutional treatment until 4 or more days after they were taken ill. Four of these cases or 44 % died and two others had the disease in a severe form.

Although this series of cases is quite small it does serve to emphasise the vital importance of prompt treatment, and the terrible danger of delay in dealing with all cases of suspected Diphtheria.

The new Cubicle Block of 10 beds was opened in July and its value was at once demonstrated. Two cases of Enteric Fever, 2 cases of Whooping Cough, 8 cases of Measles, 2 of Erysipelas, and one of Dysentery were accommodated here as well as several cases of mixed infection of Scarlet Fever and Diphtheria.

On occasions when there were only two or three cases of Diphtheria requiring nursing it was found more convenient to transfer these to the Cubicle Block and to temporarily close the Diphtheria Block.

The Old No. 3 Block has now been pulled down and the site on which it stood is being prepared for a Playing Ground and Tennis Court.

No further investigations of the Dick test were made during the year but all new members of the Nursing Staff were Schick Tested and any reactors were given immunizing injections.

Animal Pests.—The powers of duties of the Corporation under the Rats and Mice Destruction Act, have been delegated to the Cleansing Committee. A good deal of property in the centre and older parts of the town is rat infested, particularly that in the proximity of Markets and Stables.

Prevention of Blindness.—The Table dealing with the particulars of Ophthalmia Neonatorum will be found on page 75. No action has been taken under Section 66 of the Public Health Amendment Act, 1925.

Tuberculosis.—(Tables XVI—XVIII).—There was a further slight drop in the number of new notifications of Tuberculosis of the Respiratory System, but the notifications of other forms of the disease increased correspondingly and the total notification rate remains unchanged at the figure of 1·5 per 1,000 population. The death rate from this disease has shown a steady decline during the past three years.

Year.	Death Rate from Tuberculosis. (per 1,000 population).
1926	1·08
1927	·87
1928	·78

The diminution in the Death Rate from Tuberculosis of the Respiratory System has been very satisfactory seeing that it has fallen from ·97 per 1,000 population in 1926 to 0·58 in 1928. The disquieting feature about the mortality rates from Tuberculosis is the increase in deaths from Tuberculosis of organs other than the lungs. (In 1926 this rate was ·11, in 1927 it was ·13 and in 1928 it was ·20).

Non-Pulmonary Tuberculosis includes diseases affecting the bones, joints and glands and also Tubercular Meningitis. Last year 75% of the deaths in Wolverhampton from non-pulmonary Tuberculosis occurred in children under the age of 10 years. Is it the environment that is chiefly at fault or is it that these children have succumbed to an infection of bovine origin introduced by cow's milk? Either or both of these factors may be operating. There is no doubt that the spread of Tuberculosis is assisted by overcrowding, by slums and by want of fresh air and sunlight. These same conditions prejudice the recovery of any sufferer by lowering his vitality and diminishing his resistance to disease. Too often one finds that an adult consumptive after having a course of treatment at a Sanatorium has to come back to live under these very conditions of overcrowding which have been largely responsible for his breakdown in health. As a workman he is handicapped by his disease and his earnings have diminished. He and his family have to live in the cheapest lodgings they can get. Is it surprising that under these conditions, further members of the family become affected even though the consumptive himself may take all the precautions which he has been taught to avoid spreading the disease.

Infection by drinking milk contaminated by Tubercle Bacilli is always a possibility but the majority of the dwellers in the very poor districts of this town use only sterilized milk which should be germ free.

A report of the Milks examined for the presence of Tubercle Baccilli appears on Table XXIX. In only one sample were living Tubercle Bacilli reported present and in this case the Veterinary Surgeon inspected the Dairy Herd and dealt with the affected animal.

At the end of 1928 the number of active cases on the Tuberculosis Register for Wolverhampton was as follows :—

Pulmonary Tuberculosis	959
Other Forms	465
	<hr/>
	1424
	<hr/>

The usual Table giving the efficiency or otherwise of the notifications of Tuberculosis appears on page 56. No cases were heard of during the year which would come within the scope of the Public Health (Prevention of Tuberculosis) Regulations, 1925. The Tuberculosis Officer referred two or three persons whom he thought might require to be dealt with under Section 62 of the Public Health Act, 1925, but after full investigation it was decided that a case could not be made out for their compulsory removal to and detention in an Institution.

VENEREAL DISEASES.

Table XX.

The clinical work is carried on by the Royal Hospital. Until the end of October 1928, the Clinic premises consisted of some Army Huts in the Hospital grounds but when the new Out-Patient Department of the Hospital was built provision was made in it for a proper V.D. Department. These new clinic premises, which have been planned and equipped on most modern and up-to-date lines, were opened on November 1st, 1928.

There is one entrance to them from the general Out-Patient Waiting Hall and another from the exterior of the building, neither of which is at all conspicuous.

Although the V.D. Department is partly below the ground level it has excellent natural lighting and good ventilation. This clinic deals particularly with patients belonging to Wolverhampton, Staffordshire and to Shropshire, as well as a smaller number of cases belonging to other authorities. It is therefore first necessary to consider the work of the clinic as a whole.

From the Tables it will be seen that the number of cases dealt with during the year for the first time amounted to 671 as compared with 667 in the year 1927. The number of persons who defaulted during treatment was only 6, and the total attendances of all patients at the clinic exceeded those of last year by 1,851 and actually reached the total of 18,155.

Turning now to the Wolverhampton cases it is found that there is very little change to record. The total new cases were practically the same as last year but the aggregate attendances had increased from 6,702 to 7,251.

The Cleveland House Hostel continues to do excellent work by admitting for care and treatment women suffering from Venereal Diseases, particularly pregnant women.

SANITARY CIRCUMSTANCES OF THE AREA.

Water Supply.—The Water Engineer has supplied me with the following information :—

“No important works have been completed during the year 1928 but progress with the new Dimmingsdale Water Works has been made and contracts for the Pumping Plant have been placed. The existing works of the Corporation have been maintained in good repair and the supply of water has been satisfactory. A considerable amount of mainlaying has been carried out in the extensions of the distribution system required to supply new houses.”

Routine chemical and bacteriological examinations of the water supplies are carried out once a month or oftener and the following is an average report:—

	Grains per gallon.
Total Solid Matter dried at 212°F.	23.52
Free and Saline Ammonia ...	0.0
Albuminoid Ammonia ...	0.0053
Nitric Nitrogen ...	0.17
Chlorine ...	2.03
Oxygen absorbed in 4 hrs. at 80°F.	0.046
Appearance ...	clear
Colour thro' 2 feet ...	pale greenish tinge
Hardness before boiling ...	14.64°
" after " ...	8.26°
Temporary Hardness ...	6.38°

Bacteriological Examination.

On gelatin at 20°F.	28 organisms per c.c.
" agar-agar at 37°F.	8 " " "
No B. Coli in 10 c.c.	

Drainage and Sewerage.—Several new sewers have been laid in areas of the Borough where development is rapidly taking place. About 2,000 yards of sewer cleansing has been carried out.

As regards sewage disposal a second installation of the Bio-Aeration Plant has been under construction during the year at the main Outfall Works at Barnhurst and is now nearing completion. Arrangements have also been made with an adjoining farmer to irrigate certain fields with settled sewage. Altogether some 130 acres are available of which about one-third can be irrigated at any one time. The more intensively irrigated fields on the Sewage Farm have been redrained, ploughed and cleansed and nearly the whole of the irrigated land has been deep ploughed.

A small sewage works at Bushbury taken over by the extended Borough has been reconditioned and brought into use. At another sewage works (Coven Heath) a stand-by settlement tank has been constructed for storm-water and one of the irrigated fields has been

underdrained. Large extensions at the Parnhurst Works are likely to be undertaken during the coming year.

Closet Accommodation.—The Scheme for the compulsory conversion of Waste Water Closets was carried one step nearer completion during 1928. There were 1,087 of these conversions dealt with leaving 4,598 Waste Water Closets in the whole Borough. There were 144 Pail Closets and 7 Privies altered to Water Closets during the year.

On December 31st the numbers of the various types of sanitary conveniences, other than Water Closets, in use in the Borough were as follows:—

Privy Middens	...	...	15
Cess Pools	...	...	38
Pail Closets	...	...	168
Waste Water Closets	...	...	4,598

Scavenging.—There is now a dual system of refuse disposal in Wolverhampton. Part is burnt at the Destructor and part is tipped. The Incinerator is situated on the North side of the town and the two areas of tipping land on the east and south-west respectively. The criticisms of the latter method which I made in my last report have now been met. The tipping ground has been enclosed with a high wire fence, the lower part of which consists of a close mesh in order to catch any loose papers blown about. No unauthorised person can gain admittance to the tip after the men have left it at night for the purpose of searching for scrap iron, jars or bottles, as the entrance is securely fastened.

The Wolverhampton system of tipping now compares very favourably with the methods commonly employed.

There is a weekly collection of refuse from private dwelling houses in the Borough and practically all the vehicles in use are provided with dustless tops, which minimise the amount of dust blown about when the bin is being emptied into the dust cart.

By the Wolverhampton Corporation Act, 1928, the Corporation obtained powers for the compulsory acquisition of all Ash Bins in use in connection with dwelling houses in the Borough, which they were

thereafter to maintain in good condition and to charge a small annual sum for this maintenance. No compensation was to be paid for the bins thus acquired. A census of all the bins was made towards the end of the year and it is proposed to put the new scheme into operation early in 1929.

Powers were also given to require the abolition of all Ash Pits and their substitution by bins. Practically all the Ash Pits remaining are those locally known as Shovel-Ups. It will only be necessary to clean these out and they will make very suitable places in which to keep the bin. The Corporation will share the expenses of this alteration from Shovel-Ups to Bin with the owner and will then take over the maintenance of the bin in accordance with the scheme just mentioned.

The relative number of bins and ash pits in the Borough at the end of December, 1928 is given as follows:—

Ash Bins	..	...	...	27,869
Open Ash Pits		...	...	16
Small Covered Ash Pits			...	2,500
Miscellaneous	...	...	...	132

SANITARY INSPECTION OF THE AREA.

The usual tabular summary of the premises visited, the nuisances discovered and the action taken in regard to them will be found on pages 62-64 of this report. Tables relating to the inspection of Work Shops and Canal Boats appear on pages 60-61.

Generally it may be said that a high standard of efficiency is maintained in dealing with the various defects discovered as the result of inspection. Unless a nuisance is removed within a reasonable time after the service of a notice the person responsible knows quite well he will have to explain matters to the magistrate, and now that this understanding has been established between the Chief Sanitary Inspector and the Property Owners, the machinery of nuisance abatement moves smoothly.

During 1928 it was necessary to take proceedings in 21 cases for non-compliance with notices. The total number of improvements

effected during the year was 16,553 and the total premises improved was 7,903.

Smoke Abatement.—Concerted action on this subject is being attempted through the Midlands Joint Council on Smoke Abatement. It is hoped to establish a uniform standard for permissible black smoke for factory chimneys throughout the area.

Smoke nuisance was reported on 5 occasions during the year and the owners of the Factories were forthwith notified of the result of the Inspector's observations. In one case the service of a Statutory Notice became necessary before the nuisance was abated.

A gauge for measuring the amount of impurity deposited from the atmosphere has recently been erected in the centre of the town and monthly estimates are now made. The results for November and December are as follows:—

			Tons per square mile	
			November	December
Tar	...	...	0.37	0.33
Carbonaceous matter other				
than tar	...	...	3.70	2.50
Ash	...	...	8.68	5.18

PREMISES CONTROLLABLE BY BYE-LAWS.

Common Lodging Houses.—There are still 7 registered Common Lodging Houses in the town, all maintained in a satisfactory condition.

Houses Let-in-Lodgings.—A total of 101 visits of inspection were paid to the 21 premises registered under this designation.

Tents, Vans and Sheds.—New powers have now been obtained to deal with caravan dwellers who from time to time make their appearance in the courts and backyards of the poorer quarters of the town and also on land adjoining some of the refuse tips. (See page 13).

Although this Section 56 of the Wolverhampton Corporation Act became effective in August 1928, an undertaking had been given

that it would not be put into force until six months had elapsed, and no cases were therefore taken under this section before the end of the year.

