

[Report 1927] / Medical Officer of Health, Birkenhead County Borough.

Contributors

Birkenhead (England). County Borough Council.

Publication/Creation

1927

Persistent URL

<https://wellcomecollection.org/works/z954du5c>

License and attribution

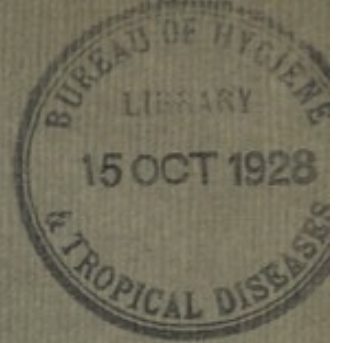
You have permission to make copies of this work under a Creative Commons, Attribution license.

This licence permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited. See the Legal Code for further information.

Image source should be attributed as specified in the full catalogue record. If no source is given the image should be attributed to Wellcome Collection.



Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
<https://wellcomecollection.org>



COUNTY BOROUGH OF BIRKENHEAD.

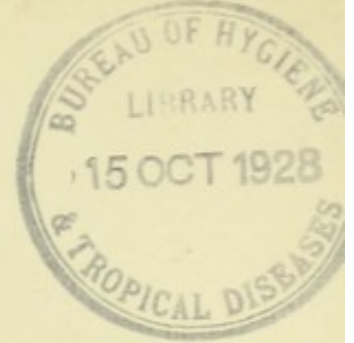


ANNUAL REPORT
OF THE
MEDICAL OFFICER
FOR
1927.

D. MORLEY MATHIESON, M.A., M.D. (Edin.), Ch.B., D.P.H.

Medical Officer of Health, and
Chief Medical Officer for the Municipal Tuberculosis, Mental Deficiency,
Maternity and Child Welfare, &c., Schemes, and for the School Medical Service.





COUNTY BOROUGH OF BIRKENHEAD.



ANNUAL REPORT
OF THE
MEDICAL OFFICER
FOR
1927.

D. MORLEY MATHIESON, M.A., M.D. (Edin.), Ch.B., D.P.H.

Medical Officer of Health, and
Chief Medical Officer for the Municipal Tuberculosis, Mental Deficiency,
Maternity and Child Welfare, &c., Schemes, and for the School Medical Service.



Digitized by the Internet Archive
in 2017 with funding from
Wellcome Library

CHAIRMEN OF COMMITTEES.

Health Committee	Alderman TWEEDLE, J.P.
Education Committee	Alderman ARKLE, O.B.E., J.P.
Maternity & Child Welfare Committee...	Alderman Mrs. MERCER.
Mental Deficiency Committee	Councillor HERRON.
Water Committee	Councillor POWER.

INDEX.

	PAGE
Abattoirs	40
Adenoids and enlarged tonsils	92
Administration	ix
Area of Borough	73
Births	3
Birth-rates	3
Blind, welfare of	71
Borough boundaries extension	xi
Cancer	7
Cerebro-spinal fever	59
Chairmen of Committees	iii
Cheshire Joint Sanatorium	50
Clinics: Antenatal	86
Postnatal	85
Dental	103
Eye	97
Minor ailments	99
Orthopædic	99
Tuberculosis	47
Venereal diseases	53
X-Rays	98
Corkhill fund	45
Cost of health services	xix
Deaths	4
Death-rates	5
Deaths, uncertified	5
Dental inspection and treatment	102
Diphtheria and membranous croup	63
Diphtheria antitoxin	60
Diphtheria immunisation	61, 64
Disinfection after infectious diseases, etc.	49, 60
Drugs	41
Elementary schools (medical inspection and treatment)	94
Elementary schools (dental inspection and treatment)	102
Encephalitis lethargica	59
Extension of Borough boundaries	xi
Factories and workshops	79
Food	40
Food and drugs inspection	41
Health Education	81
Health of school children	91
Health services, cost of	xix
Home nursing	61
Hospital, Infectious Diseases	61
Hospital, Leasowe	51
Houses, new	73
Housing and general sanitation	73
Immunisation against diphtheria	61, 64
Increase of Rent, etc., Acts, 1920-1923	77
Industries, local	26
Infantile mortality	6
Infectious diseases	58
Infectious Diseases Hospital	61
Inquests	5
Laboratory	66
Leasowe Hospital	51
Local industries	26
Lodging houses	78
Maternity and child welfare	81
Maternity homes	90
Meals, provision of	108

INDEX.—CONTINUED.

	PAGE
Meat inspection	40
Medical inspection and treatment of school children	94
Mental deficiency	68
Meteorological results	1
Midwives, inspection and supervision of	83
Milk supply	28, 66
Municipal laboratory	66
Notification of tuberculosis	45
Occupations	26
Open-air school	92
Operative treatment for cases of nose and throat obstruction	92
Ophthalmia neonatorum	84
Partially blind children	92
Poisons and Pharmacy Act, 1908, and Orders, 1909	80
Poor law relief	26
Population	3
Prematurely born infants	89
Puerperal fever and puerperal pyrexia	83
Rag Flock Act, 1911	80
Rats and mice	77
Ringworm	98
Sale of food and drugs	41
Scarlet fever	63
School children, health of	91
Secondary schools (medical inspection and treatment)	104
Short statistical summary	viii
Smallpox	60
Special school for mentally defective children	106
Staff	ix
Superannuation	xviii
Theatres, music halls, etc.	77
Thingwall Sanatorium	49
Tonsils and adenoids	92
Training of nurses	64
Tuberculosis	45
Typhoid fever	64
Uncleanliness	101
Unemployment	26
Vaccination	60
Venereal diseases	53
Water supply	28, 66
Weather	1
Welfare of the blind	71
Workshops	79
X-Ray treatment of ringworm	98

CONTENTS.

	PAGE
Short statistical summary	viii
Administration	ix
Extension of Borough boundaries	xi
Superannuation scheme	xviii
Cost of health services	xix
Weather	1
Meteorological results	1-2
Population, births and deaths	3
Population	3
Births	3-4
Deaths	4-25
Local industries	26
Occupations	26
Unemployment	26
Amount of poor law relief	26-27
Water supply, food and drugs	28
Water supply	28
Milk supply	28-39
Other foods	40-41
Sale of Food and Drugs Acts	41-44
Tuberculosis	45
Administrative arrangements	45
Prevalence of, and mortality from, tuberculosis	45-47
Cases dealt with through the tuberculosis clinic	47-48
Home visiting, disinfection, compulsory treatment, etc.	49
Thingwall sanatorium	49-50
Cheshire joint sanatorium	50-51
Leasowe hospital	51
Statistical tables	52
Venereal diseases	53
Administrative arrangements	53
General notes	53-54
Statistical tables	55-57
Other infectious diseases	58
Infectious diseases which are notifiable	58-60
Disinfection	60
Vaccination	60
Issue of diphtheria antitoxin	60
Immunisation at clinics against diphtheria	60-61
Home nursing	61
The infectious diseases hospital	61-65
Laboratory	66-67
Mental deficiency	68
Administrative arrangements	68
Cases coming within the provisions of Mental Deficiency Act, 1913	68-69
Cases dealt with under the Elementary Education (Defective and Epileptic Children) Acts, 1899 and 1914	70
Cases coming within the provisions of the Blind Persons Act 1920	70
Welfare of the blind	71
Administrative arrangements	71
General facts regarding blind persons in Birkenhead	71-72
Housing and general sanitation	73
Administrative arrangements	73
General	73-74
Administrative action taken in connection with housing and general sanitation	74-78
Factories, workshops and workplaces	79
Factory and Workshops Act, 1901 and 1907	79-80
Rag Flock Act, 1911	80
Poisons and Pharmacy Act, 1908, and Orders, 1909	80

CONTENTS.—CONTINUED.

	PAGE
Health Education	81
Maternity and child welfare	82
Administrative arrangements	82-83
Inspection and supervision of midwives	83-84
Home visiting of expectant mothers, mothers, and young children	84-85
Postnatal clinics	85-86
Antenatal clinic	86-88
Other provision made by the local authority	88
Agencies assisted by the local authority	88-89
Agencies not provided or assisted by the local authority.....	89
Investigation regarding prematurely born infants	89-90
Maternity homes	90
Health of school children	91
Administrative arrangements	91
General notes	93-94
Medical inspection and treatment (elementary schools)	94-102
Dental inspection and treatment (elementary schools)	102-104
Medical inspection and treatment (secondary schools and con- tinuation schools)	104-105
Miscellaneous	106-122

SHORT STATISTICAL SUMMARY.

1927.

Area of Borough	3,924 acres, or a little over 6 square miles
Estimated population (at midsummer)	158,500
Number of persons per acre (density of population)	40.4
Estimated number of houses in Borough	29,537
Number of inhabited houses at time of census, 1921	26,630
Rateable value	£928,119
Estimated product of penny rate	£3,325
Birkenhead rates, 1926-1927	12/3 in the £
Birth-rate per 1,000 of the population	18.2
Death-rate " "	12.6
Average death-rate for the last ten years	12.8
Tuberculosis death-rate per 1,000 of the population	1.2
Infantile mortality rate (per 1,000 births)	95
Average number of children in elementary schools.....	23,865
Number of elementary school children medically inspected during year	8,332

ADMINISTRATION.

General administrative arrangements.—The detailed arrangements made by the local authority for dealing with various branches of health work—*e.g.*, maternity and child welfare, tuberculosis, etc.—are set out in the appropriate sections of this report.

Staff.—The staff engaged on the work of the department consisted at the end of 1927 of the following:—

Medical Officer of Health and Chief Administrative Medical Officer:

D. MORLEY MATHIESON, M.A., M.D. (Edin), Ch.B., D.P.H.

Assistant Medical Officers:

MARY A. S. DEACON, M.B.E., M.B., B.S., D.P.H.

H. MASON LEETE, M.D., B.S., B.Hy., D.P.H.

F. G. FOSTER, M.A., M.D., Ch.B., D.P.H.

ANNA MAY WILLIAMS, M.B., Ch.B., D.P.H.

D. G. ANDERSON, M.B., Ch.B., D.P.H.

Dental Surgeons:

P. WILSON SMITH, L.D.S., R.F.P.S. (Glas.).

EVELINE M. WARLOW, L.D.S. (L'pool.).

Veterinary Officer:

H. L. TORRANCE, M.R.C.V.S., D.V.S.M. (Vict.).

Bacteriologist and Pathologist:

*Professor J. M. BEATTIE, M.A., M.D., etc.

Analyst:

*HERBERT E. DAVIES, M.A., B.Sc., F.I.C.

Orthopædic Surgeon:

*T. HARTLEY MARTIN, M.B., Ch.B.

Inspectors:

ALFRED LONGSTAFF (Chief Inspector and Inspector under the Food and Drugs Acts).

†JOHN M. CARNIE (Meat, Fish, and Abattoir Inspector), H. L. BATV (Housing Inspector), ‡J. LEE, W. H. TILSTON, J. CROSHAW, G. WILLS, W. H. BATES, R. E. JONES, T. OVERSBY, J. S. RATCLIFFE, H. AULT (District Sanitary Inspectors), H. HOLDEN (Workshops, Food and Drugs, etc., Inspector), W. S. EDWARDS (Infectious Diseases Inspector), J. JACKMAN (Common Lodging Houses Inspector), ARCHBELL CARNIE (Meat Inspector), ALLEN COUPE (Assistant Meat Inspector).

Matron, Isolation Hospital:

Miss EMILY YEOMANS.

Matron, Thingwall Sanatorium:

Miss I. R. MILLAR.

Health Nurses:

Miss K. NIXON (Chief Health Nurse).

Mrs. L. E. FLETCHER (Health Nurse and Inspector of Midwives).

Miss A. G. ADAMS, Miss J. BEATTIE, Miss M. M. GRAHAM, Miss E. HENDLEY, Miss M. JONES, Miss F. D. LEWIS, Miss J. McDONALD, Miss G. F. PARKINSON, Miss L. PEACE, Miss E. A. SMITH, Miss G. SMITH, Miss A. I. STEELE, Miss W. H. D. TYLER, Miss J. A. WARD, Miss L. WILSON, Mrs. C. B. WILLIAMS.

*Not whole-time officers.

†Retired under Superannuation Scheme on 30th September, 1927.

‡Retired under Superannuation Scheme on 31st December, 1927.

Clerks:

J. BENNETT (Chief Clerk). J. OWEN (Senior Clerk).
 E. P. ROGERS, R. BAKER, C. MARTIN, L. PINGUEY, F. OWENS, W. S. SHAW,
 J. CHALLINOR, N. WILSON (Clerks); Miss E. M. PINCHES (Records
 Clerk); Miss B. CHALLINOR, G. DAVIES, W. ROBSON (Junior Clerks);
 Miss I. SHORTER, Miss J. MATHIESON (Typists); J. Moreton, J.
 LOWSBY, A. BARNETT (Office Boys).

School Teacher, Thingwall Sanatorium:

Miss M. HOBSON.

Other Staff:

NURSING STAFF, ISOLATION HOSPITAL—18.
 DOMESTIC STAFF, ISOLATION HOSPITAL—16.
 MALE STAFF, ISOLATION HOSPITAL—6.
 NURSING STAFF, THINGWALL SANATORIUM—7.
 DOMESTIC STAFF, THINGWALL SANATORIUM—7.
 MALE STAFF, THINGWALL SANATORIUM—4.
 ASSISTANT ON MEAT INSPECTION WORK—1.
 LAVATORY ATTENDANT—1.

EXTENSION OF BOROUGH BOUNDARIES.

The Birkenhead Extension Bill came before both Houses of Parliament in 1927. The Bill was before the Committee of the House of Lords from 23rd March to 17th May, and before the Committee of the House of Commons from 5th July to 22nd July.