Offensive Trades.—The list of Offensive Trades established in Wolverhampton is as follows:—

Bone Boilers	...	...	1
Gut Scrapers	...	...	2
Hide and Skin Dealers	...	...	2
Rag and Bone Dealers	...	...	2
Tripe Boilers	...	...	10
Fish Friers	...	...	94
Fat Melters	...	...	3

Considerable difficulty is still being experienced in dealing with collectors of rags, etc., who offer toys and other articles to children in exchange for old clothing. Proceedings were successfully instituted in two cases but it frequently happens that the person collecting the rags resides in some outlying districts and gives an incorrect address where he cannot be traced. In other cases an attempt is made to evade the provisions of Section 73 either by distributing articles which do not come within the scope of the Section, or else by distributing toys from one barrow or handcart whilst the rags are collected on another.

One prosecution was taken for unlawfully establishing an offensive trade. Two men were found to be jointly carrying on the trade of Rag and Bone Dealers in a wooden hut on the outskirts of the Borough without having obtained sanction. One man was fined £5 or 26 days' imprisonment and the case against the other man was withdrawn.

Two prosecutions were taken during the year under Section 73 of the Public Health Act, 1925, (which prohibits Rag and Bone Dealers from selling or distributing food or toys from their barrows). A fine of 10/- was imposed in the first case and the second case was dismissed on payment of costs.

Other Sanitary Conditions Requiring Notice.—At the present time serious difficulties are encountered in dealing with overcrowding. One finds houses accommodating two or more families which were never intended to accommodate more than one; one finds

houses consisting only of two rooms accommodating a family of 5 or 6 persons ; and one finds houses which might reasonably be adapted for two families but which are sub-let to three or four. The common practice is for a family living in a house of four rooms (two living and two bedrooms) to sub-let the front living room and the front bedroom to another family irrespective of the number of persons who will then have to sleep in the two bedrooms. The washing accommodation and sanitary conveniences will be used in common and the sub-tenants will rarely have any proper sink in their living room or proper food storage or cooking range.

Whilst the difficulty of obtaining houses is fully realised the Health Department cannot tolerate the existence of such gross overcrowding as exists in many of these cases and is compelled to take action under statutory powers to require the abatement of the nuisance. In some cases it has been possible to arrange for some members of a family to sleep away from home and thus obtain the requisite sleeping space for the remainder but a good many cases of overcrowding have had to be brought before the magistrates. The greatest difficulty is found in dealing with sub-tenants who are causing overcrowding and who cannot afford the rent of a Corporation House by reason of unemployment.

One cannot expect the landlord of a working class house to be any more altruistic than the Corporation Housing Department, particularly when the prospective tenants' prospects of regular employment are very uncertain. Many of these cases will continue to be a problem even with the advent of the cheaper (two bedroom) municipal houses, both for the reason mentioned above and also because many of these families are too large to be considered suitable for a house with only two bedrooms.

A special Committee of the National Housing and Town Planning Council have recently reported upon the Slum Problem and upon the housing of the lowest paid workers. Certain of their conclusions are certainly worth a reference. The Committee say "we are forced therefore, to adopt a new principle ; to recognise that if the slum problem is to be solved without gross extravagance, we must give a special subsidy for the poor, large family, based on the special needs of the family. We must base the subsidy not on the house, but on the

family." This proposal is certainly a novel one and deserves serious consideration.

Schools.—A careful survey was made last year of the Sanitary conditions of the municipal schools added to the Borough by the Wolverhampton Corporation Act, 1926. One of the added Schools was closed and temporary premises were provided until such time as a new permanent building shall have been erected. The sanitary conveniences of several of the newly added schools are trough closets provided with an automatic flush.

In the Local Bill which was before Parliament last year, an application was made for power to make bye-laws dealing with the heating, lighting, ventilation and facilities for washing and for drying the clothes in connection with Private Schools. This clause was, however, struck out in Committee.

No schools or departments were closed last year on account of Infectious Diseases.

Rag Flock Act.—There are no manufacturers of Rag Flock in the Borough but there are 11 premises where rag flock is used, 5 of which are factories and 6 workshops. Thirty-two visits of inspection were paid during 1928 and 11 samples were taken for analysis. In only one case did the amount of chlorine in the sample exceed the amount permitted and in this case the excess was so slight that it was considered that the case would be met by a warning letter.

It is not the custom for Rag Flock to be sold from any of the premises although bedding manufacturers do occasionally oblige one another.

Health Propaganda.—In a modern Health Department the teaching of the doctrine of good health is continuously carried on by the Doctors, Health Visitors, Sanitary Inspectors and others. They are regularly in contact with the citizens and by their words and their actions they are advertising the art of healthy living.

A second method in use is the distribution of leaflets and pamphlets and the exhibition of posters. This practice has been extensively employed in Wolverhampton during the year, particularly

in connection with the various Infant Welfare Centres. A special effort was made to popularise immunization against Diphtheria by means of handbills.

A third method is by means of lectures. In addition to occasional addresses to various Associations and Societies and to Midwives and Nurses, meetings for Fathers were continued during the winter season when well-known professional men gave addresses on such subjects as "Cancer," "Microbes," "The Care of the Teeth," "The Prevention of Diphtheria," etc.

In order to develop Health Propaganda by means of films the Committee have purchased a portable projector which can be used on any premises where electric current is available and which throws a picture 10½ft. by 6½ft.—an ample size for a Hall seating 100 to 150 persons. A special film Health Week was organised from October 15th to the 20th when a series of films were shown and short addresses given.

Two meetings were held at Lea Road Welfare Centre, two at Ward Street Welfare Centre and two at the Heath Town Centre.

The films shown included :—

- (1) "Dr. Wise on Influenza."
- (2) "Tommy Tucker's Tooth."
- (3) "Giro the Germ."
- (4) "Through Life's Windows" (The care of the Eyes).
- (5) "Drink More Milk."
- (6) "The Climber."

INSPECTION AND SUPERVISION OF FOOD.

(a) **Milk.**—Table XXIX.—The various Dairies in the Borough have been kept under close observation by the District Sanitary Inspectors and have also received quarterly visits by the Veterinary Surgeon.

Although there is considerable difficulty in getting the older generation of milkers to conform to the requirements of the Milk and Dairies Order, 1926, particularly in regard to grooming of the cows

and their own personal cleanliness, yet, on the whole a steady progress is being made.

There are no producers of milk under the Special Designations Order, 1923, in the Borough. The licenses granted under this Order to Bottlers and Retailers are as follows :—

GRADE "A" MILK.

Bottlers.	Retailers.
2	13

GRADE "A" (T.T.) MILK.

Bottlers.	Retailers.
2	2

PASTEURISED MILK.

Bottlers.	Retailers.
Nil.	1

During the year 37 persons were registered for the sale of Loose Milk. One application was refused on the ground of unsuitability of premises.

Routine bacteriological examinations of the milk retailed in the Borough are carried out and a summary will be found in Table XXIX.

(b) **Meat and other Foods.**—There are 20 Private Slaughterhouses still remaining in the extended Borough. In view of the rapid progress made with the new Municipal Abattoir, the occupiers of these slaughterhouses have been given notice that their licenses from the Corporation (which fall due in November each year) will only be granted for a period of 6 months and will not be renewed after that.

Three prosecutions were taken in respect of an act of slaughtering on unlicensed premises. The circumstances were as follows :—"A man killed two pigs in a pig sty and conveyed the bodies to his wash house where they were scalded and dressed by him with some outside assistance. Most of the Pork was afterwards sold." The man himself was fined £2 and £1 costs and the cases against the persons helping him were withdrawn.

The new Municipal Abattoir promises to be one of the finest in the country. On the same site there will be chilling rooms, and abundance of cold storage, as it is the Corporation's intention to scrap

the present Cold Storage and Ice Making Plant near the Open Market and to instal the latest type of plant on part of the abattoir site. There will also be a plant for dealing with all the waste products of slaughtering in an economical and efficient manner and manufacturing fertilizers and chicken food.

A summary of the unsound meat surrendered or destroyed is given in table XXX.

(c) **Bakehouses.**—The total number of inspections paid to premises where meat or other foods were prepared, stored or exhibited for sale, amounted to 5,935 last year and the number of visits of inspection to Bakehouses was 889.

Adulteration.—The Public Health (Preservatives in Food, etc.) Regulations, 1925-27, came into full force last year. Their important provisions include the prohibition of use of preservatives in food, except in the case of certain specified articles of food to which the addition of small quantities of benzoic acid or sulphur dioxide are permitted. The new regulations absolutely prohibit the use of boric acid, formalin and salicylic acid in any article of food.

From the total of samples taken, which is given on Page 69, it will be seen that a number of canned, potted and dried articles were purchased by the Sampling Officer during the year in order to ascertain that the above regulations had been complied with. Three samples of bacon contained sulphur dioxide which is permitted, but the vendor had omitted to declare its presence. The informal sample of bacon contained a small quantity of boric acid but the formal sample proved genuine.

The total number of milk samples taken for analysis was 148 of which 12% were reported to be non-genuine. Nine of these samples were deficient in fat, five contained added water, and four were reported as deficient in solids not fat. The average composition of all the milk samples was—fat 3.58%—solids not fat 8.65%. Two samples of condensed and two samples of dried milk were taken under the Public Health (Condensed Milk) Regulations and the Public Health (Dried Milk) Regulations. All were reported to be genuine.

Any necessary chemical investigations of food stuffs are carried out at the Laboratory of the Public Analysts of the Borough. All

Bacteriological work is done at the Bacteriological Laboratory of the Royal Hospital, including milk examinations for bacteria; the examination of shell fish or the investigation of any cases of suspected food poisoning. In this connection it should be noted that Section 54 of the Wolverhampton Corporation Act, 1928, requires notification of suspected cases of Food Poisoning by the Medical Practitioner in attendance. No cases of this nature were reported last year.

HOUSING.

Apart from Improvement Schemes there still remain a large number of individual houses which would normally be made the subject of closing orders if alternative accommodation were readily available for the tenants. Since 1921 it has happened that Closing Orders have been in operation for 2, 3 and even 4 years before the tenants could be removed and before demolition orders could be made. Under these circumstances, it is considered advisable to represent only the very worst of the unfit houses for closure.

For comments on overcrowding see Page 28.

In several instances owners themselves have requested that Closing Orders might be put upon certain houses belonging to them because they realised that it was not practicable to keep them in proper repair owing to their age and general dilapidation.

The tabular summary of housing activities in the form required by the Ministry of Health, appears on Pages 65 and 66.

SLUM CLEARANCE.

The Local Enquiry by a representative of the Ministry of Health was held into the Council's Brickkiln Croft Area Improvement Scheme last July and the Minister's decision is now being awaited.

The Faulkland Street Area Improvement Scheme has now reached a stage when it is possible to erect a certain number of houses on the site for the accommodation of those tenants still remaining

At the end of last year 218 of the 279 houses included in the scheme had already been demolished and a further 13 were void and awaiting demolition.

MATERNITY AND CHILD WELFARE.

Midwives.—(Table XXXIV.)—During the year 48 Midwives notified their intention to practice in the Borough. Of these 26 were trained Midwives working independently, 17 were trained Midwives working in Institutions and 5 were untrained Midwives working independently.

One claim was received from a Midwife under Section 2 of the Midwives and Maternity Homes Registration Act, 1926, for compensation for suspension from practice and a sum of 25/- was allowed.

Four Midwives were jointly reported to the Central Midwives Board for breaches of the Rules in connection with a case of Ophthalmia. The charges against two of these Midwives were dismissed and the other two cases were withdrawn.

One Midwife was reported to the Local Supervising Authority for breach of the Rules and was censured.

The total number of live and still births notified by Midwives during the year was 2,321 and Medical assistance was sought by them in 703 cases. The frequency with which a Midwife seeks the assistance of a doctor, at or during a confinement is a matter of some interest and these figures have therefore been extracted for the past 8 years.

Year	Births attended by Midwives	Doctors called in	Percentage
1921	2151	371	17·3
1922	1981	409	20·6
1923	1789	427	23·9
1924	1680	515	36·6
1925	1710	625	36·5
1926	1777	617	34·7
1927	2162	750	34·7
1928	2321	703	30·3

The fees charged by Midwives in this Area are surprisingly low considering the additional duties that they are now expected to perform and the increased skill that is required of them. The minimum and usual fee is one of 25/- which has to cover ante-natal supervision, confinement and a further 6 or 7 visits afterwards.

The Local Authority will pay a Midwife's fee when the parent is proved on enquiry to be unable to do so, and therefore a Midwife has no need to incur bad debts among her patients.

The total amount of fees refunded in this way during 1928 amounted to £76 13s. 0d.

A definite scale is in force for recovering from the patient the whole or part of the fee paid to a medical man called in by a Midwife for an emergency under Section 14 of the Midwives Act, 1918. The gross expenditure under this heading last year amounted to £222 4s. 0d. and the amount recovered from patients themselves was £85 15s. 7d.

Home Helps.—Details of the revised scheme for the payment by patients for Home Helps provided by the Corporation were published in the previous Annual Report.

The hours of duty of a Home Help are from 8-0 a.m. to 5-0 p.m. on weekdays and from 8-30 a.m. to 11-30 a.m. on Sundays.

She is under the authority of the mistress of the house as regards her ordinary duties in the home but in matters of health she is required to act under the orders of the Nurse or Midwife. She is required to provide her own meals at any house at which she may be working. Each Home Help is paid 30/- for her 10 days' work. Last year the total expenditure on Home Helps was £73 10s. 0d. and the amount recovered was £31 0s. 6d.

Maternity Outfits.—The cheap confinement sets now being supplied at cost price by the Corporation to Midwives and to expectant mothers are in great demand. During the year 1928 there were 124 of such sets sold. Although a small thing in itself this is one of the measures which may help to lessen the risks of sepsis following childbirth.

Puerperal Fever and Puerperal Pyrexia Regulations.

There were 19 cases of Puerperal Fever notified during the year and 27 cases of Puerperal Pyrexia. Two of these cases died as a consequence of the severity of the infection.

As the differences between Puerperal Fever and Puerperal Pyrexia are somewhat ill-defined it will be convenient to summarise these 46 cases together.

In 30 instances there had been no ante-natal care by a Doctor nor had the woman attended an ante-natal clinic. Eleven women had been attended by their own Doctor before confinement and five women had been under the supervision of the doctor at the Clinic. Delivery was normal in 26 cases, instrumental in 13 cases and in seven cases there were complications in the third stage, which may have been a factor in producing sepsis.

Sixteen of the cases notified as Puerperal infections occurred in persons whose confinements had taken place in Institutions, a further 18 women were removed to Hospital for treatment of this condition, whilst 12 were treated at home.

A consulting Obstetrician was called in on 10 occasions, 9 specimens were sent for bacteriological examinations and 5 vaccines were prepared by the bacteriologist.

It is not possible to determine the individual causes which led to the occurrence of the septic infection nor can an exact diagnosis be given in each case. It is believed that some degree of pelvic infection was present in at least 26 cases and possibly in a further twelve. The other causes were :—

Influenza	3.
Bronchitis	1.
Pyelitis	1.
Mammary Abscess	3.

The Medical Officer of Health or his deputy investigates all cases of Puerperal Sepsis as well as every maternal death,

Maternity Homes.—Table XXXVI.—On July 1st, 1928, Part I. of the Midwives and Maternity Homes Act, was repealed by the Nursing Homes Registration Act, 1927, which came into force on that date. The Council assigned to the Maternity and Child Welfare Committee the administration of this latter Act as regards Maternity Homes but the supervision of Institutions registered only as Nursing Homes and not taking Maternity cases, was handed over to the Health Committee.

The Ministry of Health Model Bye-Laws for Nursing Homes were adopted by the Council on August 1st, 1928, and copies of these Bye-laws, together with an explanatory note, were sent to the keeper of every registered Nursing Home in the district.

All these homes were inspected at least once during the year. In one or two instances there was some slight uncertainty about the requirements of the Bye-Laws, and particularly to the Bye-Law requiring a Case Record to be kept giving a detailed statement of the Health of every patient in the home to whom a child is born in the home, and of every child so born.

In the smaller Maternity Homes where there were no facilities for dry sterilization, the sterilized Maternity Outfits which had been suggested at a previous inspection had been obtained and were stored in a lock-up cupboard for cases of emergency.

It was necessary to caution the keeper of one Nursing Home for having more patients in the Home than it had been registered for. The number allowed has not since been exceeded.

Ante-Natal Clinics.—The Salop Street premises were given up last April and from then onwards one weekly Ante-Natal Clinic was held at the Horseley Fields Centre and one at the Lea Road Centre.

In October a weekly Clinic for Expectant Mothers was started at the Heath Town Centre in addition to the two just mentioned. The total attendances last year at these Clinics amounted to 1457 and the average attendance per session was 14·5. In 1927 the number of new cases seen at the Ante-Natal Clinic was 301 and last year the figure had increased to 318, but the most important feature to be observed is the increase in the average attendance from 13·4 to 14·5.

The births notified during the year amounted to 2,931 of which nearly 80 % were attended by Midwives, so that although there is a slow, but steadily increasing realization of the value of Ante-Natal advice and supervision, as yet only the fringe of the problem has been touched. The most important step towards safe child birth is proper medical care and attention during pregnancy, given either by the family doctor or at an ante-natal clinic. In an industrial town like Wolverhampton where a doctor is booked to attend only a very small proportion of the confinements it must be the aim of the Health Department to educate expectant mothers until the importance of this matter is realised, and until not 14 % but 100 % of women giving birth to a child have previously been under the care of a private doctor or have attended one of the Clinics for expectant mothers.

There is still a reluctance on the part of some Midwives to send their cases to the Clinic because it has occasionally happened that one of their clients has been recommended by the Doctor of the Clinic for Institutional treatment, and has been sent to a Maternity Home as a Municipal Case, thus depriving the Midwife of her fee. A little reflection should show that the interests of the patients must always come first on these occasions.

Maternity Hospital.—Mention was made in the last Annual Report of the new Maternity Block at the Women's Hospital which was expected to be ready for occupation in April, 1928. Owing to various unforeseen circumstances this building was not completed last year and municipal cases had to take advantage of such other accommodation as was available. Beds were found for 18 patients at the Maternity Home No. 1 Bath Road and a certain number (12) were sent to the Maternity Ward of the New Cross (Poor Law) Hospital. In spite of this there were a good many women who needed Institutional treatment during their confinement but who could not be found accommodation at the Maternity Home and who objected to go to the Guardians Institution. Two unmarried mothers were maintained by the Corporation at the Legge Memorial Home.

Work of Health Visitors — (Table XXXVII.)—The Staff of lady Health Visitors was working short handed for practically the whole year. Miss Tonks did not return to duty until the end of March, various holidays had to be filled in during the summer months

and the vacancy caused by the resignation of Miss Jasper in September had not been filled at the end of 1928. It was therefore necessary to alter the number of areas in the Borough from 9 to 8 and to increase the district of each Health Visitor.

The additional session at Heath Town also had the effect of lessening the amount of time available for following up cases in their homes and it was therefore inevitable that there should have been fewer home visits paid than during the previous year. In 1927 the total number of home visits was 23,949 and in 1928 it was 21,720. Whilst the number of first visits paid showed a slight increase over the 1927 figures there was a very serious decrease (2,267) in the visits paid to Toddlers.

Mothers now realise the importance of bringing their babies to the Clinics but many of them fail to realise that supervision and advice is just as necessary after the baby can walk and talk. In view of this fact it has been the aim of the Health Visitors to keep in touch with this class of children in their homes, and it is a great pity that the temporary shortage of Staff has had the effect of curtailing their activities in this direction.

The total live births in the year amounted to 2,644 and the number of infants under 12 months of age who attended one of our Clinics for the first time was 1,348, which represents 51% of all the babies born in the Borough, compared with 53.3% last year.

Infant Welfare Centres.—Table XXXIX.—The most important feature of this year's work was the opening of new clinic premises at Lea Road and Moseley Village.

The Lea Road Clinic, which was opened in July, is a brick structure comprising large central Waiting Hall, two doctor's rooms, a Weighing Room, Clerk's room, Kitchen and also a room from which Dried Milk and other medical comforts are issued. Outside there is a Pram Shed and Coal Store.

The Central Hall, which has a low platform at one end, is capable of seating 120 persons and has already proved most useful for Lectures and Addresses. The total cost of the buildings and equipment was

£3,292. Three Baby Clinics are held at this Centre each week and one Clinic for expectant mothers.

Arrangements have been made to lease part of these premises to the Committee for the care of Mental Defectives for use as an Occupation Centre on two days a week.

The Moseley Village Clinic is a temporary building of wood lined with asbestos sheets and is divided into a Waiting Room, a Weighing and a Doctor's Room and there is a platform on the east side which can be used as a Pram Shelter. The total cost of this building including equipment was £538, in addition to which there is an annual Ground Rent of £5. At present this Clinic is only open one half day a week but extra sessions will be needed in the future.

Formal Opening of the Moseley Village Clinic was performed by the Mayoress on October 31st when a tea was provided for the mothers followed by a Musical Entertainment. The social side of the work carried on at both the Lea Road and the Moseley Village Clinics has been greatly assisted by the gift of two pianos for which the Committee are particularly grateful.

A further change during the year was the transfer of the Heath Town Clinic from the Dean Street Schools to one wing of the Old Heath Town Council Offices. Certain alterations were necessary to the interior of the building to adapt it for this purpose and even now the accommodation provided is scarcely adequate and other premises will certainly be needed in the near future.

Infant Consultations are held at the Heath Town Clinic on Tuesday and Friday afternoons each week and the total attendances increased from 2,097 for 1927 (9 months) to 4,994 for the year 1928.

Wolverhampton is most fortunate in having a band of Voluntary Helpers at the Clinics who display such enthusiasm for the work. Special mention must be made of the highly successful Christmas Party held at the Baths on December 19th. Invitations were issued to the regular attendants at all the Clinics and every mother was served with tea and a mincepie and every child received a present off the Christmas Tree.

In the summer, many of the mothers saved up their sixpences for a day's excursion to Blackpool. Refreshments were provided gratis on the train, the necessary funds being collected by means of Concerts and Whist Drives organised by the Voluntary Helpers and Health Visitors.

Supplies of Milk.—At the suggestion of the Ministry of Health a slight revision was made last year in the income scale below which an Expectant or Nursing Mother or a child is entitled to free milk. The Scale is now as follows :—

“ If the total income, after deduction of the rent, falls below the sum represented by allowing 24/- for two parents (15/- for one parent) and 5/- for each of the first two children, and 3/- for any other children, then the members of the family qualifying for a supply of milk, are entitled to be granted it at the expense of the Corporation.”

All dried milk, Olive Oil, Liquid Paraffin, etc., is now issued from two depots instead of one. The Heath Town depot is open on Tuesday and Friday afternoons and that at Lea Road is open during the rest of the week. Owing to the increase in unemployment during the Autumn, there was a substantial and unforeseen increase in the amount of Dried Milk supplied free through the Clinics. The total expenditure on this item for the year was £789 18s. 2d.

Last Summer the Committee approved the proposal of a local firm of Milk Distributors to supply small bottles of Grade “A” Milk to one of the Clinics for an experimental period of three months. These small bottles are capped in the ordinary way but a special instrument is supplied for perforating the cap to allow a straw to be introduced into the bottle. Each bottle holds 6 ozs. of milk and is retailed at 1d. a bottle. Instead of a mother buying a pennyworth of biscuits for the Toddler when she brings him to the Clinic she now buys him a penny bottle of Grade “A” Milk. This innovation has been such a success that it is now being introduced to all the other Clinics.

In view of the tendency of many mothers to restrict the supply of cow's milk to their children as soon as they begin to take other food, this scheme is all to the good. Although it does not provide Toddlers with a daily ration of Grade “A” Milk its educational value to parents is most important.

Orthopædic Treatment.—A Joint Orthopædic Scheme has been formulated by the Maternity and Child Welfare Committee and the Education Committee and has received the approval of the Ministry of Health and the Board of Education. This Scheme will commence in January, 1929. A whole time Orthopædic Nurse and a Consulting

Orthopædic Surgeon have been appointed and the Clinic itself will be held at the Ward Street Welfare Centre, the sessions being arranged so as not to interfere with the sessions for Infant Consultations. On the financial side it has been arranged that the cost of Out-Patient Orthopædic work (with the exception of the cost of splints and appliances) shall be shared between the two Committees in proportion to the attendances of, and the visits paid to, children under their respective charge.