The protracted and expensive nature of the proceedings before these Committees, during which many more or less irrelevant questions were discussed *ad nauseam*, has been freely commented on in many quarters and need not be further emphasised here.

In view, however, of the fact that the essential argument in favour of an extension of the Borough boundaries was one based upon the health requirements of the area, and was specially concerned with the very high population density prevailing in the Borough, it is desirable to place on record in this report the main features of the evidence given by the Medical Officer of Health before both Houses of Parliament. These are set out below.

The Bill, as finally passed, includes within the boundaries of the Borough, as from 1st April, 1928, the Parishes of Prenton, Landican, and Thingwall, and part of the Parish of Bidston. The total area which will thus be added to the Borough is 2,092 acres; the estimated total population being 2,754.

(1) GENERAL CONSIDERATIONS.

(a) Geographical situation and general characteristics.

Birkenhead occupies an area of 3,924 acres, and is the largest Borough in Cheshire. The situation of Birkenhead geographically has certain features of paramount importance in relation to the question of the Borough's legitimate growth and expansion.

Roughly square in shape, Birkenhead is bounded on the east by the River Mersey and on the north by the Great Float, a sheet of water communicating with the Mersey and separating Birkenhead from the neighbouring County Borough of Wallasey. On both of these sides, therefore, the Borough is shut in by natural barriers; and room for its extension is to be found only to the south and west. The proposals before Parliament suggested extension in one of these directions only, namely, to the westward.

A study of local conditions reveals the following facts:—

- (1) The area occupied by the Borough is, in practically every direction, built up right to the boundary on urban lines.
- (2) Just over the boundaries of the Borough to the west and south-west there have grown up communities of an essentially urban or suburban character, with no breach of continuity between themselves and the adjoining parts of the Borough.

- (3) There is every reason to believe that the area beyond this will in the very near future also be developed on essentially urban or suburban lines.

The picture which presents itself, therefore, is that of an urban area fully built up, with a fringe just outside its boundaries already developed on urban lines, and a hinterland which is bound rapidly to become urbanised.

(b) Continuity of districts.

The existing boundaries of Birkenhead are not made apparent by any gap or breach of continuity between the Borough itself and the surrounding districts.

In many directions, owing to the gradual extension of building outwards from the Borough, it is impossible without special knowledge to say where the Borough ends and the outer districts begin. One result of this is that confusion arises from the point of view of Public Health administration. Patients resident in the outlying districts and suffering from tuberculosis and other diseases are notified to my department; applications for the use of our disinfecting apparatus and ambulances, and for the services of members of the sanitary staff are sent in error.

It is obvious, too, that the control of outbreaks of infectious diseases tends to be complicated when adjacent districts of an urban character are closely interwoven. There are instances of one side of a street or back passage being within the Borough, the other side without; of a portion of a street being inside, the remainder outside the Borough; of one of a pair of semi-detached houses being in the Borough while the other is in an adjoining district. It is most important that the preventive measures to be taken in connection with infectious diseases in such an area should be under one control. There is no doubt that with such unification efficiency is more easily attained than can possibly be the case under multiple control, no matter how amicably the various component organisations work together.

(2) POPULATION.

(a) The Registrar General's official estimate of the population of Birkenhead as at mid-year 1926 is 158,000. There has been a steady growth in the population of the Borough during the past 49 years, as the following figures show:—

1877 (year of incorporation)	77,260
1881 (census)	84,006
1891 (census)	99,857
1901 (census)	110,915
1911 (census)	130,794
1921 (census)	145,577
1922 (mid-year)	149,200
1923 (mid-year)	151,400
1924 (mid-year)	154,100
1925 (mid-year)	155,500
1926 (mid-year)	158,000

(b) During the intercensal period 1911-1921 Birkenhead increased in population by no less than 11.3 per cent. Table E 1 given below shows that only 9 of the 82 County Boroughs of England and Wales had a greater growth than Birkenhead during this period and, of these 9, 5 (Blackpool, Bournemouth, Eastbourne, Southend and Wallasey) were seaside or residential areas.

TABLE E 1.
COUNTY BOROUGHs OF ENGLAND AND WALES.
INCREASE OF POPULATION, 1911-1921.

County Borough.	Percentage increase or decrease (-) 1911-1921	County Borough.	Percentage increase or decrease (-) 1911-1921
Barnsley	6.0	Liverpool	6.6
Barrow	16.4	Manchester	2.2
Bath	- 0.7	Merthyr Tydfil	- 1.1
Birkenhead	11.3	Middlesbrough	9.3
Birmingham	9.4	Newcastle	3.2
Blackburn	- 4.8	Newport	10.4
Blackpool	64.0	Northampton	0.9
Bolton	- 1.2	Norwich	- 0.7
Bootle	9.5	Nottingham	1.0
Bournemouth	15.9	Oldham	- 1.7
Bradford	- 0.9	Oxford	7.5
Brighton	8.5	Plymouth	1.2
Bristol	5.6	Portsmouth	5.9
Burnley	- 3.4	Preston	0.3
Burton-on-Trent	1.3	Reading	5.2
Bury	- 4.5	Rochdale	- 0.7
Canterbury	- 3.6	Rotherham	8.9
Cardiff	9.8	St. Helens	6.3
Carlisle	0.9	Salford	1.2
Chester	4.3	Sheffield	6.6
Coventry	20.5	Smethwick	7.2
Croydon	12.5	Southampton	11.0
Darlington	14.9	Southend	50.0
Derby	5.2	Southport	10.0
Dewsbury	1.5	South Shields	7.4
Dudley	9.4	Stockport	2.9
Eastbourne	18.1	Stoke	2.5
East Ham	7.3	Sunderland	5.2
Exeter	0.8	Swansea	9.4
Gateshead	7.0	Tynemouth	8.4
Gloucester	2.6	Wakefield	2.7
Great Yarmouth	8.6	Wallasey	15.7
Grimsby	10.3	Walsall	5.2
Halifax	- 2.4	Warrington	6.4
Hastings	8.7	West Bromwich	7.8
Huddersfield	2.1	West Ham	4.1
Ipswich	7.4	West Hartlepool	7.4
Hull	3.3	Wigan	0.3
Leeds	0.9	Wolverhampton	7.4
Leicester	3.0	Worcester	- 0.7
Lincoln	7.7	York	2.1
82 County Boroughs of England and Wales	5.6		

(c) The density of the population of Birkenhead at the time of the last census was **37.2 per acre**. At mid-year, 1926, it had risen to **40.3 per acre**. These are high figures.

If the corresponding ratio of density for the 82 County Boroughs of England and Wales at the time of the last census be calculated, it will be found to be **21.9 persons per acre**—little over half the density now prevailing in Birkenhead.

From Table E 2 below it will be seen that among the 82 County Boroughs of England and Wales arranged in order of density Birkenhead takes 11th place, there being only 10 County Boroughs with a higher density and no less than 71 with a lower density. Of the latter, 41 have a population density less than half that of Birkenhead.

TABLE E 2.
COUNTY BOROUGHES OF ENGLAND AND WALES.
DENSITY OF POPULATION.

County Borough	Population, Census 1921	Density per acre
West Ham	300,905	64.2
Brighton	142,427	56.0
South Shields	116,667	48.6
Sunderland	159,100	47.4
Salford	234,150	45.0
East Ham	143,304	43.1
Gateshead	124,514	40.0
Smethwick	75,757	39.3
Bootle	76,508	39.3
Liverpool	803,118	37.8
Birkenhead	145,577	37.2
Plymouth.....	209,857	36.8
Kingston-upon-Hull.....	287,013	34.9
Manchester	730,551	33.7
Newcastle-on-Tyne	274,955	32.5
Middlesborough	131,103	31.5
Portsmouth	247,343	31.0
Coventry	128,205	30.9
Cardiff	200,262	30.8
Oldham	145,001	30.6
Preston	117,426	29.6
Wolverhampton	102,373	29.0
Grimsby	82,329	28.7
Leicester	234,190	27.3
Wallasey	90,721	27.3
Northampton	90,923	26.2
West Hartlepool	68,689	25.6
Warrington	76,811	25.1
Derby	129,836	24.6
Nottingham	262,658	24.0
Barnsley	53,670	22.5

County Borough	Population, Census 1921	Density per acre
York	84,052	22.5
Burnley	103,175	22.3
Gloucester	51,330	22.1
Stoke-on-Trent.....	240,440	21.6
Croydon	190,877	21.2
Birmingham	919,438	21.1
Bristol .. .	377,061	20.5
Newport (Mon.)	92,369	20.5
Sheffield	490,724	19.6
Blackpool	99,640	19.2
Wigan	89,447	17.6
Stockport	123,315	17.5
Southampton	160,997	17.5
Blackburn	126,630	17.1
Great Yarmouth	60,710	16.9
Leeds	458,320	16.3
Dudley	55,908	15.8
Norwich	120,653	15.3
Southend-on-Sea	106,021	15.0
Hastings	66,496	14.8
Tynemouth	63,786	14.6
Chester	40,802	14.3
Darlington	65,866	14.3
Rochdale	90,807	14.1
St. Helens	102,675	14.1
Bournemouth	91,770	14.0
Worcester	48,883	13.3
Bath	68,648	13.3
Wakefield	52,891	13.0
Walsall	96,964	13.0
Exeter	59,608	12.7
West Bromwich	73,761	12.6
Bradford	285,979	12.5
Oxford	57,052	12.1
Bolton	178,678	11.7
Carlisle.....	52,600	11.7
Burton-on-Trent	48,909	11.6
Rotherham	68,045	11.4
Lincoln	66,020	10.8
Reading	92,274	10.1
Ipswich	79,383	9.8
Eastbourne ...	62,030	9.6
Bury.....	56,426	9.5
Huddersfield	110,120	9.3
Dewsbury	54,165	8.1
Southport	76,644	7.9
Swansea*	157,561	7.3
Halifax	99,129	7.1
Barrow-in-Furness	74,254	6.7
Canterbury	23,737	6.0
Merthyr Tydfil	80,161	4.5

82 County Boroughs of England and Wales (Census 1921) Average 21.9

If the population density of the various **wards** in the Borough be considered separately it will be seen that in 3 of the 9 wards the density is over 50 persons per acre, viz.:—

Argyle Ward	62.2
Clifton Ward	89.9
Grange Ward	91.8

Table E 3 below shows ward densities.

Further, it has to be noted that there are undoubtedly portions of wards where the population density rises to a much higher figure than that in any of the 3 wards which I have specially mentioned. This will be obvious from a consideration of the fact that in Clifton Ward (with a population density of 89.9 per acre) a large area is taken up with railway sidings, gas works, and the Mersey Park, while in Argyle Ward (with a population density of 62.2 per acre) a very considerable portion of the acreage is taken up by docks, railway sidings, public market, etc.

The congestion evidenced by the statistics which I have quoted is undoubtedly prejudicial to the health of the population of Birkenhead, and is the strongest argument which can be advanced in favour of a re-arrangement of local government boundaries in the neighbourhood.

TABLE E 3.
BIRKENHEAD : WARDS.
DENSITY OF POPULATION.

Ward	No. of acres			Population				Persons per acre		
	1911*	1921†	1926	1911 Census	1921 Census	1926 estimated at mid-year	1911	1921	1926	
	Argyle	285	294	294	15,153	16,883	18,293	53.3	57.4	62.2
Grange	330	332	332	26,387	29,401	30,468	79.8	88.6	91.8	
Cleveland	665	668	668	23,722	28,115	31,861	35.6	42.1	47.7	
Claughton	439	435	435	7,909	8,733	9,459	18.0	20.1	21.7	
Oxton	814	806	806	4,798	4,424	5,058	5.8	5.5	6.3	
Clifton	298	294	294	23,857	24,385	26,423	80.1	83.0	89.9	
Egerton	629	627	627	17,157	20,716	22,440	27.2	33.0	35.8	
Mersey	144	206	221	8,243	9,058	9,813	57.0	44.0	44.4	
Bebington	246	247	247	3,568	3,862	4,185	14.5	15.6	16.9	
Whole Borough	3,850	3,909	3,924	130,794	145,577	158,000	33.9	37.2	40.3	

*Borough Surveyor's figures.
†Registrar General's figures.

SUPERANNUATION SCHEME.

The Local Government and Other Officers' Superannuation Act, 1922, was adopted by the Birkenhead Corporation in June, 1923, and came into operation on 1st August, 1923.

The number of posts in the Corporation service designated as "established posts" for the purposes of the Act was 1,906, of which 1,711 were actually filled at the date on which the Act came into force, and 195 were additional posts. Since the commencement of the scheme 87 new posts have been created, making a total of 1,993.

Medical examinations carried out during 1927.—During the past year 167 examinations of selected applicants for designated posts, and 2 examinations of selected applicants for junior posts, were carried out.

Department.	Designated Posts	Junior Posts.
Baths	1	0
Education	3	0
Electricity	23	0
Engineer and Surveyor's	6	0
Ferries	13	0
Gas	14	0
Libraries	1	0
Markets	1	0
Medical Officer's	14	0
Parks	2	0
Town Clerk's	4	1
Tramways	77	0
Treasurer's	4	1
Water	4	0
	—	—
Total examinations	167	2
	—	—

NOTE.—In addition to the above there were 15 re-examinations during 1927.

COST OF HEALTH SERVICES.