Dental Treatment.—Table XL.—There has been no alteration in the arrangements detailed in my last Report. During the year there were 49 sessions held in the Out-Patient Department of the Women's Hospital at which 333 attendances of Municipal Patients were made, an increase of 71 over last year. Artificial Dentures were supplied to 52 Expectant or Nursing Mothers at a gross cost of £215 1s. 0d. and the sum of £48 10s. 6d. was recovered from the patients themselves.

Artificial Sunlight.—Selected cases from the Infant Welfare Clinics continue to be sent to the Light Department of the Royal Hospital for a course of treatment by Ultra-Violet Rays. Careful observations are made on these children both before and after treatment. Prompt notification is given by the Hospital authorities respecting any children who fail to attend regularly and these cases are then visited in their homes by one of the Health Visitors and the reason for their non-attendance ascertained.

There were 61 children who had a complete course of 20 treatments during the year. Included in these were 34 cases of rickets as well as a certain number of children who were underweight, children who were suffering from anæmia and debility and one or two cases of skin diseases.

In 24 cases it was noted that a marked improvement had taken place in the child's health after the course as evidenced by increase in weight and more satisfactory general condition.

The charge made by the Hospital is 1/6 per attendance and a complete course of 20 treatments thus costs 30/-.

Adoption Orders.—During the year reports were furnished upon 6 children on whom Adoption Orders had been applied for and in each case the Maternity and Child Welfare Committee were appointed the Guardians *ad litem* of the children until they reached the age of 5 years. All these children have since been kept under special supervision.

TABLE I.

METEOROLOGICAL REPORT FOR THE YEAR 1928.

1928	Mean Pressure of Barometer, at Station Level	Sea Level	Mean Relative Humidity	Mean of Max. and Min. Temp.	Mean undergrnd. Temp.		Absolute Extremes of Temperature				Direction of Wind								Total Rain- fall.
					1 ft.	4 ft.	High- est	Date	Low- est	Date	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	
January	29.338	29.845	90	41.0	38.5	43.0	54.8	6th	25.2	1st	...	1	...	1	...	18	3	8	4.31
Feb.	29.527	30.034	90	41.6	41.0	43.4	53.8	22nd	30.2	26th	...	...	...	8	...	14	1	6	2.35
March	29.287	29.798	87	42.4	42.2	43.4	61.2	4th	23.2	13th	...	5	...	11	...	12	...	3	1.98
April	29.320	29.811	79	46.9	45.8	45.4	72.8	26th	28.2	17th	...	5	...	9	...	11	...	5	1.13
May	29.455	29.944	75	51.5	51.7	49.1	77.5	28th	32.8	9th	...	11	...	7	1	2	...	10	.36
June	29.430	29.892	73	54.7	55.4	49.9	77.5	4th	38.5	17th	...	...	...	7	...	13	...	10	2.55
July	29.616	30.063	72	61.6	60.6	56.7	86.2	15th	44.8	4th	...	1	...	...	...	11	1	18	1.29
August	29.443	29.900	79	56.9	58.7	56.3	(Max. Therm. out of order).	47.5	30th		2	3	1	2	2	11	7	3	2.39
Sept.	29.617	30.186	83	48.7	55.7	55.4	Do.	34.0	30th		2	4	5	2	3	6	5	3	.90
Oct.	29.383	29.861	90	49.7	50.0	52.3	62.8	6th	30.8	1st	3	1	2	2	6	12	4	1	4.31
Nov.	29.245	29.728	92	45.1	45.3	49.3	66.8	18th	28.8	9th	3	...	5	3	1	10	4	4	3.63
Dec.	29.497	30.011	92	37.7	40.6	45.8	59.0	25th	18.5	15th	8	1	1	6	1	8	2	4	1.87

TABLE II.

VITAL STATISTICS DURING 1928 AND 9 PREVIOUS YEARS

Year.	Population to middle of each year. 2.	BIRTHS. Net.		DEATHS BELONGING TO THE DISTRICT.			Total Deaths in Public Insti- tutions in the District. 8.	Deaths of Non-Residents in the District 2.	Deaths of Residents occurring outside the District. 9.	Total Deaths registered in the District.	
		No. 3 & 4.	Rate. 5.	At all ages		No. 6.				Rate. 7.	
				No. 10.	Rate per 1,000 Births 11.						No. 12.	Rate 13.
1919	98,403	2,137	20.2	214	102	1,541	326	199	224	1,516	15.4
1920	102,324	2,904	28.3	253	87	1,287	310	199	188	1,298	12.7
1921	104,000	2,591	24.9	228	88	1,255	343	216	198	1,273	12.2
1922	105,700	2,314	22.0	193	83	1,330	362	239	264	1,310	12.4
1923	106,700	2,277	21.4	173	76	1,250	410	277	219	1,308	12.3
1924	108,200	2,101	19.4	178	85	1,283	415	280	256	1,307	12.1
1925	108,500	2,087	19.2	185	89	1,326	481	332	270	1,389	12.8
1926	110,000	2,079	18.9	148	71	1,245	493	340	279	1,310	11.9
1927	135,200	2,367	18.2	215	91	1,524	728	378	121	1,845	14.2
1928	133,900	2,644	19.7	161	61	1,439	811	360	84	1,715	12.8

AREA OF DISTRICT IN ACRES, 7,105.

Institutions within the Borough receiving sick and infirm persons from without the Borough :—The Royal Hospital ; The Wolverhampton Union Infirmary ; The Wolverhampton Borough Hospital ; The Wolverhampton and Midland Counties Eye Infirmary ; The Wolverhampton and District Hospital for Women ; The Queen Victoria Nursing Institution.

TABLE III.

CAUSES OF, AND AGES AT DEATH DURING THE YEAR 1928 (R.G.)

CAUSES OF DEATH.		Net Deaths at the subjoined ages of Residents within the Borough.									
		All Ages.	Under 1 year.	1 and under 2.	2 and under 5.	5 and under 15.	15 and under 25.	25 and under 45.	45 and under 65.	65 and under 75.	75 and upwards.
All causes	{ Certified ...	1436	161	32	35	40	48	172	364	294	290
	{ Uncertified ...	3	...	...	...	...	...	...	2	1	...
Enteric Fever ...	...	...	...	...	...	...	...	...	...	...	...
Small-pox ...	...	...	...	...	...	...	...	...	...	...	...
Measles ...	...	14	3	9	2	...	...	...	...	...	...
Scarlet Fever ...	...	...	...	...	...	...	...	...	...	...	...
Whooping Cough...	...	2	2	...	...	...	...	...	...	...	...
Diphtheria ...	...	7	...	1	4	2	...	...	...	...	...
Influenza ...	...	23	1	...	...	...	1	8	9	1	3
Encephalitis Lethargica ...	...	4	...	...	...	...	...	...	4	...	...
Meningococcal Meningitis	...	1	...	...	...	...	1	...	...	...	...
Tuberculosis of Respiratory System ...	...	77	...	...	1	2	10	44	20	...	...
Other Tuberculous Diseases	...	29	8	2	7	7	2	2	1	...	...
Cancer, malignant disease	...	153	...	...	...	...	1	11	58	59	24
Rheumatic Fever...	...	5	...	...	...	3	...	1	1	...	...
Diabetes ...	...	16	...	...	...	...	...	2	7	5	2
Cerebral Hæmorrhage, &c.	...	58	...	...	...	...	...	1	14	17	26
Heart Disease ...	...	283	...	...	...	5	7	18	77	90	86
Arterio-Sclerosis ...	...	43	...	...	...	...	...	...	16	13	14
Bronchitis ...	...	73	5	1	3	...	1	1	14	20	28
Pneumonia (all forms) ...	...	110	20	13	6	2	4	18	24	14	9
Other Respiratory Diseases	...	20	1	...	1	1	...	1	11	3	2
Ulcer of Stomach or Duodenum ...	...	12	...	...	...	...	...	2	4	4	2
Diarrhœa, &c. ...	...	31	24	3	...	...	...	...	1	1	2
Appendicitis and Typhlitis	...	10	...	...	...	2	2	2	3	1	...
Cirrhosis of Liver ...	...	2	...	...	...	...	...	...	2	...	...
Acute and Chronic Nephritis	...	46	1	...	...	1	2	7	13	16	6
Puerperal Sepsis ...	...	2	...	...	...	...	...	2	...	...	...
Other accidents and diseases of Pregnancy and Parturition...	...	1	...	...	...	...	...	1	...	...	...
Congenital Debility and Malformation, Premature Birth ...	...	80	78	...	...	...	1	...	1	...	...
Suicide ...	...	19	...	...	...	...	1	7	9	2	...
Other Deaths from Violence	...	46	1	...	6	6	5	10	8	4	6
Other Defined Diseases	...	272	17	3	5	9	10	34	69	45	80
Causes ill-defined or unknown ...	...	...	...	...	...	...	...	...	...	...	...
Totals ...	...	1439	161	32	35	40	48	172	366	295	290

TABLE IV.

VITAL STATISTICS IN WARDS, 1928.

WARD	Adjusted Population	Net Births	Birth Rate	Net Deaths	Death Rate	Deaths under 1 year	Infant Mortality Rate	Deaths from Diarrhoea under 2 years	Diarrhoea Death Rate per 1,000 Births	Deaths from Phthisis	Rate	Deaths from Tuberculosis all forms	Rate	Deaths from Respiratory diseases, excluding Phthisis	Rate
St. Peter ...	6820	123	18.0	85	12.5	6	49	2	16.26	3	0.44	4	0.59	10	1.47
St. Mary ...	8098	125	15.4	68	8.4	9	72	2	16.00	5	0.62	6	0.74	16	1.98
St. James ...	8394	263	31.3	113	13.5	19	72	4	15.21	7	0.83	12	1.43	22	2.62
St. Matthew	10007	246	24.4	128	12.8	25	102	12	48.78	9	0.81	13	1.30	18	1.71
St. George...	13872	282	20.3	123	8.9	17	60	3	10.64	7	0.50	8	0.58	22	1.59
Heath Town	14328	258	18.0	128	8.9	14	54	1	3.88	5	0.35	7	0.49	17	1.19
Blakenhall & St. John ...	14835	198	13.3	175	11.8	13	66	4	20.20	8	0.54	10	0.67	29	1.95
Graiseley ...	13684	176	12.9	151	11.0	8	45	1	5.68	11	0.80	16	1.17	26	1.90
St. Mark & Merridale...	10606	116	10.9	142	13.4	8	69	1	8.62	4	0.38	4	0.38	18	1.70
Park ...	8826	274	31.0	79	9.0	5	18	...	...	1	0.11	2	0.23	10	1.13
Dunstall ...	11388	124	10.9	119	10.4	10	81	...	...	10	0.81	12	1.05	16	1.40
Upper Penn	3550	70	19.7	43	12.1	...	...	...	...	1	0.28	1	0.28	5	1.41
Bushbury ...	9492	389	41.0	85	9.0	27	69	...	...	7	0.73	10	1.05	11	1.16
Borough ...	133,900	2644	19.7	1439	10.7	161	61	30	11.35	78	0.58	105	0.78	220	1.64

TABLE V. BACTERIOLOGICAL EXAMINATIONS.

	Positive.				Negative.				
	Borough Hospital	Other Institutions	Medical Practitioners	Total	Borough Hospital	Other Institutions	Medical Practitioners	Total	Total
For Diphtheria Bacilli.									
Swabs	78	8	20	106	710	74	298	1082	1188
For Hæmolytic Streptococci.	3	...	1	4	9	...	...	9	13
For Tubercle Bacilli.									
Sputum ... ..	...	3	24	27	...	15	153	168	195
Others ... ..	...	3	...	3	...	...	2	2	5
Totals	81	14	45	140	719	89	453	1261	1401

TABLE VI.

DEATHS UNDER 1 YEAR, ARRANGED ACCORDING TO WEEKS AND MONTHS.

CAUSE OF DEATH.		Under 1 week	1-2 weeks	2-3 weeks	3-4 weeks	Total under 4 weeks	1-3 months	3-6 months	6-9 months	9-12 months	Total Deaths under 1 year
All Causes {	Certified ...	63	10	8	3	84	20	21	18	18	161
	Uncertified ...	...	...	...	...	...	...	...	...	...	...
Small Pox ... ..		...	...	...	...	...	...	...	...	...	...
Chicken-Pox ... ..		...	...	...	...	...	...	...	...	...	...
Measles ... ..		...	...	...	...	...	1	...	...	2	3
Scarlet Fever ... ..		...	...	...	...	...	...	...	...	...	...
Whooping Cough ... ..		...	...	...	...	...	...	1	...	1	2
Diphtheria and Croup ... ..		...	...	...	...	...	...	...	...	...	...
Influenza ... ..		...	...	...	...	...	1	...	...	...	1
Erysipelas ... ..		...	...	...	...	...	...	...	...	...	...
Tuberculous Meningitis ... ..		...	...	...	...	...	...	1	1	...	2
Abdominal Tuberculosis ... ..		...	...	...	...	...	...	3	...	1	4
Other Tuberculous Diseases ... ..		...	...	...	...	...	...	...	1	1	2
Meningitis (not tuberculous) ... ..		...	...	...	...	...	1	...	...	...	1
Convulsions		4	1	1	...	6	1	...	...	...	7
Laryngitis ... ..		...	...	...	...	...	...	...	...	...	...
Bronchitis ... ..		...	...	...	1	1	...	...	...	1	2
Pneumonia (all forms)		1	...	...	...	1	3	3	7	8	22
Diarrhœa ... ..		...	1	...	...	1	...	2	...	...	3
Enteritis ... ..		...	...	1	1	2	6	6	5	4	23
Gastritis ... ..		...	...	...	...	...	...	...	...	...	...
Syphilis ... ..		...	...	...	...	...	...	...	1	...	1
Rickets ... ..		...	...	...	...	...	...	...	1	...	1
Suffocation (overlying) ... ..		...	...	...	...	...	...	...	...	...	...
Injury at birth		3	...	...	...	3	...	...	...	...	3
Atelectasis		2	...	...	...	2	...	...	...	...	2
Congenital Malformations		9	1	...	...	10	1	1	...	...	12
Premature Birth		33	4	4	...	41	4	...	...	...	45
Atrophy, Debility and Marasmus		6	1	2	1	10	2	2	1	...	15
Other Causes		5	2	...	...	7	...	2	1	...	10
Totals		63	10	8	3	84	20	21	18	18	161

TABLE VII.

CANCER DEATHS, 1928.

	AGE GROUPS							
	25—45		45—65		65 and upwards		Total Deaths	
	Male	Fe- male	Male	Fe- male	Male	Fe- male	Male	Fe- male
Cancer of the Buccal Cavity ... ..	...	...	1	1	3	...	4	1
Cancer of the Pharynx, Oesophagus, Stomach, Liver and Annexa ...	3	2	13	5	16	11	32	18
Cancer of the Periton- eum, Intestines and Rectum ... ..	...	2	8	4	16	13	24	19
Cancer of the Female Genital Organs ...	...	3	...	8	...	4	...	15
Cancer of the Breast ...	...	1	1	6	...	6	1	13
Cancer of the Skin ...	...	...	...	...	1	1	1	1
Cancer of other or unspecified organs ...	...	...	6	2	6	4	12	6
TOTALS ...	3	8	29	26	42	39	74	73
	11		55		81		147	

TABLE VIII. ZYMOTIC DISEASES, 1928.

Notifiable Disease.	Notified.	Admitted to Hospital.	Deaths in Hospital.	Deaths at home of cases previously notified
Small Pox	7	7	...	...
Diphtheria	60†	55	5	...
Scarlet Fever	286*	261	...	...
Enteric Fever	2	2	...	...
Puerperal Fever	19	17	1	...
Puerperal Pyrexia	27	17	1	...
Erysipelas	42	17	1	...
Ophthalmia Neonatorum	80	1	...	...
CerebroSpinal Meningitis	2	1	...	1
Encephalitis Lethargica	2	1	1	1
Malaria	4	1	1	...
Primary Pneumonia	106	46	9	7
Influenzal Pneumonia	20	2	2	4
Acute Poliomyelitis	1	...	...	1
Chicken Pox	255	...	...	...
Others ... ..	...	...	...	...

* 5 of these proved not to be Scarlet Fever.

† 5 " " " " Diphtheria.

TABLE IX. DISINFECTION.

Number of rooms disinfected with Formalin 471

Number of rooms sprayed 157

3 Ambulances. 3 Shelters. 1 Pavilion.

Articles disinfected by steam :—

Blankets - 1127. Sheets - 323. Quilts - - - - 267

Pillow Cases 382. Rugs - - 19. Dresses and Suits 338

Pillows - - 409. Mattresses 284. Miscellaneous - - 4594

Total - 7,743.

Library books fumigated 162

TABLE X. INFECTIOUS DISEASES, YEAR 1928.

NUMBER OF NOTIFICATIONS.														Total Admitted to Hospital.		DEATHS.										Total Deaths.		
Age-periods.	0-1	1-2	2-3	3-4	4-5	5-10	10-15	15-20	20-25	25-35	35-45	45-65	65 & Up.	Total	Admitted to Hospital.	0-1	1-2	2-3	3-4	4-5	5-10	10-15	15-20	20-25	25-35	35-45	45-65	65 & Up.
Small Pox	2	...	3	1	1	...	7	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria	2	1	5	5	18	6	6	14	1	2	...	60	55	...	...	1	1	1	1	2	...	...	...	...	...	...	6
Scarlet Fever	4	10	6	15	138	43	35	30	4	1	...	286	261	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever	2	...	...	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Fever	12	7	...	...	19	17	...	...	...	...	...	...	...	...	...	1	...	...	...	1
Puerperal Pyrexia	2	16	9	...	...	27	17	...	...	...	...	...	...	...	...	...	1	...	...	...	1
Erysipelas	1	...	...	...	...	1	1	10	5	15	9	42	17	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Ophthalmia Neonatorum	80	...	...	...	...	...	...	...	...	...	...	...	80	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Primary Pneumonia ...	2	5	3	4	2	17	11	6	18	10	17	11	106	46	...	3	1	1	1	...	...	...	3	6	9	18	9	51
Influenzal Pneumonia	1	...	...	1	2	7	3	6	...	20	2	...	1	...	...	...	...	...	...	...	1	2	3	2	9
Encephalitis Lethargica	2	...	2	1	...	...	...	...	...	...	...	...	...	...	4	...	4	...
Cerebro Spinal Fever	1	...	1	...	...	...	2	1	...	...	...	...	...	...	...	...	...	1	...	...	...	1
Acute Poliomyelitis	1	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
Malaria	2	1	1	...	4	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
TOTALS ...	82	12	14	17	22	173	65	52	113	43	45	20	658	428	...	4	2	3	2	1	2	...	3	10	11	25	13	76

TABLE XI.

CASES OF INFECTIOUS DISEASES NOTIFIED IN EACH WARD, YEAR 1928.

WARD	Small Pox	Diphtheria	Scarlet Fever	Enteric Fever	Puerperal Fever	Puerperal Pyrexia	Erysipelas	Ophthalmia Neonatorum	Primary Pneumonia	Influenzal Pneumonia	Encephalitis Lethargica	Cerebro Spinal Fever	Acute Pulmonary	Malaria
St. Peter	...	2	13	...	1	3	1	6	5	1	...	...	...	2
St. Mary	1	1	15	...	1	1	3	7	8	...	...	1	...	...
St. James	...	3	22	...	1	3	3	6	14	1	...	...	...	...
St. Matthew	1	4	23	...	1	2	4	10	11	2	...	...	...	...
St. George	...	15	21	1	6	3	8	9	9	3	1	...	...	...
Heath Town	...	3	26	...	3	1	4	5	18	5	...	...	...	...
Blakenhall and St. John's	...	15	14	1	...	2	3	7	15	3	...	...	...	...
Graiseley	...	4	34	...	...	2	4	10	8	2	...	...	...	...
St. Mark's and Merridale	...	3	19	...	...	...	2	9	4	...	...	...	...	...
Park	...	2	8	...	2	2	5	2	6	2	1	...	...	...
Dunstall	1	4	47	...	1	4	1	3	3	1	...	...	...	...
Upper Penn	...	2	6	...	...	1	1	...	2	...	...	...	...	1
Bushbury	4	2	38	...	3	3	3	6	3	...	...	1	1	1
Borough...	7	60	286	2	19	27	42	80	106	20	2	2	1	4

TABLE XII.

SCARLET FEVER.
Relation of Overcrowding to Incidence.

	No. of Hous ³⁸ .	Total Occupants.	Persons per Room.	No. of Susceptible persons under 15.	Recurrences.	% of Recurrences.
A.—Cases removed to Hospital ...	73	295	Less than 1 person per room	44	2	4.5%
	177	1077	1—2 persons per room	278	14	5.0%
	8	69	More than 2 persons per room	36	—	—
B.—Cases nursed at home ...	20	75	Less than 1 person per room	2	—	—
	3	19	1—2 persons per room	3	—	—
	—	—	More than 2 persons per room	—	—	—

TABLE XIII. DIPHTHERIA.

Year	Cases	Deaths	Death Rate per 1,000 population	
			WOLVERHAMPTON	England & Wales
1919	56	2	0·02	0·13
1920	49	3	0·03	0·15
1921	43	3	0·03	0·12
1922	29	2	0·02	0·11
1923	55	2	0·02	0·07
1924	58	5	0·05	0·06
1925	48	7	0·06	0·07
1926	42	2	0·02	0·07
1927	42	5	0·04	0·07
1928	60	6	0·04	0·06

TABLE XIV. WHOOPING COUGH.

Year.	Deaths.	Death Rate per 1,000 population.	
		WOLVERHAMPTON.	England and Wales.
1919	9	0·09	0·07
1920	21	0·21	0·11
1921	7	0·07	0·12
1922	22	0·21	0·16
1923	8	0·08	0·10
1924	11	0·10	0·10
1925	16	0·15	0·15
1926	6	0·05	0·10
1927	57	0·44	0·09
1928	2	0·01	0·07

TABLE XV.

BOROUGH INFECTIOUS HOSPITAL.

	Scarlet Fever.	Diph- theria.	Other Diseases.	Total.
Cases in Hospital on December 1st, 1927	21	9	—	30
Total cases admitted during year ...	293	67	13	373
Cases admitted from outside districts	36	18	1	55
Cases wrongly diagnosed ...	7	10	—	17
Mild and uncomplicated cases ...	238	44	9	291
Severe and septic cases ...	48	13	4	65
Complications : —				
Adenitis ...	5	—	—	5
Otitis Media ...	7	1	—	8
Nephritis ...	9	5	1	15
Rhinitis ...	11	—	—	11
Scarlatinal Rheumatism ...	4	—	—	4
Intercurrent diseases				
(e.g. Bronchitis) etc. ...	6	3	1	10
Cardiac ...	—	3	—	3
Laryngeal ...	—	1	—	1
Miscellaneous ...	6	—	2	8
Number of Operations performed : —				
Minor Operations ...	1	—	—	1
Major „ ...	—	—	—	—
Number of Deaths ...	—	5	2	7
Total cases discharged during the year	297	64	11	372
Average duration of treatment ...	...	...	30 days	
Average number of beds occupied ...	...	...	28	8
Cases in Hospital, December 29th, 1928	17	7	—	24

*The above figures refer to all cases admitted to the Borough
Hospital and not solely to Wolverhampton ones.*

TABLE XVI.
TUBERCULOSIS, YEAR 1928.

AGE PERIODS.	NEW CASES.				DEATHS.			
	Pulmonary.		Non-Pulmonary.		Pulmonary.		Non-Pulmonary.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
0—1	...	...	4	1	...	...	5	3
1—5	1	...	6	3	...	1	7	2
5—10	7	5	5	3	...	1	2	2
10—15	3	2	1	...	2	1	...	1
15—20	6	10	1	...	1	3	1	...
20—25	3	13	...	...	...	6	...	1
25—35	25	22	1	2	9	13	...	...
35—45	26	15	...	...	14	7	1	1
45—55	11	10	...	...	7	3	...	...
55—65	8	...	2	...	10	...	1	1
65 & upwards	2	...	...	1	...	...	...	...
TOTALS ...	92	77	20	10	43	35	17	11

TABLE XVII.