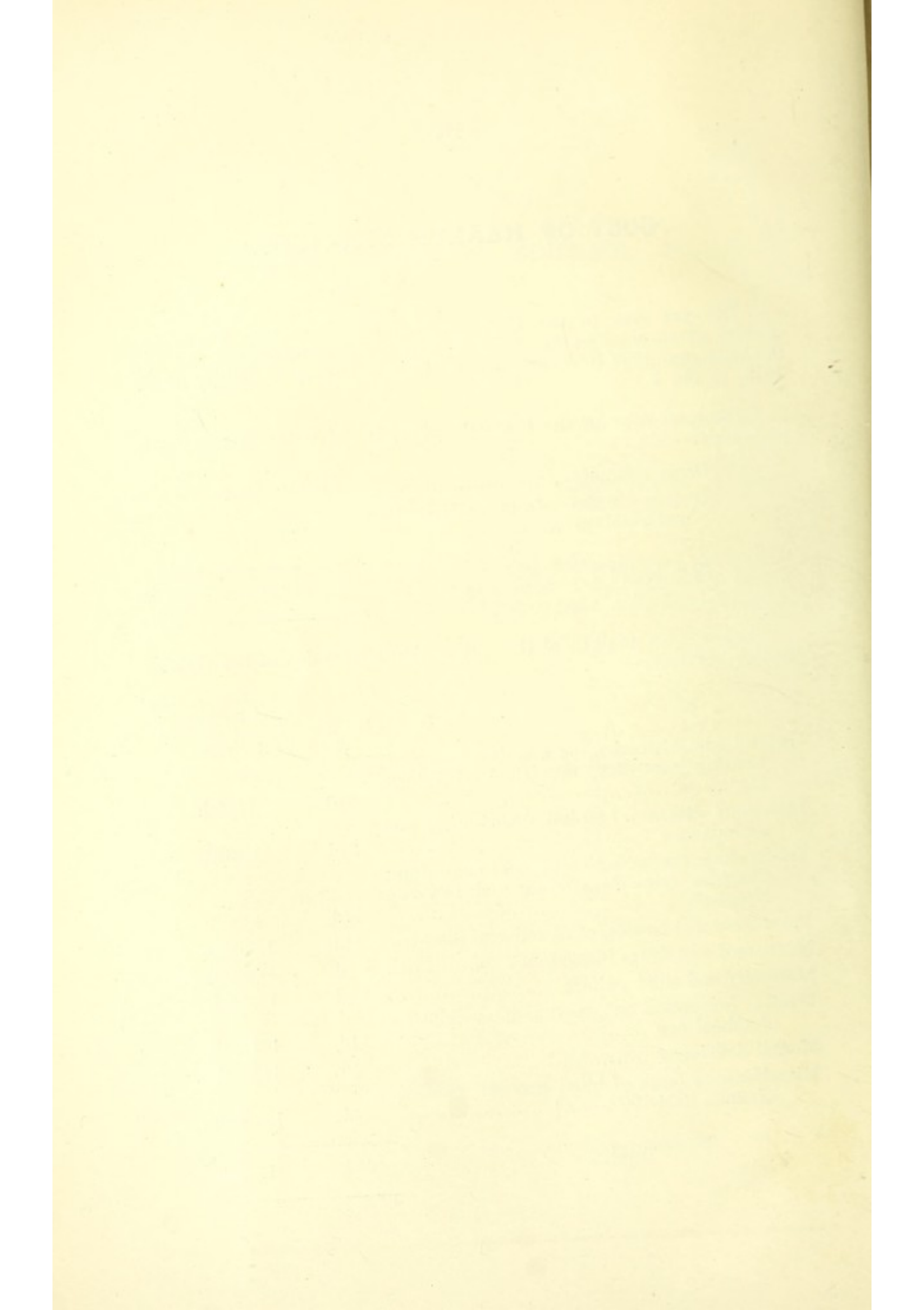
The *net* cost to the Corporation (after deducting Exchequer grants) of all the Health Services dealt with in this report, for the financial year 1927-1928, was covered by a local rate of slightly under 10½d. in the £.

The total rate for the Borough (exclusive of water charges) was as follows:—

Gross estimate	12/9 in the £
Deduct relief from Corporation undertakings	6d. in the £
Rate levied	12/3 in the £

Below is an analysis of the cost to the Corporation of the various Health Services:—

	In the £	Approx. fraction of the total (gross) estimate for rates.
General administration, port sanitary account, housing inspection, municipal laboratory, etc.	2½d.	1/60th
Infectious diseases hospital, disinfecting and ambulances	2¾d.	1/50th
Tuberculosis (including Thingwall Sanatorium, Cheshire Joint Sanatorium and Leasowe Hospital)	1¾d.	1/90th
Prevention and treatment of venereal diseases	¼d.	1/600th
Meat, food and drugs inspection	½d.	1/300th
Maternity and child welfare	¾d.	1/200th
Medical inspection and treatment of children of school age	1d.	1/150th
Mental deficiency	½d.	1/300th
Miscellaneous (care of blind persons, housing schemes 1904-1909, etc.)	½d.	1/300th
Total	10½d.	1/15th



WEATHER.

METEOROLOGICAL RESULTS.

The mean barometer reading for the whole year was 29.869 inches, as compared with a mean of 29.921 for the past 61 years.

The number of wet days in 1927 was 196.

The total amount of rainfall at Bidston was 36.177 inches, as compared with an average annual rainfall for the past 61 years of 28.668 inches. The abnormally heavy rainfall during the summer is well shown in the tables below.

The mean temperature for the year was 48.9° Fahrenheit.

In Tables A 1 and A 2 monthly and weekly results are set out : those in Table A 2 being for the 52 weeks ending December 31st, 1927.

TABLE A 1.

Meteorological observations during 1927. Monthly results.

1927	Mean Temperature	Mean Barometer	Rainfall—1 ft above ground
	° F.	INCHES	INCHES
January	41.3	29.695	3.304
February	40.1	29.980	1.201
March	44.7	29.652	2.608
April.....	46.5	29.914	1.089
May	52.4	30.089	1.292
June	54.0	29.882	3.798
July	60.5	29.860	4.140
August	60.5	29.805	6.129
September ..	54.8	29.759	5.296
October.....	51.6	29.995	2.404
November.....	44.1	29.869	3.790
December	35.7	29.931	1.126

TABLE A 2.
 Meteorological observations during 1927. Weekly results.

Weeks	Barometer means reduced to sea level & to 32°F.	Mean of Evaporation.	Thermometer means.	Rainfall.		Average percent ge of cloud to clear sky.	Mean hourly horizontal motion of air in miles	Percent ge of time wind blew fm S., SW. W. & NW.
				Hours.	Inches.			
1	29.896	41.9	43.1	19.2	0.656	80.00	23.92	98.21
2	29.715	41.4	43.0	14.6	0.820	82.85	24.32	92.26
3	29.657	34.6	35.6	22.6	0.687	65.71	12.55	62.50
4	29.576	41.0	43.2	23.3	1.026	75.71	23.80	73.21
5	29.824	33.2	40.4	8.5	0.322	52.85	18.01	81.54
6	30.476	32.8	34.2	1.9	0.100	48.57	13.21	26.19
7	30.245	39.6	40.3	4.3	0.079	84.28	8.82	48.80
8	29.360	41.7	43.4	11.9	0.440	78.57	15.54	39.28
9	29.314	43.5	45.6	15.9	1.048	77.14	23.37	73.21
10	29.608	39.1	41.0	9.8	0.270	62.85	14.38	69.64
11	30.191	41.8	45.2	—	—	67.14	16.02	23.21
12	29.403	43.8	47.4	16.7	1.086	58.57	16.82	58.92
13	29.711	38.7	43.5	17.9	0.768	44.28	17.22	64.88
1st Qr.	29.767	39.8	41.9	166.6	7.302	66.06	17.53	62.45
14	29.619	42.1	44.5	18.5	0.486	64.28	16.47	80.95
15	30.044	44.2	47.0	5.0	0.094	70.00	21.57	83.33
16	30.102	47.8	52.1	4.5	0.095	75.71	20.58	100.00
17	29.879	39.6	43.3	7.0	0.220	70.00	21.81	87.50
18	29.999	49.5	53.5	8.0	0.409	60.00	12.71	27.97
19	30.211	46.6	51.5	6.0	0.050	52.85	14.20	44.64
20	29.992	47.8	50.9	15.0	0.449	64.28	15.32	95.23
21	30.159	48.7	52.7	0.0	0.060	65.71	14.72	63.09
22	29.876	49.0	53.1	18.0	0.724	74.28	10.50	66.07
23	29.954	49.1	51.8	9.1	0.520	65.71	11.84	80.35
24	29.933	51.9	57.3	16.2	1.148	64.28	13.68	60.71
25	29.880	50.3	54.1	24.1	1.046	80.00	26.61	94.04
26	29.656	51.6	54.5	19.0	0.734	95.71	16.35	56.54
2nd Qr.	29.946	47.5	51.2	150.4	5.975	69.44	16.64	72.34
27	29.734	57.3	61.2	17.1	1.340	84.28	11.12	43.45
28	30.092	57.8	60.4	10.5	1.838	72.85	10.31	46.42
29	29.975	56.4	59.7	3.8	0.245	75.71	13.34	60.11
30	29.760	59.6	61.5	9.0	0.699	80.00	12.35	77.97
31	30.020	58.9	63.6	1.3	0.192	64.28	11.01	60.71
32	29.653	58.7	62.2	19.7	1.296	81.42	11.50	54.16
33	29.648	55.6	58.0	35.0	2.763	77.14	14.01	66.66
34	29.785	55.3	58.6	16.5	1.396	72.85	16.24	92.85
35	30.154	56.8	60.3	13.7	0.496	58.57	9.02	49.40
36	29.899	55.1	58.0	15.5	0.420	80.00	13.67	59.52
37	29.807	49.2	52.6	53.6	1.064	81.42	15.05	55.35
38	29.409	51.8	54.1	42.1	2.700	85.71	20.38	94.64
39	29.718	48.7	51.8	17.0	1.742	74.28	18.31	94.04
3rd Qr.	29.819	55.4	58.6	254.8	16.191	76.03	13.56	65.79
40	30.293	49.2	52.1	1.0	0.018	41.42	11.35	62.50
41	30.295	47.6	49.6	7.0	0.207	82.85	9.64	26.19
42	29.809	46.6	49.2	28.0	0.780	81.42	21.18	75.00
43	29.668	51.7	54.3	10.8	0.555	85.71	21.78	73.21
44	29.922	51.2	53.6	24.1	1.736	85.71	20.24	87.50
45	29.636	35.8	38.9	3.0	0.116	52.85	12.87	29.76
46	29.994	43.1	44.5	28.0	1.816	84.28	17.02	52.97
47	29.935	42.1	43.7	12.0	0.432	72.85	16.98	41.66
48	30.262	38.3	39.6	8.0	0.306	72.85	9.52	26.19
49	29.786	40.8	41.9	0.8	0.034	94.28	15.62	1.19
50	30.030	31.8	33.5	6.0	0.084	85.71	13.62	8.92
51	29.589	34.3	34.0	31.0	0.982	84.28	14.85	1.78
52	30.292	30.5	32.9	6.5	0.018	60.00	16.64	0.55
4th Qr.	29.962	41.7	43.6	166.2	7.084	75.70	15.48	37.64
Year ...	29.873	43.8	48.8	738.0	36.552	71.80	15.80	59.55

POPULATION, BIRTHS, AND DEATHS.

POPULATION.

Population.—The population of the Borough as recorded at the time of the 1921 census was 145,592. The estimated mid-year population, 1927, was 158,500. This estimate has been made by the Registrar-General on the basis of the "adjusted" 1921 figures, after allowance for the varying rate of natural increase as evidenced by the births and deaths in each area and of migration as indicated from other sources of information such as the change in the numbers in the Parliamentary Register and the migration returns obtained by the Board of Trade.

BIRTHS.

Births registered during 1927, and birth-rate.—During the year 2,879 births belonging to the Borough were *registered*. (This total includes 50 Birkenhead births registered in other areas and transferred to Birkenhead, and excludes 102 births belonging to other areas which occurred in Birkenhead and were transferred to the areas concerned. Among the latter are numerous births which occurred at the Birkenhead Maternity Hospital and the Birkenhead Infirmary.)

This corresponds to a birth-rate of 18.2 per 1,000 of the population; the lowest rate yet recorded for the Borough.

Birth-rate in recent years.—The birth-rates since 1911 are as follows (the rates for 1912-1920 are given as they were published year by year, and are not calculated on revised estimates of population in the intercensal period):—

1911	28.4	per 1,000
1912	28.2	..
1913	28.7	..
1914	27.3	..
1915	27.4	..
1916	26.9	..
1917	22.4	..
1918	21.1	..
1919	22.5	..
1920	27.7	..
1921	25.8	..
1922	23.1	..
1923	21.4	..
1924	21.1	..
1925	20.5	..
1926	20.4	..
1927	18.2	..

Comparison of birth-rate with rates for country generally—

	Per 1,000 of population.
England and Wales	16.7
107 County Boroughs and Great Towns (including London)	17.1
155 Other Towns (1921 adjusted populations, 20,000-50,000)	16.4
London	16.1
Birkenhead	18.2

Sex-distribution of births.—Of the 2,879 births, 1,448 were males and 1,431 females; a proportion of 1,011 : 1,000.

Legitimacy.—Of the 2,879 births registered, 122 were illegitimate; a percentage of 4.2.

Births notified during 1927.—During the year 2,995 births were notified in the Borough under the Notification of Births Acts, 1907 and 1915. Of these 116 were still-births, leaving a total of 2,879 live births. This total includes births which occurred in the Birkenhead Maternity Hospital, the Birkenhead Infirmary, and the Birkenhead General Hospital, many of which were transferable to other areas.