TUBERCULOSIS, 1928.
Interval elapsing between date of notification and date of death.

	Not notified	Under 1 week	1-4 weeks	4-12 weeks	3-6 months	6-12 months	1-2 years	2-3 years	Over 3 years	Total Deaths
Pulmonary—Males ...	3	7	9	2	3	5	11	1	2	43
Pulmonary—Females...	5	...	1	7	3	6	4	8	1	35
Non-Pulmonary—Males	10	5	1	...	...	...	1	...	...	17
Non-Pulmonary—Females	9	...	1	1	...	...	...	...	...	11
Totals ...	27	12	12	10	6	11	16	9	3	106

TABLE XVIII. TUBERCULOSIS, 1928.

	Pulmonary	Non-Pulmonary	Total
Cases notified	169	30	199
Cases re-notified	77	3	80
Changes of Address	70	...	70
Cases admitted to Institutions :			
Sanatoria... ..	97	2	99
Kinver Hospital	18	...	18
Poor Law Infirmary	3	...	3
Other Institutions ... ..	...	...	...
Cases discharged from Institutions :			
Sanatoria... ..	108	1	109
Kinver Hospital	16	...	16
Poor Law Infirmary	12	...	12
Other Institutions ... ..	...	1	1
First visits to homes by Inspectors	169	30	199
Number of Deaths	78	27	105
Cases transferred to other districts	11	...	11
Cases removed from register "Cured," etc.	378	51	429

TABLE XIX. NEW CASES ATTENDING T.B. DISPENSARY.

	Pulmonary	Non-Pulmonary	Total
Recommended for :			
Dispensary Treatment	11	13	14
Domiciliary Treatment	9	1	10
Hospital Treatment	10	4	14
Sanatorium Treatment	89	...	89
Totals	119	18	137

TABLE XX.

RETURN relating to all persons who were treated at the Venereal Diseases Treatment Centre at the Royal Hospital, Wolverhampton during the year ended the 31st December, 1928.

	Syphilis.		Soft Chancre.		Gonorrhœa		Conditions other than Venereal.		TOTAL.	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
1. Number of cases which :—										
(a) at the beginning of the year under report were under treatment or observation for	113	106	...	...	46	30	7	4	166	140
(b) had been marked off in a previous year as having ceased to attend or as transferred to other Centres, and which returned to the Treatment Centre during the year under report suffering from the same infection	10	6	...	...	8	3	...	...	18	9
TOTAL—Items 1 (a) and 1 (b) ...	123	112	...	...	54	33	7	4	184	149
2 (a) Number of cases dealt with at the Treatment Centre during the year for the first time	95	79	...	...	179	80	138	96	412	255
TOTAL—Items 1 (a) 1 (b) and 2 (a)...	218	191	...	...	233	113	145	100	596	404
2 (b) Number of cases included in Item 2 (a) known to have received previous treatment at other Centres for the same infection	5	2	...	...	9	...	...	...	14	2
3. Number of cases which ceased to attend :—										
(a) before completing the first course of treatment for... ..	3	3	...	...	18	6	...	...	21	9
(b) after one or more courses but before completion of treatment for	8	4	...	...	...	...	...	...	8	4
(c) after completion of treatment, but before final tests as to cure of	5	19	...	...	14	7	...	...	19	26
4. Number of cases transferred to other Treatment Centres after treatment for	43	30	...	...	33	9	...	...	76	39
5. Number of cases discharged after completion of treatment and observation for	51	28	...	...	107	47	...	...	158	75
6. Number of cases which, at the end of the year under report, were under treatment or observation for	108	107	...	...	61	44	...	...	169	151
TOTAL—Items 3, 4, 5, and 6 ...	218	191	...	...	233	113	...	...	451	304
7 Out-patient attendances :—										
(a) For individual attention by the Medical Officer	2576	2335	...	...	2087	1031	371	187	5034	3553
(b) For intermediate treatment, e.g., irrigation, dressings, etc.	68	2	...	...	5264	4206	20	8	5352	4216
Total attendances	2644	2337	...	...	7351	5237	391	195	10386	7769
8 Aggregate number of "In-patient days" of treatment given to persons who were suffering from	111	89	...	...	105	36	...	...	216	125

TABLE XX.—*Continued.*
Examination of Pathological Material.

	For detection of			For Wassermann Reaction.
	Spirochetes.	Gonococci.	Other Organisms.	
Specimens from persons attending at the Treatment Centre which were sent for examination to an approved laboratory	2	668	...	1070

STATEMENT showing the services rendered at the Treatment Centre during the year, classified according to the areas in which the patients resided.

	Wolverhampton.	Staffs.	Salop.	Walsall.	Dudley.	Birmingham.	Other Authorities.	TOTAL.
A. Number of persons from each area dealt with during the year <i>for the first time</i> and found to be suffering from :—								
Syphilis	75	88	1	7	...	...	3	174
Soft Chancre ... ..	...	...	...	...	...	...	...	...
Gonorrhœa	88	116	14	3	4	3	31	259
Conditions other than venereal	97	104	15	2	...	6	10	234
TOTAL	260	308	30	12	4	9	44	667
B. Total number of attendances of all patients residing in each area	7251	7916	906	185	17	334	1646	18,255
C. Aggregate number of "In-patient days" of all patients residing in each area	204	84	53	...	...	...	...	341
D. Number of doses of Arsenobenzol Compounds given in the :—								
1. Out-patient Clinic	444	548	15	35	...	...	46	1088
2. In - patient Dept. to patients residing in each area.	3	...	...	...	...	...	...	3

(Signed),

GEORGE MITCHELL, M.D.,

Medical Officer of the Treatment Centre.

January 31st, 1929.

TABLE XXI.

CANAL BOATS ACTS, 1877-1884.

Number of boats registered during 1928	...	...	3
„ „ inspected „ „	...	...	246
„ infringements discovered	...	...	43
„ notices issued	...	...	33
„ „ outstanding at end of year	...	...	7
„ infectious diseases notified	...	...	Nil
„ cabins disinfected	...	...	Nil

WORKSHOPS.

TABLE XXII. A.—INSPECTIONS.

Premises. (1)	Number of		
	Inspections. (2)	Written Notices. (3)	Prosecutions (4)
Factories (includg. Factory Laundries) Workshops („ Workshop „) Workplaces	4445	82	Nil
Total			

B.—DEFECTS FOUND.

Particulars. (1)	Number of defects.			Prosecu- tions. (5)	
	Found. (2)	Remed- ied. (3)	Referred to H. M. Insp'ctr (4)		
NUISANCES UNDER THE PUBLIC HEALTH ACTS :—					
Want of cleanliness	162	309	...	...
Want of ventilation ... ..	...	9	...	...
Overcrowding ... ..	...	1	...	...
Want of drainage of floors ... ..	...	...	...	...
Other Nuisances	138	157	...	...
* Sanitary Accommodation { insufficient unsuitable, or de- fective not separate for sexes	22	40	...	...
Total	322	516	...	...

* Section 22 of the Public Health Acts Amendment Act, 1890, is in force, and the standard aimed at is that of the Order of February, 1903.

TABLE XXII.—Continued. C.—HOME WORK.

* NATURE OF WORK.	OUTWORKERS' LISTS, SEC. 107.					
	Received from Employers.					
	Twice in the year.			Once in the year.		
	Lists.	Out Workers.		Lists.	Contractors.	Workmen.
		Contractors.	Workmen.			
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Wearing Apparel—						
Making, &c. ...	8	10	13	5	...	5
File Making ...	2	2	2	...	...	...
Locks, Latches & Keys ...	...	3	...	...	...	...
Totals ...	10	15	15	5	...	5

* When the return is "nil" the item is omitted from the table.

D.—REGISTERED WORKSHOPS.

Workshops on the Register (s. 131) at the end of the year. (1)	Number (2)
Boot and Shoe Makers and Repairers, 89 ; Bakehouses, 80 ; Lockmakers, 29 ; Tailors, 65 ; Dressmakers, 49 ; Milliners, 21 ; Cabinet Makers and Upholsterers, 13 ; Smiths, 17 ; Keymakers, 4 ; Spectacle Frame Makers, 9 ; Builders, &c., 21 ; various other trades, 237	634

E.—OTHER MATTERS.

Class (1)	Number (2)
MATTERS NOTIFIED TO H.M. INSPECTOR OF FACTORIES :—	
Failure to affix Abstract of Factory and Workshop Act ...	...
Action taken in matters referred by H.M. Inspectors as remediable under the Public Health Acts, but not under the Factory Acts ...	6
Others ...	?
Underground Bakehouses (s. 101) :—	...
Certificates granted during the year ...	...
In use at the end of the year ...	1

TABLE XXIII.
SUMMARY OF ROUTINE INSPECTION WORK.

	DISTRICTS.						Work-shops	Total for Borough
	N.W.	W.	S.W.	N.E.	E.	S.E.		
Investigations made into Notifiable Infectious Diseases	89	119	160	150	134	205	...	857
Investigations made into other Infectious Diseases	31	57	197	169	115	293	...	862
Number of Houses Inspected	166	27	19	317	169	263	...	961
Re-inspections, Calls made, &c. ...	3351	3759	3633	2895	2933	3752	4363	24686
Smoke Observations ...	1	2	...	21	...	8	15	47
Inspections under Housing, etc., Act	29	7	55	30	6	...	1	128
of Houses let-in-Lodgings	...	20	43	...	30	8	...	101
" Canal Boats	...	...	...	...	...	...	...	242
" Workshops	2	...	...	...	...	...	55	57
" Bakehouses	14	292	427	68	31	57	...	889
" Cowhouses	23	7	10	25	78	...	...	143
" Dairies and Milkshops	120	760	655	227	68	464	...	2294
" Slaughter-houses	29	225	332	824	543	1419	...	3372
" Offensive Trades	29	229	573	42	69	127	...	1096
" Stables and Stable-yards	11	51	274	5	12	56	27	540
" Courts, Out-door Closets, Drains, &c. ...	797	2232	2706	1490	1235	2213	271	10944
" Piggeries, Fowls and other animals kept	7	24	9	76	2	42	13	173
" Meat and Food	5	1272	866	663	1796	1333	...	5935
" Miscellaneous	1	37	47	28	36	28	122	299
Total Inspections, &c. ...	4705	9120	10006	7030	7257	10268	5240	53626
References to:—								
Borough Engineer's Department	3	26	24	15	11	49	21	149
Cleansing	...	1	5	13	1	20	...	40
Water Engineer's	1	10	18	43	11	63	36	182
Totals	4	37	47	71	23	132	57	371

TABLE XXIV. SANITARY DEFECTS REPORTED.

		N.W.	W.	S.W.	N.E.	E.	S.E.	Work-shops.	Total for Borough.
HOUSES AND WORKSHOPS;—									
1. Requiring cleansing and limewashing	...	17	73	105	75	175	94	48	587
2. Dampness	...	36	43	145	78	113	125	17	557
3. Dilapidations	...	43	122	123	122	248	151	6	815
4. Overcrowding	...	5	36	27	34	40	68	...	210
5, 6, 7, 8, 10. Defective or insufficient closet accommodation	...	170	212	297	172	153	271	84	1359
9, 36. Defective urinals	...	...	...	2	...	...	...	5	7
11, 12, 13, 14, 15, 16, 27. Defective sanitary fittings	...	4	48	21	25	37	34	1	170
35. Offensive accumulations	...	3	45	57	24	48	97	14	288
17, 18, 19, 21, 22, 23. Defective drains	...	15	29	18	23	38	39	6	168
20. Drains found stopped	...	27	93	70	56	79	111	11	447
24. Defective fall pipes	...	10	66	33	26	54	31	10	230
25. Defective eaves spouting	...	21	67	62	27	58	47	9	291
26. Defective roofs	...	28	74	119	62	114	79	20	496
GENERAL:—									
28. Defective yard surfaces	...	12	48	12	27	34	27	3	163
29, 30. Defective outbuildings	...	19	200	219	108	228	140	63	977
31, 32. Defective ash receptacles	...	148	349	433	154	102	515	3	1,704
33, 34. Infringements of Bye-laws	...	6	24	19	25	33	35	4	146
MISCELLANEOUS	...	37	81	94	36	67	69	18	402
Totals	...	601	1,610	1,856	1,074	1,621	1,933	322	9,017

TABLE XXV. NOTICES SERVED DEALING WITH THE AFORESAID SANITARY DEFECTS.