The following is an analysis of the above births:—

Births in Public Institutions:—

Maternity Hospital	256	(19 still-births)
Infirmary	224	(14 „)
General Hospital	15	(2 „)
Other births (including those in nursing homes):—		
Notified by doctors	206	(10 still-births)
Notified by midwives	2293	(71 „)
Notified by parents	1	(— „)
	2995	(116 „)

Un-notified births.—The Registrars reported 98 cases of un-notified births. 24 of these were attended by medical practitioners, 68 by both certified midwives and doctors, 4 by the Maternity Hospital staff, 1 by the Infirmary staff, and 1 by the General Hospital staff.

DEATHS.

Death-rate.—1,997 deaths occurred during the year; the total figure includes 142 deaths of Birkenhead residents which occurred outside the Borough, but excludes 198 deaths of non-residents which occurred in the area. This gives a death-rate of 12.6 per 1,000.

Deaths in recent years.—The death-rates since 1911 are as follows (the rates for 1912-1920 are given as they were published year by year, and are not calculated on revised estimates of population in the intercensal period):—

1911	16.0	per 1,000
1912	14.7	„
1913	14.9	„
1914	15.6	„
1915	15.6	„
1916	14.2	„
1917	13.3	„
1918	17.6	„
1919	13.7	„
1920	13.3	„
1921	11.6	„
1922	13.6	„
1923	11.0	„
1924	11.9	„
1925	12.1	„
1926	11.1	„
1927	12.6	„

Seasonal deaths.—The following gives the deaths for each quarter of the years 1926 and 1927.

	No. of deaths	
	1926	1927
First quarter.....	476	683
Second quarter.....	452	449
Third quarter.....	393	383
Fourth quarter.....	432	482
Totals	1753	1997

Sex-distribution of deaths.—Of the total deaths 1,033 were males and 964 females, a proportion of 1,071 : 1,000.

Uncertified deaths.—In 1927, there were no uncertified deaths belonging to the area.

Coroners' inquests.—Coroners' inquests were held regarding 144 deaths—that is, in 7.2 per cent. of the total deaths during the year.

The Coroners' (Amendment) Act, 1926.—This Act came into force on 1st May, 1927. A note regarding the provisions of this Act is appended to Table P 5 (page 25). During the period the Act was in force 11 deaths (0.6 per cent. of the total deaths during the year) were registered without the Coroner holding an inquest.

Causes of death.—From the beginning of 1927 the classification of causes of death previously employed during the years 1920-1926 was abandoned, and the recognised classification contained in the detailed international list was adopted. An analysis on this basis will be found in Tables P 1, P 2, and P 3.

Table P 1 (pages 8 to 19) shows the causes of death in detail, sub-classified according to age.

Table P 2 (pages 20 to 21) is a short list of deaths, prepared by the Registrar-General, sub-classified according to sex and age.

Table P 3 (pages 22 to 23) is a condensed form of Table P 1, sub-classified according to wards.

Infantile mortality.—There were 273 deaths of infants under 1 year old. This corresponds to an infantile mortality rate of 95 per 1,000 births.

There were 27 deaths in illegitimate infants under 1 year old; giving an illegitimate mortality rate of 221 per 1,000.

The causes of infant deaths, and the ages at which death occurred, are shown in Table P 4 (page 24).

The corresponding rates for each year since 1911 are given below:—

1911	136
1912	98
1913	117
1914	122
1915	122
1916	105
1917	95
1918	110
1919	102
1920	102
1921	75
1922	95
1923	62
1924	91
1925	92
1926	85
1927	95

The main causes of infant deaths during the past two years are shown below:—

	No. in 1926	No. in 1927
(a) Pneumonia (all forms)	40	55
Bronchitis	21	12
Whooping cough	5	7
Measles	6	1
(b) Diarrhœa and enteritis	62	59
Premature birth	53	45
(c) All other causes	89	94
	<hr/>	<hr/>
	276	273
	<hr/>	<hr/>

Deaths from tuberculosis.—Tuberculosis was responsible for 10 per cent. of all the deaths recorded in the Borough in 1927. The deaths from the disease were as follows:—

Deaths from tuberculosis of the lungs	155
Deaths from other forms of tuberculosis	45
	<hr/>
Total	200
	<hr/>

This gives a tuberculosis death-rate of 1.26 per 1,000 of the population.

Of the 155 deaths from respiratory tuberculosis during 1927, 147 occurred in individuals between 15 and 65 years old—that is, of a wage-earning age.

This subject is further dealt with in the " Tuberculosis " section of this report.

Deaths from epidemic diseases.—The seven " principal epidemic diseases " caused 89 deaths, as follows:—

Diarrhœa and enteritis (under 2 years)	63
Whooping cough	10
Measles	7
Scarlet fever	1
Diphtheria (including membranous croup)	8
"Fever" (enteric, typhus, and simple continued fever)	0
Smallpox	0

This corresponds to a death-rate from all these diseases of 0.56 per 1,000 of the population.

Deaths from other notifiable infectious diseases.—Pneumonia caused, in its various forms, 211 deaths; puerperal fever caused 0; encephalitis lethargica caused 3; erysipelas caused 5; poliomyelitis caused 1; polioencephalitis caused 1.

Deaths from cancer.—The following table shows the cancer death-rate in Birkenhead as compared with the country generally:—

Year	BIRKENHEAD			ENGLAND AND WALES	
	Population	Number of deaths from cancer in Birkenhead	Rate per 100,000 population	Rate per 100,000 population	
1901	111,377	91	81	}	
1902	113,231	66	58		
1903	115,117	78	68		87
1904	117,034	83	70		
1905	118,982	94	79		
1906	120,964	101	83	}	
1907	122,978	90	73		
1908	125,026	101	80		94
1909	127,108	91	71		
1910	129,227	115	89		
1911	131,377	114	86	}	
1912	135,521	126	92		
1913	135,740	107	70		105
1914	137,906	114	82		
1915	140,291	121	85		
1916	142,622	140	98	}	
1917	144,993	144	99		
1918	147,403	154	104		118
1919	149,853	181	121		
1920	152,345	186	122		
1921	147,800	186	125	121	
1922	149,200	172	115	123	
1923	151,400	179	118	127	
1924	154,100	179	116	130	
1925	155,500	199	129	133	
1926	158,000	204	129	136	
1927	158,500	206	130	137	

Comparison of Birkenhead death-rates with those for country generally.—In Table P 5 (page 25) Birkenhead rates are shewn together with those for the country generally. The latter are provisional figures kindly supplied by the Registrar-General. Non-civilians are included in the figures for England and Wales, but not for other areas.

TABLE P 1.—CONTINUED.

Classi- fication No.	Causes of death	Ages at death																	
		All ages			Under 1 year & over months			Under 5 years & over years			Over subjoined years								
		Tot'l			Tot'l			Tot'l											
		0	3	6	9	1	2	3	4	5	10	15	20	25	35	45	55	65	75	85 & up
40	Gonococcal infection—	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	1. Gonococcal infection (ophthalmia excepted)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
41	2. Gonorrhoeal or purulent ophthalmia.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
42	Purulent infection, septicaemia	3	..	..	..	1	..	..	..	..	..	..	..	..	2	..	..	..	..
	Other infectious diseases—	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	1. Vaccinia .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	2. Other diseases included under 42 .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	II.—General diseases (43-69) not in- cluded in I. (1-42).																		
	Cancer, malignant disease (43-49)—																		
43	Buccal cavity.....	14	..	..	..	..	..	..	..	..	..	..	..	..	3	9	..	..	2
44	Pharynx, oesophagus, stomach, liver & annexa	69	..	..	..	..	..	..	..	..	..	..	..	1	16	16	21	13	1
45	Peritoneum, intestines and rectum	43	..	..	..	..	..	..	..	..	..	..	..	2	7	14	14	6	..
46	Female genital organs	21	..	..	..	..	..	..	..	..	..	..	..	3	6	6	5	1	..
47	Breast.....	15	..	..	..	..	..	..	..	..	..	..	..	1	4	5	3	2	..
48	Skin.....	2	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
49	Other unspecified organs	42	..	..	..	..	..	..	1	..	..	..	..	1	2	5	16	13	1
50	Tumours not returned as malignant (brain and female genital organs excepted) ..	3	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..	..
51	Rheumatic fever	11	..	..	..	..	..	..	..	..	..	..	..	1	2	1	1	1	..
52	Chronic rheumatism, osteo-arthritis, gout—																		
	1. Chronic rheumatism, chronic arthritis.....	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2
	2. Rheumatoid arthritis, osteo-arthritis	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..
	3. Gout .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
53	Scurvy.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
54	Pellagra .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
55	Beri-beri .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
56	Rickets	2	1	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..
57	Diabetes	21	..	..	..	..	..	..	..	..	..	..	..	..	2	3	3	6	3
58	Anaemia, chlorosis—																		
	A. Pernicious anaemia	9	..	..	..	..	..	..	..	..	..	..	..	1	1	1	3	2	..
	B. Other anemias and chlorosis.....	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..

TABLE P 2.

Deaths: causes, sex, and ages.

Causes of death	Sex	Allages	Ages										
			0—	1—	2—	5—	15—	25—	45—	65—	75—		
All causes.....	Male	1034	167	40	20	34	60	133	287	172	121		
	Female	968	105	24	23	31	49	106	239	193	198		
1 Enteric fever	Male	...	...	...	...	...	...	...	...	...	...
	Female	...	...	...	...	...	...	...	...	...	...
2 Smallpox	Male	...	...	...	...	...	...	...	...	...	...
	Female	...	...	...	...	...	...	...	...	...	...
3 Measles	Male	6	1	1	1	1	1	1	1	1	1		
	Female	3	2	1	1	1	1	1	1	1	1		
4 Scarlet fever	Male	1	...	...	...	...	...	...	...	...	...
	Female	...	...	...	...	...	...	...	...	...	...
5 Whooping Cough	Male	7	1	1	1	1	1	1	1	1	1		
	Female	3	1	1	1	1	1	1	1	1	1		
6 Diphtheria	Male	5	1	1	1	1	1	1	1	1	1		
	Female	3	1	1	1	1	1	1	1	1	1		
7 Influenza	Male	33	3	2	...	1	1	4	6	10	7		
	Female	39	1	1	...	1	1	5	15	8	8		
8 Encephalitis lethargica	Male	2	1	1	...	1	1	1	1	1	1		
	Female	3	1	1	...	1	1	1	1	1	1		
9 Meningococcal meningitis	Male	4	1	1	...	1	1	1	1	1	1		
	Female	2	1	1	...	1	1	1	1	1	1		
10 Tuberculosis of respiratory system.....	Male	100	1	1	...	1	1	17	50	29	3		
	Female	58	1	1	...	1	1	13	26	14	1		
11 Other tuberculous diseases	Male	27	3	6	6	5	5	4	2	1	1		
	Female	18	2	5	5	5	5	2	2	1	1		
12 Cancer, malignant disease	Male	88	...	1	...	...	...	2	2	49	26
	Female	124	...	...	...	...	...	1	9	65	30
13 Rheumatic fever	Male	3	...	...	...	...	...	1	1	...	...
	Female	3	...	...	...	...	...	2	2	...	...
14 Diabetes	Male	8	...	...	...	...	...	1	1	3	1
	Female	14	...	...	...	...	...	1	6	4	2
15 Cerebral hæmorrhage, &c	Male	36	...	...	...	...	...	...	3	6	11
	Female	49	...	...	...	...	...	...	1	18	13
16 Heart disease	Male	128	...	...	...	...	...	2	13	52	37
	Female	137	...	...	...	...	...	2	10	40	41

17	Arterio-sclerosis.....	Male	62	...	...	...	...	...	...	1	10	24	27
		Female	67	...	...	...	...	...	...	1	4	20	42
18	Bronchitis	Male	46	2	1	...	...	...	...	2	18	8	9
		Female	49	4	...	...	...	...	...	2	11	14	18
19	Pneumonia (all forms).....	Male	119	36	4	5	...	...	...	9	22	16	6
		Female	89	19	6	3	...	...	...	9	10	15	6
20	Other respiratory diseases	Male	15	1	1	1	...	...	...	4	4	2	1
		Female	4	...	...	...	...	...	...	2	1	...	1
21	Ulcer of stomach or duodenum	Male	16	...	...	...	...	...	...	7	8	1	...
		Female	4	...	...	...	...	...	...	1	3	...	...
22	Diarrhoea, &c.	Male	35	33	2	...	...	...	...	...	...	...	...
		Female	33	27	2	1	...	...	...	2	...	...	...
23	Appendicitis and typhlitis	Male	7	...	1	1	...	...	...	3	1	...	...
		Female	9	...	1	3	...	...	...	2	2	...	...
24	Cirrhosis of liver	Male	2	...	...	...	...	...	...	...	2	...	...
		Female	6	...	...	...	...	...	...	...	5	...	1
25	Acute and chronic nephritis	Male	33	1	...	1	...	...	...	2	18	6	4
		Female	32	...	1	1	...	...	...	5	10	10	5
26	Puerperal sepsis.....	Male	...	...	...	...	...	...	...	...	...	...	...
		Female	2	...	...	...	...	...	...	1	...	...	...
27	Other accidents and diseases of pregnancy and parturition	Male	...	...	...	...	...	...	...	...	...	...	...
		Female	4	...	...	...	...	...	...	3	...	...	...
28	Congenital debility and malformation, premature birth	Male	52	52	...	...	...	...	...	...	...	...	...
		Female	30	30	...	...	...	...	...	...	...	...	...
29	Suicide	Male	7	...	...	...	...	...	...	5	2	...	...
		Female	7	...	...	...	...	...	...	4	3	...	...
30	Other deaths from violence	Male	52	2	3	6	...	...	...	11	13	2	2
		Female	20	2	...	3	...	...	...	3	5	3	2
31	Other defined diseases	Male	140	21	1	6	...	...	...	13	45	23	18
		Female	156	20	2	1	...	...	...	15	26	33	42
32	Causes ill-defined or unknown.....	Male	...	...	...	...	...	...	...	...	...	...	...
		Female	...	...	...	...	...	...	...	...	...	...	...
			2002	272	64	43	65	109	239	526	365	319	
		Totals											

NOTE.—The above Table has been compiled by the Registrar General from statistics in his office. He states that the figures do not relate to deaths occurring but to deaths registered during the calendar year as belonging to the area. Further, the classification of some deaths in respect of which the certifying medical practitioners have given indefinite causes is modified in the light of fuller information obtained from them in response to special enquiries. Thus, when comparing the number of deaths classified locally to the various headings with the numbers classified to the same headings by the Registrar General, this possible source of discrepancy should be borne in mind.

The above Table cannot, therefore, be closely checked against Tables P 1 and P 3 which have been compiled in my department.

TABLE P 3.
Deaths: causes and wards.

Causes of death	Deaths in or belonging to wards at all ages.									Total deaths in Public Institu- in the district	
	Whole Borough	Argyle	Grange	Cleveland	Cloughton	Oxon	Clifton	Egerton	Mersey		Beblington
All causes.....	1997	274	428	376	99	55	294	275	125	71	888
1 Enteric fever .....	...	...	...	...	...	...	...	...	..	...	...
2 Smallpox .....	...	..	...	..	...	...	...	..	..	...	...
3 Measles	7	1	1	..	...	...	4	...	1	...	1
4 Scarlet fever	1	...	1	...	...	...	...	...	...	...	1
5 Whooping cough	10	1	2	4	...	...	1	1	1	...	...
6 Diphtheria..	8	...	2	...	...	...	3	1	...	2	6
7 Influenza	55	6	10	8	7	4	6	8	5	1	4
8 Encephalitis lethargica	3	...	...	2	1	...	...	...	...	...	2
9 Meningococcal meningitis	1	...	...	1	...	...	...	...	...	...	...
10 Tuberculosis of respiratory system	155	24	82	41	12	2	17	13	10	4	68
11 Other tuberculous diseases	45	3	11	13	..	1	9	3	4	1	25
12 Cancer, malignant disease	206	25	45	35	9	7	35	33	12	5	88
13 Rheumatic fever	11	1	2	2	...	1	2	3	...	...	4

14	Diabetes.....	21	3	3	3	5	2	...	2	3	...	6
15	Cerebral hemorrhage, &c.	97	8	21	8	10	4	16	4	7	4	36
16	Heart disease.....	213	22	47	36	9	6	38	6	11	10	79
17	Arterio-sclerosis	99	16	16	13	5	1	15	1	6	6	66
18	Bronchitis	130	22	37	29	1	2	11	2	7	3	49
19	Pneumonia.....	211	34	54	45	4	4	24	4	13	7	85
20	Other respiratory diseases	27	3	6	6	3	1	1	1	3	1	14
21	Ulcer of stomach or duodenum	16	1	6	4	...	...	3	...	1	1	10
22	Diarrhea	69	17	14	17	2	2	6	2	7	1	42
23	Appendicitis and typhlitis	13	1	3	2	...	...	5	...	...	...	12
24	Cirrhosis of liver	7	...	2	1	1	..	2	..	...	..	...
25	Acute and chronic nephritis	71	4	17	14	2	3	13	3	4	4	20
26	Puerperal sepsis.....	...	...	...	...	...	...	...	...	...	...	...
27	Other accidents and diseases of pregnancy and parturition ...	6	1	2	1	...	...	...	2	...	...	8
28	Congenital debility and malformation, premature birth	82	14	15	18	6	1	18	4	4	2	25
29	Suicide	14	6	1	1	...	1	3	1	1	...	3
30	Other deaths from violence....	75	15	12	16	1	1	9	1	8	4	48
31	Other defined diseases	341	46	64	55	21	12	53	12	18	15	185
32	Causes ill-defined or unknown	3	..	2	1	...	...	...	...	...	...	1
Totals		1997	274	428	376	99	55	294	275	125	71	888

NOTE.—All deaths which occurred in institutions are classified in the ward in which the patient resided.

TABLE P 4.

Infant deaths: causes and ages.

Causes of death	Under 1 week	1-2 weeks	2-3 weeks	3-4 weeks	Total under 4 weeks	Over 4 weeks & under 3 months	3-6 months	6-9 months	9-12 months	Total under 1 year
All causes.....	64	16	14	7	101	50	44	42	36	273
Smallpox ..	..	..	..	..	..	..	..	..	..	..
Chickenpox ..	..	..	..	..	..	..	..	..	..	..
Measles .....	..	..	..	..	..	..	..	..	1	1
Scarlet fever .....	..	..	..	..	..	..	..	..	..	..
Whooping cough.....	..	..	..	2	2	..	1	2	2	7
Diphtheria .....	..	..	..	..	..	..	..	..	1	1
Influenza ..	..	..	..	..	..	..	1	2	1	4
Tuberculosis of central nervous system .....	..	..	..	..	..	..	1	..	1	2
Tuberculosis of intestines and peritoneum .....	..	..	..	..	..	..	..	..	1	1
Meningitis (not tuberculous) .....	..	..	..	..	..	..	1	1	1	3
Convulsions	1	1	1	1	4	2	1	..	..	7
Bronchitis (all forms).....	1	..	..	..	1	3	1	5	2	12
Pneumonia (all forms)	2	..	..	1	3	8	8	21	15	55
Diarrhœa and enteritis .....	..	3	4	1	8	20	20	4	7	59
Gastritis	1	..	..	..	1	2	1	..	..	4
Syphilis	1	..	1	..	2	2	1	..	..	5
Ricketts ..	..	..	..	..	..	..	1	..	1	2
Injury at birth	1	1	..	..	2	..	..	..	..	2
Atelectasis	9	..	..	..	9	..	..	..	..	9
Congenital malformations... ..	6	3	1	..	10	2	2	..	1	15
Premature birth	32	5	4	1	42	3	..	..	..	45
Atrophy, debility and marasmus ..	5	..	2	..	7	7	2	2	..	18
Other causes	5	3	1	1	10	1	3	5	2	21
Totals..	64	16	14	7	101	50	44	42	36	273

Net births in the year—

Legitimate

2757

Illegitimate

122

Net deaths in the year—

Legitimate infants

246

Illegitimate infants ...

27

TABLE P 5.
Death-rates: comparison with rest of country.

	Annual death rate per 1000 civilian population								Rate per 1000 births		Percentage of total deaths				
	All causes	Enteric fever	Smallpox	Measles	Scarlet fever	Whooping cough	Diphtheria	Influenza	Violence	Diarrhea and enteritis (under 2 years)	Total deaths under 1 year	Certified by Registered Medical Practitioner	Inquest cases	Certified by Coroner* after P.M. No inquest	Uncertified causes of death
England and Wales	12.3	0.01	0.00	0.09	0.01	0.09	0.07	0.57	0.51	6.3	69	91.7	6.6	0.7	1.0
107 County Boroughs and Great Towns	12.2	0.01	0.00	0.12	0.01	0.10	0.08	0.49	0.46	8.3	71	91.9	6.6	0.9	0.6
including London (census population exceeding 50,000)	11.3	0.01	0.00	0.07	0.01	0.08	0.05	0.58	0.41	5.0	68	92.7	5.8	0.3	1.2
155 Smaller Towns	11.9	0.01	0.00	0.04	0.01	0.12	0.09	0.39	0.51	7.5	59	90.3	7.9	1.8	0.0
(1921 adjusted populations 20,000 to 50,000)	12.6	—	—	0.04	0.006	0.06	0.05	0.35	0.56	21.8	95	92.2	7.2	0.6	—
London															
Birkenhead.....															

* The Coroners (Amendment) Act, 1926, which came into operation on the first May, 1927, provided for the registration of deaths on a certificate of the Coroner after p.m. without inquest. These percentages relate, therefore, to 8 months of the year only.

NOTE 1.—The Registrar General states that a death certified by a Coroner after a post mortem examination made by his direction under section 21 of the Coroners (Amendment) Act, 1926, and in respect of which no inquest is held, should be classified as "certified" irrespective of whether the Coroner is a certified Medical Practitioner or not.

NOTE 2.—As the registration of stillbirths did not come into operation until 1st July, 1927, no stillbirths are included.

LOCAL INDUSTRIES.

OCCUPATIONS.

The staple industries of the district are shipbuilding, ship-repairing and engineering.

Occupations of males and females aged 12 years and over.—A statement setting out the occupations of males and females aged 12 years and over at the time of the 1921 census was given in my annual report for 1923.

UNEMPLOYMENT.

The Minister of Health requests Medical Officers to give in their annual reports an indication of the extent of unemployment and of the amount of poor law relief in their areas.

The returns of unemployment for each month of the year are shown below:—

TABLE O 1.
Unemployment during 1927.

Month	Live register	Increase or decrease in live register	Applicants placed	
			Locally	In other districts
January	6182	Inc. 710	122	14
February	6196	Inc. 14	146	4
March	5056	Dec. 1140	179	41
April	5198	Inc. 142	139	53
May	4795	Dec. 403	197	28
June	5439	Inc. 644	203	43
July	4963	Dec. 476	189	40
August	5677	Inc. 714	197	29
September	5517	Dec. 160	235	65
October	4620	Dec. 897	317	32
November	5993	Inc. 1373	303	34
December	4875	Dec. 1118	426	32

AMOUNT OF POOR LAW RELIEF.

The following is a statement of the sums expended in the relief of the poor in the Birkenhead Union for the year ended 31st March, 1928:—

Union Institution	£10,303	4	6
Union Infirmary	18,684	16	4
Children's Homes	2,464	19	10
Outdoor relief (actual cash payments to recipients of)	46,789	6	4
Outdoor relief (on loan to unemployed)	33,771	12	0
Lunatics in asylums and licensed houses (total cost of maintenance)	29,242	9	11
Persons maintained in other Institutions not under the control of the Guardians	6,389	17	3
	<u>£147,646</u>	<u>6</u>	<u>2</u>

The Birkenhead Union area covers the County Boroughs of Birkenhead and Wallasey, and the parishes of Bidston-cum-Ford and Noctorum. The populations of these three component parts were, in 1921:—

Birkenhead	145,592	(61.3 per cent.)
Wallasey	90,721	(38.2 per cent.)
Bidston and Noctorum ...	1,091	(0.5 per cent.)

WATER SUPPLY, FOOD, AND DRUGS.

THE WATER SUPPLY.

Particulars regarding the water supply of the Borough were given in detail in my annual report for 1921.

Bacteriological examinations. — Arrangements were continued during the year for bacteriological examinations of the Alwen water supply to be carried out in the laboratory in the Medical Officer's Department. The procedure followed was indicated in my annual report for 1923.

During the past year, bacteriological examinations have been carried out in connection with—

52 samples of tap water in Birkenhead.

12 samples of water from Alwen Reservoir, before filtration.

21 samples of water at Alwen, after passing through the filtration apparatus.

THE MILK SUPPLY.

Milk in a pure condition is one of the most valuable foods available for the community; it is regrettable that it is not used in larger quantities. The consumption per head of the population in England is much below that, for example, in the United States.

No doubt it will probably acquire greater popularity in this country as the public gain confidence with regard to its strength and purity. There is a widespread feeling, for which there unfortunately has been ample justification, that the purchaser is liable to be supplied with milk which has been drawn from tuberculous cows, has been watered, or has been exposed to gross contamination in handling and transit.

A steady improvement is being effected in those districts where a policy of unceasing vigilance and rigorous action is maintained by the Public Health Authorities. To pursue such a policy effectively a sustained amount of highly-skilled work is demanded of which the general public hears little. Samples have to be taken at all hours of the day; in the course of transit, at dairies, during delivery to customers. These samples have to be subjected to chemical analysis, to an examination for dirt contamination, and to a bacteriological investigation requiring specialised knowledge and expert technique. When the presence of living tubercle bacilli is demonstrated, the milk must be traced to its source at the distant dairy farm, where the herd

supplying the milk is examined, diseased animals detected and removed, and suspicious animals put under observation.

The questions which the purchaser should keep before him are these:—

(a) Are the *cows* which produce the milk supplied to my family free from tuberculous and other communicable disease?

(b) Is the *farm* from which it comes one where scrupulous cleanliness is practised? or is it of the filthy type still too frequently encountered in some districts?

(c) Is the *shop* where the milk is retailed an up-to-date milk shop, specially adapted for the purpose, where the milk is completely protected from contamination by flies and other infecting agents, or is it a place where all sorts of food-stuffs and other commodities are brought together indiscriminately and carelessly?

(d) Is there *dust or dirt* in the milk? Milk taken from the cow under proper conditions has no dust or dirt in it. Has this milk which I am buying been protected from pollution in the process of milking, and during later handling and in transit?

(e) Is the milk *full strength*, or has it been diluted?

In Birkenhead the arrangements for milk inspection and supervision have during the past few years been continuously developed, so that they will now, it is hoped, compare favourably with those of any other great town in the country. Some idea of the extent and nature of the work carried out will be gathered from the succeeding paragraphs.

Dairy farms.—Milk is supplied to the Borough chiefly from farms in Cheshire, Shropshire, Denbighshire and Flintshire.

There were only 4 cowsheds within the boundaries of the Borough at the end of the year.

Milkshops and the retail sale of milk.—There are 164 registered milk shops in Birkenhead. In addition, the following are registered for retailing milk within the Borough:—74 farmers resident outside Birkenhead, 2 “purveyors” of milk, and the 4 cowsheds within the Borough referred to in the preceding paragraph.

Applications for registration.—During the year 22 applications for registration—Milk and Dairies (Amendment) Act, 1922—have been received from persons desiring to retail milk within the Borough. Of these 20 have been placed on the register. In the remaining 2 cases registration was refused owing to lack of suitable accommodation for the storage and sale of milk in the premises occupied by the applicants.