FORM OF NOTICES.	DISTRICTS.						Work-shops.	Total for Borough.
	N.W.	W.	S.W.	N.E.	E.	S.E.		
Intimation (Preliminary) ...	49	138	185	120	285	344	52	1173
Statutory ...	305	699	826	381	589	780	30	3610
TOTALS ...	354	837	1011	501	874	1124	82	4783
Prosecutions :								
Non-compliance with Notices (Premises) ...	2	3	2	3	5	6	...	21
Slaughtering on unlicensed premises ...	...	...	...	...	...	3	...	3
Establishing an Offensive Trade ...	...	...	...	...	...	2	...	2
Public Health Act, 1925, Section 73 ...	1	...	...	...	1	...	...	2
Canal Boats Acts Contravention ...	...	...	...	...	...	...	1	1
TOTALS ...	3	3	2	3	6	11	1	29

TABLE XXVI. IMPROVEMENTS MADE IN COMPLIANCE WITH NOTICES SERVED.

IMPROVEMENTS.		DISTRICTS.						Work-shops.	Total for Borough.
		N.W.	W.	S.W.	N.E.	E.	S.E.		
Drains	Reconstructed ..	234	5	96	68	7	2	3	415
	Improved or Repaired ...	97	341	349	296	119	374	28	1604
	Traps fixed ...	238	47	283	184	133	254	11	1150
Sinks	Provided ...	1	8	19	5	6	10	...	49
	Improved or Repaired ...	3	155	6	13	17	8	...	202
Pan Closets altered to Water Closets		3	...	133	1	...	...	7	144
Waste-water Closets altered to W.C's		203	191	224	148	75	238	8	1087
Privy Middens altered to W.C's ...		1	...	...	4	2	...	...	7
Water Closets	Constructed ...	5	1	...	8	7	1	3	25
	Improved or Repaired ...	12	32	29	34	66	65	22	260
Ashpits	Ash Bins provided ...	133	482	397	165	168	580	4	1929
	Altered to Bin ...	100	33	10	2	1	57	...	203
	Improved or Repaired ...	2	1	1	9	1	...	...	14
Courts, Yards and Channels		11	225	404	178	145	268	6	1267
Water	Wells Closed...	2	...	...	...	...	...	...	2
	Water laid on ...	8	...	9	11	17	3	1	49
	Soft Water Cisterns Cleansed ...	...	1	...	...	...	...	...	1
Houses	Cleansed or Limewashed ...	23	45	192	91	151	137	70	709
	Generally Repaired ...	106	125	325	133	246	282	14	1231
	Lighted or Ventilated ...	13	33	5	41	3	11	9	115
	Spouting, etc., provided or repaired	64	129	221	118	170	91	10	803
Overcrowding Abated ...		...	6	6	13	11	39	1	76
Out-door Premises Limewashed ...		33	287	777	88	484	139	107	1915
" " Improved or Repaired ...		24	244	856	214	56	227	39	1660
Animals Removed ...		5	12	18	21	56	32	...	144
Offensive Accumulations Removed ...		104	118	144	223	248	151	132	1120
Other Amendments or Nuisances Abated ...		50	10	18	3	244	6	41	372
TOTAL IMPROVEMENTS ...		1475	2561	4522	2071	2433	2975	516	16553
TOTAL PREMISES IMPROVED ...		974	1036	1624	906	1252	1864	247	7903

TABLE XXVII.

WOLVERHAMPTON HOUSING CONDITIONS, 1928.

Number of houses erected during the year:—

(a) Total	...	...	...	...	...	476
(b) With State Assistance under the Housing Acts, 1919, 1923 or 1924						
(1) By Local Authority	...	...	...	...	...	320
(2) By other bodies or persons	...	...	...	...	...	108

2.—UNFIT DWELLING HOUSES.

I.—INSPECTION.

(1) Total number of dwelling houses inspected for housing defects (under Public Health or Housing Acts)	...	...	...	961
(2) Number of dwelling houses which were inspected and recorded under the Housing (Inspection of District) Regulations, 1910	...	...	...	128
(3) Number of dwelling houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation	...	...	...	11
(4) Number of dwelling houses (exclusive of those referred to under the preceding sub-heading) found not to be in all respects reasonably fit for human habitation	...	...	...	624

II.—REMEDY OF DEFECTS WITHOUT SERVICE OF FORMAL NOTICES.

Number of defective dwelling houses rendered fit in consequence of informal action by the Local Authority or their Officers	690
---	-----	-----	-----	-----	-----

III.—ACTION UNDER STATUTORY POWERS.

A.—Proceedings under section 3 of the Housing Act, 1925 ... Nil

B.—Proceedings under Public Health Acts.

(1) Number of dwelling houses in respect of which Notices were served requiring defects to be remedied	...	...	7418
(2) Number of dwelling houses in which defects were remedied:—			
(a) By Owners	...	...	5921
(b) By Local Authority in default of Owners	...	...	Nil

C.—Proceedings under sections 11, 14 and 15 of the Housing Act, 1925

(1) Number of representations made with a view to the making of Closing Orders	...	...	...	7
(2) Number of dwelling houses in respect of which Closing Orders were made	...	...	...	7
(3) Number of dwelling houses in respect of which Closing Orders were determined, the dwelling houses have been rendered fit				Nil
(4) Number of dwelling houses in respect of which demolition orders were made	...	...	...	4
(5) Number of dwelling houses demolished in pursuance of Demolition Order	...	...	...	*4

* In addition, 3 other houses were demolished after Closing Order but before making of Demolition Order; and a further 64 houses were demolished in connection with Road Widening Schemes.

TABLE XXVIII. WOLVERHAMPTON HOUSING CONDITIONS, 1921-1928.

YEAR	Houses erected under Housing Acts.		Total	Dwelling Houses Inspected for defects	Inspections recorded under Housing (Inspection of District) Regulations.	Houses found unfit for habitation.	Closing Orders made	Houses in respect of which Demolition Orders made	Houses demolished in pursuance of Demolition Orders.	Houses not in all respects reasonably fit.	Houses in respect of which Notices served to remedy defects.	Houses in which defects were remedied.
	By L.A.	By Others										
1921	260	19	279	2147	40	40	39	18	13	1431	1896	1611
1922			129	3140	15	21	—	17	—	2093	2694	2272
1923	133	4	204	1033	263	238	2	—	—	1114	2758	2236
1924	163	88	260	1810	175	17	1	1	3	1267	2552	2069
1925	538	101	657	1743	24	16	16	1	1	1162	6070	5745
1926	966	170	1149	1660	75	25	25	—	—	1107	5377	4197
1927	1280	332	1627	1099	211	153	25	4	19	732	2790	1858
1928	320	108	476	961	128	11	7	4	4	624	7418	5921
	3660	822	4781	13593	931	521	115	45	40	9530	31555	25909

TABLE XXIX.

GRADE "A" MILKS, 1928.

Retailer.	Producer.	Sample.	Date of Sample.	Bacteriological Report.				REMARKS.
				Organisms per c.c.	Coliform Bacilli in 1 c.c.	In 0.1 c.c.	In 0.01 c.c.	
1	A	FB/28	20/3/28	12,400	—	—	—	A clean milk.
1	A	OB/28	12/6/28	1,800	—	—	—	A very clean milk.
1	A	ADB/28	11/9/28	2,800	×	—	—	Satisfactory.
1	A	AOB/28	12/12/28	2,200	—	—	—	A very clean milk.
2	B	PB/28	12/6/28	320,000	×	×	×	Grossly contaminated. Retailer interviewed.
2	B	VB/28	25/6/28	46,000	×	×	—	Signs of contamination. Retailer informed.
2	B	AKB/28	12/12/28	2,700	×	×	×	A dirty milk. Retailer warned.
3	C	IB/28	20/3/28	6,800	—	—	—	A clean milk.
3	C	QB/28	16/6/28	6,300	—	—	—	A clean milk.
3	C	ZB/28	14/8/28	18,600	×	—	—	Satisfactory.
3	C	AMB/28	12/12/28	9,000	×	—	—	Satisfactory.
3	D	ALB/28	12/12/28	1,100	—	—	—	A very clean milk.
4	D	SB/28	20/6/28	584,000	×	×	×	Grossly contaminated. Retailer was advised.
4	D	WB/28	26/6/28	14,000	—	—	—	A clean milk.
4	D	XB/28	3/7/28	1,200	—	—	—	A very clean milk.
4	D	YB/28	14/8/28	33,000	×	—	—	Satisfactory.
5	E	JB/28	21/3/28	1,760	—	—	—	Very clean.
5	E	NB/28	12/6/28	6,200	×	—	—	Satisfactory.
5	E	ACB/28	14/8/28	13,500	×	×	—	Signs of contamination. Producer informed.
5	E	AJB/28	12/12/28	24,800	×	—	—	Satisfactory.
6	F	UB/28	21/6/28	3,400	—	—	—	Very clean.
6	F	AFB/28	11/9/28	64,000	×	×	—	A dirty milk. Retailer advised.
6	F	AQB/28	12/12/28	1,900	×	—	—	Satisfactory.
7	G	TB/28	21/6/28	5,000	—	—	—	Clean.
7	G	AEB/28	11/9/28	37,000	×	—	—	Satisfactory.
7	G	APB/28	12/12/28	7,200	×	×	—	Contaminated. Retailer informed.

GRADE A (TUBERCULIN TESTED) MILKS.

8	H	GB/28	20/3/28	15,600	—	—	—	Clean
8	H	MB/28	12/6/28	8,300	—	—	—	Clean.
8	H	AAB/28	14/8/28	2,200	—	—	—	Very clean.
8	H	ANB/28	12/12/28	2,400	—	—	—	Very clean.
8	H	AH/28	5/10/28	—	—	—	—	—
2	I	HB/28	20/3/28	12,400	—	—	—	Clean
2	I	RB/28	20/6/28	12,800	—	—	—	Clean
2	I	AG/28	5/10/28	—	—	—	—	—

PASTEURISED MILKS.

5	E	ARB/28	18/12/28	3,500	—	—	—	Satisfactory.
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LOOSE MILKS (for Bacteriological Counts only).

9	J	AIB/28	4/12/28	72,400	×	×	—	Contaminated. Retailer informed.
10	K	A/1/27	17/12/28	—	—	—	—	—
10	K	B/1/27	17/12/28	—	—	—	—	Veterinary Surgeon notified. Herd inspected.
10	K	A/28	14/2/28	—	—	—	—	—
10	K	B/28	14/2/28	—	—	—	—	—
11	L	C/28	6/3/28	—	—	—	—	—
12	M	D/28	9/3/28	—	—	—	—	—
13	N	E/28	13/3/28	—	—	—	—	—
14	O	K/28	1/5/28	—	—	—	—	—
15	P	L/28	1/5/28	—	—	—	—	—

TABLE XXX. DISEASED OR UNSOUND FOOD DESTROYED.
Surrendered to Sanitary Inspectors

3 carcasses of beef.
 Forequarters of beef.
 2 hindquarters of beef.
 36 and portions of beast's livers.
 7 beast's offals.
 10 beast's lungs.
 5 beast's heads.
 2 midribs of beef.
 1 beast's intestines.
 2 cow's udders.
 1 and portion of beast's brisket.
 3 beast's spleens.
 2 beast's trimmings.
 1 beast's middles.
 1 beast's chest walls
 1 beast's skirt
 1 beast's heart.
 1 beast's kidneys.
 1 beast's stomach.
 5 sheep's carcasses.
 2 hindquarters of mutton.
 Forequarters of mutton.
 Shoulder of mutton.
 3 and portions of sheep's livers.
 1 sheep's pluck.
 1 lamb's carcass.
 1 lamb's sweetbread.
 117 pig's heads
 9 pig's livers.
 4 pig's plucks.
 7 pig's carcasses.
 7 pig's offals.
 Skin and fat of 1 pig.
 1 rabbit.
 Quantity of liquid eggs.
 1 box of skate.
 1 box of dabs.
 3 tins of lobster.
 1 box of mackerel.
 28 pounds of plaice.
 140 lbs. of mussels.
 1 tin of spaghetti.
 3 tins of tomatoes.
 7 barrels of grapes.
 58 lbs. of oranges.
 46 crates of pears.
 45 crates of lettuce.