Removals from register.—In 7 cases purveyors were persuaded to discontinue selling milk, and their names were removed from the register without the necessity of taking formal action.

Sale of “Graded” milk.—Under the Milk (Special Designations) Order, 1923, dealers’ licences for the sale of graded milk are granted

by the Council to suitable applicants. These licences are valid only for the period ending on the 31st December in the year in respect of which they are granted. During the year 8 licences were granted to persons other than producers to retail *certified milk* within the Borough.

3 licences were granted to bottle and sell *Grade A (Tuberculin Tested) Milk*.

3 licences were granted to sell *Grade A (Tuberculin Tested) Milk*.

6 licences were granted to bottle and sell *Grade A Milk*.

3 licences were granted to sell *Grade A Milk*.

1 licence was granted to sell *Pasteurised Milk*.

1 supplementary licence was granted to sell *Grade A Milk*.

The chemical and physical examination of milk.—Samples of milk taken are submitted to chemical and physical examination with a number of different objects in view. The chief of these are—

The estimation of the amount of fat (cream) present.

The estimation of the amount of solids other than fat present.

The detection of the presence of added water.

The detection of the addition of colouring matter or thickening substances.

The detection of the addition of dried or condensed milk, or skimmed or separated milk.

The detection of the presence of preservatives.

The estimation of the quantity of dust or dirt, if any.

A. *Fat and non-fatty solids.*—The average composition of the milk samples taken during the year and submitted to chemical analysis was as follows:—

Fat	3.77%
Non-fatty solids	8.82%

The composition of each sample is indicated in Table F 1 (page 35).

The action taken with regard to samples which were found to be below standard is shown in Table F 6 (page 43).

B. *Colouring matter, etc.*—No proceedings were instituted during the year under Section 4 of the Milk and Dairies (Amendment) Act, 1922 which prohibits the addition of any colouring matter, or water, or any dried or condensed milk, or any fluid reconstituted therefrom, or any skimmed milk or separated milk, to milk intended for sale. (Proceedings were instituted in certain cases under the Sale of Food and Drugs Acts for the addition of water to milk. See Table F 6, page 43).

C. *Preservatives and thickening substances.*—Samples taken under the Public Health (Milk and Cream) Regulations, 1912 and 1917, during the year showed the following results:—

1. *Milk, and cream not sold as preserved cream.*

Article	No. of samples examined for the presence of a preservative (a)	No. in which a preservative was reported to be present, and percentage of preservative found in each sample (b)
Milk	172	Nil.
Cream	10	6 { <ul style="list-style-type: none"> 0.30% 0.42% 0.27% 0.31% 0.29% 0.66%

Nature of preservative in each case in column (b)..... Boric acid.

Action taken under the Regulations The 6 samples in which a preservative was found (Nos. 72, 119 183, 224, 225 and 240) were taken informally. The vendors of these samples were cautioned.

2. *Cream sold as preserved cream.*

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

(1) Correct statement made	2
(2) Statements incorrect	0
Total	2

(3) Percentage of preservative found in each sample.	Percentage stated on statutory label.
0.29	0.4
0.30	0.4

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

(1) Above 35%	2
(2) Below 35%	0
Total	2

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

Sample No. 293 was marked "Thick Rich Cream."

(d) Particulars of each case in which the regulations have not been complied with, and action taken:—

The vendor of Sample 293 was cautioned.

3. *Thickening substances.*

The Public Analyst has not found any evidence of the addition of any thickening substances to the samples of cream or preserved cream which have been analysed.

D. *Sediment.*—In milk as it comes from the udder there is practically no sediment—say not more than one grain per gallon of milk. The presence of a larger quantity of sediment in milk is an indication that dust or dirt has been allowed to gain access to it. Not infrequently this adventitious dirt consists of cow manure.

All samples taken during the year which were found to contain

- (a) 5 grains or more of sediment per gallon; or
- (b) dung in any quantity whatever

were treated in the same manner as adulterated samples, proceedings being instituted unless special circumstances were present.

Out of 172 milk samples taken, 14 were found to contain 5 grains or more of sediment per gallon; and 20 showed the presence of dung.

For details of action taken, see Table F 6, page 43.

The bacteriological examination of milk.—The bacteriological examination of milk falls into three main divisions—

(a) An examination to ascertain the degree of general organismal contamination of the milk. This is recorded in various ways—for example, by stating number of bacteria present in one cubic centimetre (roughly a quarter of a teaspoonful) of the milk.

(b) An examination to ascertain whether bacillus coli (an intestinal organism) is present, and if so, in what quantities. This is primarily useful as an indication of contamination with cow manure.

(c) An examination to ascertain whether living tubercle bacilli are present. For this animal inoculation is necessary.

General organismal content and B. coli contamination.—Examinations for the estimation of the general organismal content of milk, and for the presence of bacillus coli, were begun in the municipal laboratory in 1925, when 12 samples were dealt with. In 1926, 42 were examined, and in 1927, 54 were dealt with.

The examinations have been confined to the “graded” milks for which the following standards have been prescribed by the Ministry of Health:—

Certified milk—Must not contain more than 30,000 organisms per c.c. or any bacillus coli in 1/10 of a c.c.

Grade A (tuberculin tested) and Grade “A” milk—Must not contain more than 200,000 organisms per c.c. or any bacillus coli in 1/100 of a c.c.

Pasteurised milk—Must not contain more than 100,000 organisms per c.c.

The results of the year's investigations are set out in Table F 2, on page 36. The table should be read in conjunction with the above standards.

Contamination with B. Tuberculosis.—At the beginning of 1927 arrangements were made for the bacteriological examination in the municipal laboratory of samples of milk for the presence of living tubercle bacilli. The routine procedure followed is described on page 32.

During the year 33 samples were examined. Of these 7 were found to contain living tubercle bacilli. This is equivalent to 21% of the total samples examined.

All the samples examined were "ordinary" milk, with the exception of one which was a "Grade A" milk. The circumstances which led to the detection of this milk may be related. A calf killed in the Birkenhead Abattoir was found to be affected with extensive tuberculosis. Enquiries were immediately made and it was ascertained that the calf was from a farm outside the Borough from which Grade A milk was supplied to this area. A sample of this milk was obtained from a retailer in Birkenhead and on being submitted to bacteriological examination was found to contain living tubercle bacilli. On following the case up it was found that of 77 cows on the farm, the milk from all of which was being sold as Grade A, 2 were suffering from tuberculosis—1 from tuberculosis of the udder and the other from pulmonary tuberculosis.

Cows producing Grade A milk must, under the provisions of the Milk (Special Designations) Order, 1923, be examined by a veterinary surgeon once in every three months and the producer must show the licensing authority the veterinary surgeon's certificate within seven days after its issue. Where this provision is rigidly observed the public should be able to feel reasonably confident that Grade A milk is free from living tubercle bacilli. The case quoted above, however, indicates the need for the added check supplied by bacteriological examination of the milk itself.

It may be recalled that herds producing Grade A milk are not required to be submitted to the tuberculin test as is the case with herds supplying Grade A (T.T.) milk and Certified milk. There is much to be said for the extension of the compulsory tuberculin test to all herds supplying Grade A milk.

In Table F 3, page 38, a complete statement of the results of bacteriological examination for B. Tuberculosis is set out.

The importance of using every endeavour to obtain a tubercle-free milk supply is now generally recognised by the public. It is known that a very large proportion of the cases of tuberculosis in children is caused by milk from tuberculous cows. If, then, this source of infection is to be eradicated *increased number of milks must be examined by the biological test.*

In the meantime the public must be encouraged to purchase Certified or Grade A (tuberculin tested) milk.

It has been contended by some in defence of tuberculous milk that a small dose of tubercle bacilli may set up immunity in a child and protect it from more serious disease later. This is a fallacious and dangerous contention. It *may* be true that a carefully regulated dose of bacilli which have been killed or treated in some way so as to reduce their virulence may set up some degree of immunity (the question is still an experimental one which research workers are investigating and to which no definite answer is yet available); but the confusion of such a careful and guarded method of inoculation with the administration, at haphazard and in unknown dosage, of virulent tubercle bacilli in dirty milk from diseased animals is evidence of a complete lack of appreciation of the scientific issues involved.

TABLE F 1.
Composition of milk samples taken during 1927.

Date of sample	Identification No. given in quarterly report	Percentage of fat	Percentage of solids not fat	Date of sample	Identification No. given in quarterly report	Percentage of fat	Percentage of solids not fat	Date of sample	Identification No. given in quarterly report	Percentage of fat	Percentage of solids not fat		
Jan. 11	1	4.10	8.84	May 26	166	3.09	8.73	Oct. 9	360	3.35	8.85		
	2	4.45	9.15		167	3.02	9.09		361	3.92	8.94		
	3	3.30	8.98		168	2.37	8.33		362	3.60	8.83		
	4	3.55	9.21		169	3.02	9.20		363	3.60	8.91		
	31	5	4.37	8.81	28	170	2.88	9.06	15	364	4.45	9.49	
		7	3.65	8.93	June 9	171	3.50	8.98	365	3.50	9.00		
		8	3.50	9.23		203	6.10	8.79	366	3.02	8.58		
		20	3.25	9.09	July 6	204	3.92	9.20	367	4.50	9.13		
21		3.45	8.77	205		3.80	9.29	370	3.62	9.11			
22		3.50	8.95	206	2.94	8.29	371	3.82	9.29				
23		2.66	7.05	207	2.96	8.30	372	3.45	9.18				
24		3.32	8.93	208	3.30	8.84	Nov. 3	391	2.34	9.02			
25		4.70	8.58	209	3.24	8.94		392	3.97	8.73			
Feb. 2		26	4.70	8.96	9	210	3.41	8.37	393	3.78	8.96		
	27	3.35	8.66	211		3.38	8.72	394	4.01	8.83			
	28	3.68	9.06	212		3.45	8.71	395	3.83	8.79			
	29	3.62	8.69	27		228	3.20	8.92	396	3.27	9.05		
30	4.30	8.90	229		3.44	8.67	397	3.50	8.96				
4	31	3.87	8.50	Aug. 17	230	3.51	8.60	6	398	4.75	8.03		
	32	2.53	6.46		231	3.02	9.05		399	4.33	9.04		
	17	46	3.43		8.81	232	3.71	8.80	400	3.43	8.45		
		47	3.48		9.01	233	2.98	9.00	401	4.20	8.58		
	48	2.85	8.70		234	3.40	8.94	402	3.35	8.99			
	49	3.70	8.60		249	3.84	8.54	403	4.78	9.35			
	50	4.18	8.91		250	3.27	8.79	8	404	4.40	8.90		
	51	4.08	8.86		251	4.61	7.95		405	4.52	8.62		
	52	3.73	8.65		252	3.25	8.73	406	3.75	8.98			
	Mar. 9	87	4.00		8.50	Sep. 14	311	4.23	9.40	9	407	4.30	8.87
88		3.35	8.75	312	3.75		8.84	12	422	4.73	8.77		
10	89	4.13	8.90	17	313	4.13	9.04	18	430	3.70	9.29		
	90	3.97	8.78		314	3.18	9.20		431	4.35	8.74		
	91	3.27	8.97		315	3.57	8.33	432	3.90	9.12			
	92	3.96	8.99		316	4.25	8.82	433	3.73	8.96			
	93	3.00	8.80		317	3.05	8.95	434	4.23	8.85			
	94	4.20	8.59		318	4.15	8.52	435	3.70	8.87			
	29	96	4.32		8.54	18	319	4.48	9.03	30	436	3.66	8.16
		97	4.52		8.85	320	3.06	8.61	23	438	3.90	8.64	
	98	5.60	8.38		321	3.20	8.80	30	440	4.05	8.94		
	99	4.45	8.64		322	4.75	8.69	30	441	4.20	8.80		
100	4.10	8.68	323	4.10	8.96	30	442	3.50	8.91				
Apr. 6	101	3.52	8.62	22	324	3.28	9.32	Dec. 8	443	4.02	9.16		
	102	3.62	8.78		325	4.15	9.47		460	3.35	8.98		
	103	3.48	8.66		326	4.30	9.37		461	3.92	8.80		
	104	3.30	8.55		27	327	3.75		9.45	462	4.06	8.62	
	105	3.59	8.81			328	4.68		8.74	463	3.18	8.46	
	106	3.28	8.44		329	4.05	9.05		464	3.82	8.88		
	107	3.32	8.44		330	3.20	8.96		465	4.20	8.81		
	29	120	4.60		8.86	29	331		3.62	8.86	13	466	3.70	8.85
121		3.75	9.13	332	3.55		9.07	13	495	4.42	8.77		
122	4.32	8.96	333	3.22	9.00	15	496	3.65	8.93				
123	3.33	8.69	334	4.82	8.74		497	3.85	8.87				
124	3.88	8.82	335	3.55	9.15	498	3.25	8.72					
125	5.25	8.97	336	3.05	8.91	499	3.94	9.23					
126	3.28	8.97	337	3.18	8.48	500	7.70	8.36					
May 26	162	3.10	9.05	30	338	3.38	8.92	501	3.60	8.63			
	163	3.03	8.94		347	4.23	9.37	502	4.85	8.98			
	164	2.91	9.17		Oct. 3	348	4.15	8.90					
165	3.43	8.89	4	349		3.20	7.73						

Average percentage..... Fat, 3.77 ... Solids (not fat), 8.82

TABLE F 2.
Bacteriological examinations of graded milk.

Con- sec. No.	Grade	Tempera- ture on arrival at labora- tory	Age of sample —hours	Number of colonies on plate				Number of bacteria per c.c.	Presence of bacillus coli in tubes																	
				1/10 c.c. 1/100 c.c.			Control		48 hours				3 days				Control									
				1/10 c.c.	1/100 c.c.	Control	1		2	3	1 c.c.	Control	1	2	3	1 c.c.										
1	"Certified"	51°	6	1068	109	11	2	10,680	nil	found	nil	found	found	found	nil	found	nil	found	nil	found	nil	found	nil	found	satisfy.	
2	"Certified"	55°	28	157	28	2	0	1,570	nil	nil	nil	0	1,570	nil	nil	nil	0	1,570	nil	nil	nil	0	1,570	nil	nil	satisfy.
3	"A" (T.T.)	44°	29	311	15	6	6	3,110	nil	nil	nil	6	3,110	nil	nil	nil	6	3,110	nil	nil	nil	6	3,110	nil	nil	satisfy.
4	"A"	44°	28	1359	205	18	5	13,590	nil	nil	nil	5	13,590	found	nil	nil	5	13,590	nil	nil	nil	5	13,590	found	nil	satisfy.
5	"A"	55°	28	153	15	2	0	1,530	nil	nil	nil	0	1,530	nil	nil	nil	0	1,530	nil	nil	nil	0	1,530	nil	nil	satisfy.
6	"Certified"	49°	4	279	12	1	0	2,790	nil	nil	nil	0	2,790	nil	nil	nil	0	2,790	nil	nil	nil	0	2,790	nil	nil	satisfy.
7	"Certified"	47°	4	664	38	5	0	6,640	found	nil	nil	0	6,640	found	nil	nil	0	6,640	found	nil	nil	0	6,640	found	nil	satisfy.
8	"A"	54°	5	572	56	6	0	5,720	nil	nil	nil	0	5,720	nil	nil	nil	0	5,720	nil	nil	nil	0	5,720	nil	nil	satisfy.
9	"A"	52°	4	*O.G.	936	119	0	119,000	found	found	found	0	119,000	found	found	found	0	119,000	found	found	found	0	119,000	found	found	satisfy.
10	"Certified"	47°	28	1262	145	15	1	12,620	nil	nil	nil	1	12,620	nil	nil	nil	1	12,620	nil	nil	nil	1	12,620	nil	nil	satisfy.
11	"Certified"	48°	5	273	6	4	1	2,730	nil	nil	nil	1	2,730	nil	nil	nil	1	2,730	nil	nil	nil	1	2,730	nil	nil	satisfy.
12	"A"	48°	5	186	13	3	3	1,860	nil	nil	nil	3	1,860	nil	nil	nil	3	1,860	nil	nil	nil	3	1,860	nil	nil	satisfy.
13	"A"	53°	5	239	14	1	0	2,390	nil	nil	nil	0	2,390	nil	nil	nil	0	2,390	nil	nil	nil	0	2,390	nil	nil	satisfy.
14	"A"	55°	5	1520	204	21	0	15,200	nil	nil	nil	0	15,200	nil	nil	nil	0	15,200	nil	nil	nil	0	15,200	nil	nil	satisfy.
15	"Certified"	55°	5	1376	122	8	0	13,760	nil	nil	nil	0	13,760	nil	nil	nil	0	13,760	nil	nil	nil	0	13,760	nil	nil	satisfy.
16	"Certified"	49°	28	128	15	0	0	1,280	nil	nil	nil	0	1,280	nil	nil	nil	0	1,280	nil	nil	nil	0	1,280	nil	nil	satisfy.
17	"A"	60°	19	*O.G.	343	20	0	34,300	found	found	found	0	34,300	found	found	found	0	34,300	found	found	found	0	34,300	found	found	satisfy.
18	"A" (T.T.)	55°	5	137	—	0	0	1,370	nil	nil	nil	0	1,370	nil	nil	nil	0	1,370	nil	nil	nil	0	1,370	nil	nil	satisfy.
19	"A"	51°	4	346	40	8	1	3,460	nil	nil	nil	1	3,460	nil	nil	nil	1	3,460	nil	nil	nil	1	3,460	nil	nil	satisfy.
20	"A"	66°	4	653	41	10	1	6,530	nil	nil	nil	1	6,530	nil	nil	nil	1	6,530	nil	nil	nil	1	6,530	nil	nil	satisfy.
21	"A"	59°	4	246	26	5	0	2,460	nil	nil	nil	0	2,460	nil	nil	nil	0	2,460	nil	nil	nil	0	2,460	nil	nil	satisfy.
22	"A"	54°	5	461	46	7	0	4,610	nil	nil	nil	0	4,610	nil	nil	nil	0	4,610	nil	nil	nil	0	4,610	nil	nil	satisfy.
23	"A"	58°	4	372	39	2	0	3,720	nil	nil	nil	0	3,720	nil	nil	nil	0	3,720	nil	nil	nil	0	3,720	nil	nil	satisfy.

TABLE F 3.
Bacteriological examinations of milk for tubercle bacilli.

Consec. No.	Lab. No.	Acid fast bacilli in smears	Cavy injected	Result	Pathological findings and notes	Remarks
1	3	..	P 7	Died	Peritonitis ... ..	...
2	4	..	P 9	Killed	No evidence of tuberculosis...	...
3	5	..	P 57	Died	Sepsis .. .. .	...
4	6	..	P 54	Died	Sepsis .. .. .	...
5	7	..	P 21	Died	Peritonitis .. .. .	...
6	8	..	P 48	Killed	No evidence of tuberculosis...	...
7	9	..	P 28	Killed	No evidence of tuberculosis..	...
8	10	..	P 36	Killed	No evidence of tuberculosis...	...
9	11	..	P 46	Died	No obvious disease ... ..	...
10	12	..	P 30	Killed	No evidence of tuberculosis...	...
11	13	..	P 22	Died	No obvious disease ... ..	...
12	14	..	P 31	Killed	No evidence of tuberculosis..	...
13	15	..	P 35	Killed	No evidence of tuberculosis	...
14	16	..	P 50	Killed	No evidence of tuberculosis .	...
15	17	..	P 41	Killed	No evidence of tuberculosis .	...
16	18	..	P 55	Killed	No evidence of tuberculosis...	...
17	19	..	P 37	Killed	No evidence of tuberculosis...	...
18	20	..	P 56	Killed	No evidence of tuberculosis...	...
19	21	..	P 42	Killed	No evidence of tuberculosis..	...
20	22	..	P 62	Killed	No evidence of tuberculosis...	...
21	23	..	P 67	Killed	No evidence of tuberculosis...	...
22	24	..	P 68	Killed	No evidence of tuberculosis	...
23	25	..	P 69	Died	No evidence of tuberculosis .	...
24	26	..	P 71	Killed	No evidence of tuberculosis...	...
25	27	..	P 61	Died	Septicæmia ... .. .	...
26	28	..	P 64	Killed	No evidence of tuberculosis .	...
27	29	..	P 66	Killed	Definite tuberculosis ... ..	...
28	30	..	P 12	Killed	No evidence of tuberculosis...	...

One cow found tuberculous and dealt with under the Tuberculosis Order 1925

OTHER FOODS.

Abattoirs in Birkenhead.—Particulars regarding these—the abattoir within the Woodside Lairages and the Corporation abattoir at Tranmere—were given in my annual report for 1920.

Food inspection.—The Veterinary Officer reports that during the year there were killed 66,006 oxen, 1,210 calves, 5,891 pigs, 10,913 sheep and lambs, and 64 goats; as set out in Table F 4.

TABLE F 4.
Animals dealt with during 1927.

	Oxen	Calves	Pigs	Sheep & Lambs	Goats	Total
No. of animals remaining over in lairages from 1926 (slaughtered in 1927).....	2125	—	22	1188	—	3335
No. of animals landed from vessels at Birkenhead during the year 1927—						
(a) From Isle of Man	351	—	413	4632	3	5399
(b) From Ireland	199172	—	61713	379565	115	640565
(c) From other places abroad	3605	—	—	—	—	3605
Total.....	205253	—	62148	385385	118	652904
The above animals were dealt with as follows—						
A - Slaughtered in Birkenhead—						
(1) At Woodside lairages	65542	—	1243	310	20	67115
(2) At nos. 4 and 5 sheds	37	—	197	527	44	805
(3) At "Wallasey Stage," B'head ...	40	—	15	20	—	75
B—(1) Removed alive from the district	138419	—	60690	384527	54	583690
(2) Not slaughtered by end of 1927 (still in lairages)	1215	—	3	1	—	1219
Total	205253	—	62148	385385	118	652904
No. of animals slaughtered in Birkenhead not included in the above statement—						
At Municipal Abattoir... ..	387	1210	4436	10056	—	16089
Total animals slaughtered in Birkenhead.....	66006	1210	5891	10913	64	84084

The total number of carcasses seized was:—

At Woodside	318	weighing	123,460 lbs.
At "Wallasey Stage" B'head	51	„	8,479 lbs.
At nos. 4 & 5 Sheds	25	„	2,836 lbs.
At Tranmere Abattoir	50	„	6,562½ lbs.
At shops	nil		nil
At other premises	nil		nil
Total	444	„	141,337½ lbs.

153 of the above carcasses were seized on account of tuberculosis; their aggregate weight being 76,017 lbs. The remainder was seized on account of transit injuries, dropsy, sepsis, etc.

The number of parts of carcasses seized was:—

At Woodside	351	weighing	25,419 lbs.
At "Wallasey Stage," B'head	1	,,	240 lbs.
At nos. 4 & 5 Sheds	1	,,	6 lbs.
At Tranmere Abattoir	43	,,	957½ lbs.
At shops	32	,,	2,047 lbs.
At other premises	nil		nil
			<hr/>
Total	428	,,	28,669½ lbs.
			<hr/>

Of the above, 250 were seized on account of tuberculosis; the aggregate weight being 22,233½ lbs. 16 heads and 67 tongues weighing 588 lbs., were seized on account of actinomycosis and actinobacillosis.

The total weight of offal seized was 264,757¾ lbs.

Other articles of food.—The total weight of articles of food seized at various premises in the Borough was 1,546 lbs. In addition, 2,814 eggs were seized.

There were 2 prosecutions taken against shopkeepers under the Public Health Acts, for having sold unsound food. A penalty of £20 was imposed in each case.

Samples taken under Food and Drugs Acts.—During the year 502 samples were taken. Of these 183 were formal and 319 informal. 172 were samples of milk, already referred to on page 30.

The articles sampled are set out in the following table:—

TABLE F 5.

Samples taken during 1927.

Article	No. samples taken formally	No. samples taken informally	Article	No. samples taken formally	No. samples taken informally
Milk	172	—	Tinned fish	—	4
Separated milk	1	—	Mustard	—	3
Cream	1	9	White pepper	—	7
Preserved cream	—	2	Vinegar	—	1
Condensed milk.....	—	1	Malt vinegar	3	12
Tinned cream	—	1	Meat paste	—	2
Cheese	—	12	Rice	—	2
Cream cheese	—	4	Tapioca.....	—	1
Butter	—	30	Dessicated soup	—	1
Margarine	1	30	Chlorodyne Ju-jubes ..	1	1
Lard	—	16	Epsom salts.....	—	6
Dripping	—	12	Glauber salts	—	3
Sausage	1	18	Liquorice powder	—	3
Self-raising flour.....	1	17	Glycerine	—	5
Baking powder	—	1	Olive oil	—	3
Custard powder	—	2	Castor oil	—	4
Tea	—	2	Cream of tartar	—	4
Cocoa	—	11	Camphorated oil.....	—	1
Coffee	—	12	Turpentine	—	1
Sugar	—	3	Seidlitz powder	—	2
Sryup	—	2	Boracic powder	—	1
Jam	—	6	Boracic Ointment ..	—	5
Canned fruit & vegetables	—	11	Sulphur ointment ..	—	1
Mincedmeat	—	3	Zinc ointment	—	4
Shredded suet	—	5	Almond oil	—	2
Ground almonds	—	6	Paregoric	—	3
Sponge fingers.....	—	7	Tincture of iodine ..	—	2
Sweets	—	2	Whisky	2	5
Fish paste	—	3	Gin	—	3

Samples analysed formally 183

Samples analysed informally 319

Total samples analysed during the year 502

Of the total number of samples analysed

- 37 samples of milk
- 6 samples of cream
- 1 sample of butter
- 2 samples of cream cheese
- 5 samples of malt vinegar
- 3 samples of sausage
- 2 samples of self-raising flour
- 1 sample of tinned sardines in tomato
- 4 samples of whisky
- 2 samples of beef dripping
- 1 sample of white pepper
- 2 samples of chlorodyne ju-jubes

were reported adulterated, and proceedings were taken in respect of:—

- 26 samples of milk
 2 samples of malt vinegar
 1 sample of sausage
 1 sample of whisky
 1 sample of chlorodyne ju-jubes.

With reference to the remaining samples reported adulterated it was decided, after consideration of the circumstances, that it was inadvisable to institute proceedings.

Informal samples.—Suitable action was taken regarding each of the 22 informal samples reported adulterated.

Particulars of the defects found in those samples with regard to which proceedings were taken, and the result of the proceedings, are set out in Table F 6.

The composition of each sample of milk analysed during the year will be found in Table F 1.

TABLE F 6.

Samples with reference to which proceedings were taken.
 Nature of adulteration and result of proceedings.