TABLE XXXI.

SALE OF FOOD AND DRUGS ACTS, 1875 TO 1927. Total number of samples taken during the year 1928:—

Article	Number Examined.			Number Adulterated, &c.		
	Formal	Informal	Total	Formal	Informa	Total
Milk	148	...	148	18	..	18
Milk "Appeal to Cow"	...	3	3	...	2	1
Cream	7	10	17	...	1	1
Sausage	20	3	23	1	1	2
Butter	11	1	12	...	...	...
Dried Fruit ... ..	...	10	10	...	...	...
Bacon	1	7	8	...	1	1
Crystallised or Glace Fruit	...	7	7	...	...	...
Malt Vinegar ...	5	1	6	...	1	1
Non-Alcoholic Wines...	...	6	6	...	...	...
Pearl Barley ...	3	1	4	...	...	...
Cheese ... ..	...	4	4	...	...	...
Sweets	1	2	3	...	...	...
Coffee	1	2	3	...	...	...
Cocoa ... ..	...	3	3	...	...	...
Self-raising Flour	3	...	3	...	...	...
Apples ... ..	...	3	3	...	...	...
Canned Fish...	1	1	2	...	...	...
Brawn	2	...	2	...	...	...
Dried Milk ...	...	2	2	...	...	...
Condensed Milk	...	2	2	...	...	...
Sponge Cakes ...	...	2	2	...	...	...
Ground Almonds	1	1	2	...	...	...
Jam ... ..	...	2	2	...	...	...
Sweet Spirits of Nitre	...	2	2	...	...	...
Vinegar, White	...	2	2	...	...	...
Aspirin ... ..	...	2	2	...	...	...
Mustard ... ..	...	2	2	...	...	...
Lard ... ..	...	1	1	...	...	...
Seidlitz Powder	...	1	1	...	...	...
Tincture of Iodine	1	...	1	...	...	...
Cream of Tartar	1	...	1	...	...	...
Olive Oil ... ..	...	1	1	...	...	...
Boracic Acid Powder...	...	1	1	...	...	...
Epsom Salts...	...	1	1	...	...	...
Glycerine ... ..	...	1	1	...	...	...
Magnesium Carbonate	...	1	1	...	...	...
Milk of Sulphur	...	1	1	...	...	...
Lime Water ...	...	1	1	...	...	...
Zinc Ointment	...	1	1	...	...	...
Gelatine ... ..	...	1	1	...	...	...
Margarine	1	...	1	...	...	...
Lemonade Crystals	...	1	1	...	...	...
Salad Cream...	...	1	1	...	...	...
Meat Pie	1	...	1	...	...	...
Lemon Curd...	...	1	1	...	...	...
Potted Shrimps	1	...	1	...	...	...
Cornflour ... ..	...	1	1	...	...	...
Cakeflour ... ..	...	1	1	...	...	...
Coffee and Chicory Essence	...	1	1	...	...	...
Sauce ... ..	...	1	1	...	...	...
Lemon Squash	...	1	1	...	...	...
Honey ... ..	...	1	1	...	...	...
Ice Cream ... ..	...	1	1	...	...	...
Canned Fruit ...	...	1	1	...	...	...
TOTALS	209	103	312	19	5	24

TAB. E XXXII.

SALE OF FOOD AND DRUGS ACT, 1875 TO 1927.

Administrative Action taken regarding Samples reported not to be genuine during the year ending 31st December, 1928.

No. of Sample	Article	Formal or Informal	Nature of Adulteration or Irregularity	Legal Proceedings Instituted		Observations
				Fine Inflicted	Costs Imposed	
				£ s. d.	£ s. d.	
52	Milk ...	Formal	Deficient in solids not fat 22·4%	3 0 0	13 6	Milk fat 3·76% ... Vendor cautioned ...
58	Milk ...	Formal	Deficient in solids not fat 4%			
79	Sausage	Formal	SO 74 parts per million ₂			
112	Milk ...	Formal	Deficient in fat 2% ...			Sample 33C/D from producer deficient.
116	Milk ...	Formal	Deficient in fat 3% ...			
118	Milk ...	Formal	Deficient in fat 8% ...			
122	Milk ...	Formal	Deficient in fat 2% ...			See samples 131 & 132 Taken at farm following 128
128	Milk ...	Formal	Deficient in fat 9% ...			
131	Milk ...	Formal	Deficient in fat 8% ...			
132	Milk ...	Formal	Deficient in fat 5% ...			Producer interviewed Taken at farm following 118
33C/D	Milk ...	Formal	Deficient in fat 8% ...			
205	Milk ...	Formal	Added Water 9% ...			See samples 1C/G & 2C/G ... Taken from producer
213	Milk ...	Formal	Added Water 9·5% ...			
210	Milk ...	Formal	Added Water 7·8% ...			Case withdrawn ... Formal sample taken and reported genuine
1C/G	Milk ...	Formal	Added Water 17·6% ...	4 0 0	3 7 6	
2C/G	Milk ...	Formal	Added Water 4% ...			
225	Sausage	Informal	SO 160 parts per million ₂			Further samples taken and reported genuine. Formal sample taken and reported genuine. Formal sample taken and reported genuine.
232	Milk ...	Formal	Deficient in solids not fat 11%	2 0 0	4 2 6	
233	Milk ...	Formal	Deficient in solids not fat 30·9%	2 0 0		
250	Cream ...	Informal	Deficient in fat 0·25%...			Dismissed under Probation of Offenders Act ... "Appeal to Cow" sample ...
252	Bacon ...	Informal	Boric Acid 0·005% ...			
280	Malt Vinegar	Informal	100% Artificial Vinegar ...			
283	Milk ...	Formal	Deficient in fat 10% ...		2 12 0	
235	Milk ...	Informal	Deficient in fat 10·7%... Deficient in solids not fat 3%			

TABLE XXXIII. DIARRHŒA AND ENTERITIS.

Year.	Deaths under 2 years.	Death Rate per 1,000 births.	
		Wolverhampton.	England and Wales.
1919	42	19·65	10·22
1920	21	7·23	8·89
1921	60	23·15	15·50
1922	15	6·48	6·20
1923	31	13·61	7·70
1924	20	9·52	7·30
1925	23	11·02	8·40
1926	17	8·18	8·70
1927	25	10·56	6·30
1928	27	10·21	7·00

TABLE XXXIV.

MIDWIVES.

No. of midwives on Register	...	...	48
No. of trained midwives working independently	...	...	26
No. of trained midwives in Institutions	...	...	17
No. of untrained midwives working independently	...	...	5

NOTIFICATIONS RECEIVED FROM MIDWIVES.

(a) Of sending for medical assistance	...	...	703
(b) Of still births	...	...	32
(c) Of proposal to substitute artificial feeding	...	...	30
(d) Of being a source of infection.	...	...	26

WORK OF THE SUPERINTENDENT OF MIDWIVES.

(a) No. of routine visits to midwives	...	...	238
(b) No. of special visits to midwives	...	...	69
(c) No. of special visits to patients	...	...	7
(d) No. of visits <i>re</i> still births	...	...	41
(e) No. of visits <i>re</i> Puerperal Fever and Puerperal Pyrexia cases	...	...	29
TOTAL VISITS			384

TABLE XXXV.

CONDITIONS FOR WHICH DOCTORS WERE CALLED IN BY MIDWIVES.

PREGNANCY.

Ante-partum Hæmorrhage	...	...	...	15
Abortion	...	...	...	2
Miscarriage	...	...	...	8
Toxæmias (a) Unclassified	...	...	11	} 11
(b) Eclampsia	...	...	0	
Undiagnosed	...	...	...	14

LABOUR.

Abnormal Labour	...	...	...	162
Post-partum Hæmorrhage	...	...	...	8
Retained and Adherent Membranes	...	...	...	18
Ruptured Perineum	...	...	...	120

PUERPERIUM.

Puerperal rise of Temperature	...	...	...	25
Subinvolution...	...	...	...	—
Unclassified (Indefinite Diagnosis)	...	...	...	50
Death of Mother	...	...	...	1

INFANT.

Ophthalmia	...	...	...	173
Convulsions	...	...	...	2
Atrophy, Debility and Marasmus	...	...	...	20
Congenital Malformations	...	...	...	10
Icterus Neonatorum	...	...	...	1
Pemphigus	...	...	...	1
Bronchitis	...	...	...	0
Death of Infant	...	...	...	16
Unclassified (Indefinite Diagnosis)	...	...	...	46

TABLE XXXVI.

NURSING HOMES REGISTRATION ACT, 1927.

NURSING HOMES.

1.	Number of applications for Registration	...	...	6
2.	Number of Homes registered	...	...	14
3.	Number of Orders made refusing or cancelling registration			0
4.	Number of appeals against such Orders	...	...	0
5.	Number of cases in which such Orders have been—			
	(a) Confirmed on appeal	...	...	0
	(b) Disallowed	...	...	0
6.	Number of applications for exemption from registration	...		2
7.	Number of cases in which exemption has been—			
	(a) Granted	...	...	2
	(b) Withdrawn	...	...	0
	(c) Refused	...	...	0

TABLE XXXVII. MATERNITY AND CHILD WELFARE.
WORK OF HEALTH VISITORS, 1928.

District.	First Visits.	Re-visits.	Visits to Toddlers.	Ineffective Visits.	Special Visits.	Clinics.	Total.
N.	372	485	307	140	139	218	1661
W.	239	497	723	182	267	188	2096
N W.	273	440	1367	290	206	127	2703
E.	339	749	984	128	213	126	2539
N.E.	215	698	1061	246	214	85	2518
S E.	347	710	1013	207	382	112	2771
S.W.	259	416	1060	169	115	95	2115
S.	449	374	1010	177	374	117	2501
H.T.	248	731	1365	140	230	102	2816
TOTAL	2741	5100	8890	1679	2140	1170	21,720

Dressings, 431.

TABLE XXXVIII.
MATERNITY AND CHILD WELFARE.

BIRTHS

Births Notified				Male	Female	Sex not stated	Total
By Midwives	...	...	...	1119	1146	8	2273
„ Doctors	...	...	...	275	264	8	547
„ Others	...	...	...	7	6	...	13
							2833
STILL-BIRTHS.							
By Midwives	...	...	...	31	16	1	48
„ Doctors	...	...	...	19	30	1	50
„ Others	...	...	...	...	...	...	...
							98

TABLE XXXIX.

MATERNITY AND CHILD WELFARE CENTRES.

	Ward Street	Lea Road	St. Ford Street	Heath Town	Moseley Village	Salop Street	Totals
INFANTS							
No. of Sessions ...	143	146	144	98	51	...	582
New Cases under 1 year ...	315	405	300	272	56	...	1348
New Cases over 1 year ...	46	50	59	112	20	...	287
Attendances under 1 year...	3209	4782	3746	3214	1214	...	16165
Attendances over 1 year ...	2648	2640	3564	1780	913	...	11545
Total Attendances ...	5857	7422	7310	4994	2127	...	27710
Average Attendances per Session ...	41	51	51	51	42	...	
EXPECTANT MOTHERS							
No. of Sessions ...	25	24	...	...	...	49	98
New Cases ...	83	79	...	...	...	156	318
Total Attendances ...	381	295	...	...	...	781	1457
Average Attendances per Session ...	15.2	12.3	...	...	...	16.0	...

TABLE XL.

DENTAL CLINIC.

Sessions	Attendances	Extractions	Dentures Supplied
49	333	942	52

TABLE XLI.

WOLVERHAMPTON COUNTY BOROUGH, CASES OF
OPHTHALMIA NEONATORUM, 1928.

Cases notified by (a) Doctors	...	...	9
" " (b) Midwives	...	...	71

Cases treated at home	...	...	43
" " out-patients Eye Infirmary	...	...	36
" " in-patients Eye Infirmary	...	...	1

Results :—

Sight apparently perfect	80
" impaired	—
Blind one eye	—
Blind both eyes	—
Result unknown	—

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