Date	Article	No. of sample	Adulteration	Fine inflicted
Jan. 31	Milk	23	17% added water.....	£2
31	Milk	24	Sediment 9 grs. per gal. dung present	£2
Feb. 2	Milk	26	Sediment 10 grs. per gal. dung present	£2
4	Milk	32	24% added water.....	£10
11	Sausage.....	33	Deficient 5% meat	Dismissed
17	Milk	48	5% Deficient in fat	£2
Mar. 9	Milk	88	Sediment 6 grs. per gal.	£1
11	Wild cherry & chloro. jujube	95	no dung present Contained no chlorodyne	£5
Apr. 6	Milk	102	Sediment 6 grs. per gal. dung present	£6
6	Milk	103	Sediment 4 grs. per gal. dung present	Withdrawn
6	Milk	104	Sediment 4 grs. per gal. dung present	Withdrawn
6	Milk	105	Sediment 4 grs. per gal. dung present	Withdrawn
6	Milk	106	Sediment 5 grs. per gal. dung present	Withdrawn
6	Milk	107	Sediment 4 grs. per gal. dung present	Withdrawn
May 26	Milk	164	3% deficient in fat	Withdrawn
26	Milk	168	20% deficient in fat and 2% added water.....	£6 10/-
31	Milk	170	4% deficient in fat	Dismissed
July 6	Milk	206	2% added water	Withdrawn
6	Milk	207	2% added water	Withdrawn
9	Milk	210	2% added water	10/- & £2/0/6 costs
Sept. 22	Milk	325	Sediment 4 grs per gal. dung present	£1 and 10/6 costs
22	Milk	326	Sediment 4 grs. per gal. dung present	£1 and 10/6 costs
30	Milk	347	Sediment 8 grs. per gal. dung present	10/- & £5/2/6 costs
Oct. 4	Milk	349	9% added water. Sediment 6 grains per gallon, dung present.....	£4 & £1/11/6 costs
11	Whisky.....	369	9.4% added water	£2 and 10/6 costs
15	Milk	370	Sediment 5 grs. per gal. dung present	£1 & £1/11/6 costs
Nov. 9	Milk	407	Sediment 8 grs. per gal. dung present	£2 & £1/11/6 costs
18	Milk	436	4% added water	10/- & £1/11/6 costs
25	Malt vinegar...	439	Artificial vinegar.....	10/- & £1/11/6 costs
Dec. 8	Malt vinegar .	467	Artificial vinegar.....	4/- & £1/11/6 costs
13	Milk	495	Sediment 4 grs. per gal. dung present	10/- & £1/11/6 costs

It will be noticed from the foregoing table that proceedings have been instituted in 15 instances for the presence of dirt in milk.

Samples Nos. 102-107 were all taken from one producer, after a complaint had been received from a purveyor that he was receiving dirty milk, and the magistrates decided to inflict a fine of £1 in each case. The defending solicitor asked that the fines should collectively be charged to one case, and the magistrates concurred if the prosecutor would not object; no objection was raised, and it is therefore gratifying to be able to report that fines were inflicted in each case where proceedings were instituted.

In 9 cases the vendors of dirty milk were warned that proceedings would be instituted if some improvement was not effected with regard to the dirt content of the milk.

TUBERCULOSIS.

ADMINISTRATIVE ARRANGEMENTS.

The arrangements made by the Birkenhead Corporation for dealing with tuberculosis in the area include

(a) The provision of a dispensary or clinic, opened in 1913. (This clinic is used on one half-day each week in connection with cases from the area of the administrative county of Chester.)

(b) The provision of garden shelters for suitable cases at a small rent.

(c) The retention since August, 1914, of twelve beds at Leasowe Hospital for cases of surgical tuberculosis in children.

(d) A joint arrangement with the Cheshire County Council, and the Councils of the County Boroughs of Wallasey, Chester, Stockport, and Stoke-on-Trent, for the provision of a sanatorium at Burntwood.

(e) The provision of a residential institution at Thingwall, Cheshire.

Staff.—The medical and health visiting staff for tuberculosis at the end of 1927 was as set out in the annual report for 1921. The clinical work at Thingwall Sanatorium and at the Tuberculosis clinic has been carried out by Dr. Mason Leete and Dr. Foster.

The Corkhill Fund.—Under the will of the late Mr. John Lloyd Corkhill, of Oxtou, a sum of money was provided for the assistance of persons suffering from consumption. By arrangement with the trustees, persons applying for help from the charity are passed through the municipal clinic for classification; and the trustees have been largely guided by the recommendations of the medical staff of the clinic.

PREVALENCE OF, AND MORTALITY FROM, TUBERCULOSIS.

Notifications.—The total number of primary cases of tuberculosis notified during 1927 was 359—246 respiratory and 113 non-respiratory. An analysis of these cases with reference to age and sex will be found in Table T 1 (page 52).

Mortality.—The total number of deaths, certified as due to tuberculosis, of patients who had previously been notified as suffering from the disease was 176—140 respiratory and 26 non-respiratory.

The total number of deaths, certified as due to tuberculosis, of patients who had *not* previously been notified as suffering from tuberculosis was 24—15 respiratory and 9 non-respiratory.

Adding these together, the total number of deaths certified as due to tuberculosis was as follows:—

Respiratory	155
Non-respiratory	45
	200

An analysis of the tuberculosis mortality for the past thirteen years will be found in Table T 2 (page 52).

Number of known cases.—After making deductions for patients who had died during the year, or who had permanently left the district, or whose names have been taken off the register as provisionally cured, the total number of known cases of tuberculosis in Birkenhead at the end of 1927 was as follows:—

	Insured persons		Dependents of insured person	Neither insured persons nor dependents	Total
	Ex-service men	Others			
Respiratory					
Male	38	487	139	35	699
Female ...	—	209	118	365	692
Non-respiratory					
Male	4	49	290	—	343
Female ...	—	59	254	33	346
Total... ..					
Male	42	536	429	35	1042
Female ...	—	268	372	398	1038
Total	42	804	801	433	2080

A revision of the cases of tuberculosis on the register is carried out each year, with a view to seeing that, so far as is practicable, only the names of patients still suffering from tuberculosis, and resident in Birkenhead, are kept on the roll. In connection with the revision the following procedure is observed:—

- (1) *Non-respiratory tuberculosis.* Cases of non-respiratory or surgical tuberculosis are struck off the register as cured when complete arrest of the disease has been maintained for three years.
- (2) *Respiratory tuberculosis.*
 - (a) *Patients who have probably been wrongly notified as tuberculous.*
If the conclusion is come to that a notified case is not, and probably never was, one of active tuberculosis, the name is crossed off the register at the time of the annual revision after obtaining, if possible, the assent of the notifying practitioner.
 - (b) *Patients diagnosed on good evidence as suffering from respiratory tuberculosis, who at a later stage appear to have been cured.*
Such cases are not removed from the register until at least five complete calendar years have elapsed since the date of notification, and three complete calendar years after the disappearance of all symptoms.

Of the 155 patients who died from respiratory tuberculosis during 1927, those who had been notified

over four years numbered ...	17 (11.0% of total)
under " " " " ...	4 (2.6 ")
" three years " " ...	12 (7.8 ")
" two years " " ...	16 (10.3 ")
" one year " " ...	23 (14.8 ")
" six months " " ...	10 (6.5 ")
" three months " " ...	23 (14.8 ")
" one months " " ...	17 (11.0 ")
" one week " " ...	18 (11.6 ")
and those who had not been notified numbered	15 (9.6 ")

Thus only 53% of these cases were notified to this department three months or more before death.

Of the 45 patients who died from non-respiratory tuberculosis during 1927 those who had been notified

over three years numbered ...	2 (4.4% of total)
under three years " " ...	4 (8.9 ")
" one year " " ...	2 (4.4 ")
" three months " " ...	2 (4.4 ")
" one month " " ...	7 (15.6 ")
" one week " " ...	19 (42.2 ")
and those who had not been notified numbered	9 (20.0 ")

3 persons previously notified as suffering from tuberculosis died from other causes. These deaths were certified as being due to:—

- Suicide (burns)
- Suicide (poisoning)
- Gastro-enteritis

CASES DEALT WITH THROUGH THE TUBERCULOSIS CLINIC.

Attendances of patients at the clinic.—During the year 1,731 examinations were made. Of these 486 were *first* examinations (*i.e.*, examinations of patients who had not been seen previously at the clinic). In addition to attendances made for the purpose of medical examination, 956 other attendances were made by patients for weighing, interview, advice or certification, and by patients' relatives in connection with questions arising as to treatment, removal, home conditions, etc.

Examination of patients who were notified for the first time during 1927.—Of the 359 new patients notified in 1927, 184 were examined at the clinic during the year. The remaining 175 were not referred to, did not attend at, or were previously examined at, the clinic.

Classification of new cases.—The 486 new patients who attended during the year were classified as follows:—

		*Adults	Children	Total
Classed as suffering from respiratory tuberculosis	Males ...	79	3	82
	Females	49	8	57
Classed as suffering from other forms tuberculosis	Males ...	3	19	22
	Females	7	30	37
Classed as non-tuberculous	Males ...	52	58	110
	Females	42	49	91
Classed as "suspect"	Males ...	20	21	41
	Females	31	15	46
Total...	Males	154	101	255
	Females	129	102	231
Total.....		283	203	486

* All patients of fifteen years and upwards are classed as adults.

Pensions cases.—Included in the 634 new cases were 2 patients examined for pensions purposes, with the following results:—

Found to be free from active tuberculosis 2

In addition to the above, 118 re-examinations were made for pensions purposes.

During the year the following reports were made in connection with the examination at the tuberculosis clinic (or at their own homes) of ex-servicemen:—

War Pensions Committee.	M.P.M.S. D. 28	36 T.O.	M.P.M.S. D. 122	Total
Birkenhead	*82	2	—	84
Liverpool	—	—	11	11
Total	82	2	11	95

* Includes 15 visits paid to pensioners' homes.

Examination of contacts.—398 persons who had been in close contact with known cases of tuberculosis were examined either at the clinic or at their homes, and were classified as follows:—

		*Adults	Children	Total
Classed as suffering from respiratory tuberculosis	Males ...	—	2	2
	Females	2	1	3
Classed as suffering from other form of tuberculosis	Males ...	—	2	2
	Females	—	—	—
Classed as non-tuberculous.....	Males ..	16	159	175
	Females	43	152	195
Classed as "suspect"	Males ..	1	6	7
	Females	8	6	14
Total...	Males ...	17	169	186
	Females	53	159	212
Total.....		70	328	398

* All patients of fifteen years and upwards are classed as adults.

HOME VISITING; DISINFECTION; COMPULSORY TREATMENT; ETC.

During the year the health nurses paid 373 first visits and 2,286 re-visits to the homes of patients.

The number of houses disinfected after death or removal of patients was 142.

Spitting flasks were provided free of charge to 11 patients.

The compulsory removal to hospital for a period not exceeding 3 months of a person suffering from pulmonary tuberculosis in an infectious state and whose condition is a danger to other members of the house is provided for by the Public Health Act, 1925 (Sec. 62).

No action was taken in Birkenhead under this Section during the year.

The power to prevent a person suffering from tuberculosis of the respiratory tract from entering upon any employment or occupation in connection with a dairy which would involve the milking of cows, the treatment of milk, or the handling of vessels used for containing milk, is given to a Local Authority under the Public Health (Prevention of Tuberculosis) Regulations, 1925.

No action was taken under these Regulations in Birkenhead during the year.

THINGWALL SANATORIUM.

Patients dealt with.—Thingwall is now devoted to the treatment of children only. At the commencement of the year there were 34 patients in the Sanatorium. There were 34 admissions during the year. These were classified as follows:—

Tuberculosis of bones and joints	4
,, abdominal glands or peritoneum	10
,, cervical and other glands	5
,, lungs	8
,, skin	1
,, meninges	1
For observation and diagnosis	5

36 patients were discharged and 1 died; the classification on discharge may be summarised as follows:—

Disease quiescent	27
Much improved	1
Improved	1
No material improvement	1
Found after observation not to be suffering from tuberculosis	6

There were 31 patients under treatment at the end of the year.

Artificial sunlight. — The only development in the treatment resources of Thingwall Sanatorium during the year has been the use of artificial sunlight. A carbon arc lamp is used, and exposures are given to most patients during the spring, late autumn, and winter months. Patients are treated twice or thrice weekly, and the length of exposure varies from 2 minutes to half an hour, depending on the nature of the case and the type of carbon used.

Artificial sunlight has been hailed as the panacea for all mortal ailments, and has been advertised and exploited commercially to an absurd extent. While it is a very useful adjunct to the treatment of and, in some cases, a cure for certain diseases, there is no justification for its indiscriminate employment. In some cases it can do actual harm; it has been found at Thingwall, for example, that it is injurious to cases with active or advancing tuberculosis. Similar results have been obtained by other observers. Cases of pulmonary tuberculosis, with the exception of pleurisy cases, do not do well with this type of treatment, and, in some patients, an aggravation of the disease is caused.

On the other hand, tuberculosis of the glands, abdomen, bones and joints, and skin, are benefited, provided there are no active foci. Rickets and certain skin diseases improve rapidly under treatment.

On the whole our experience has been that artificial sunlight, judiciously and carefully employed, has proved its worth. But it must not be thought to compare in efficacy with natural sunlight.

Average duration of stay.—For the patients discharged during the year the average length of stay in the sanatorium was 45 weeks. This is a considerable increase as compared with previous years; and is associated with a definite increase in the number of cases discharged with disease quiescent.

Garden, etc.—There was a marked increase in garden produce this year. The currant bushes and fruit plants yielded good results.

CHESHIRE JOINT SANATORIUM.

The Cheshire Joint Sanatorium was opened on the 6th November, 1923, for 50% of the approved bed accommodation.

The approved accommodation for Birkenhead cases (32 beds) is now available.

Patients dealt with.—At the beginning of the year 27 Birkenhead patients were under treatment. During the year 40 Birkenhead patients were admitted, 35 were discharged, and 5 died. 27 patients remained under treatment at the end of the year.

	Men	Women	Children (under 15)	Total
In Sanatorium January 1, 1927	14	13	—	27
Admitted during year.....	22	18	—	40
Discharged or left Sanatorium during year	16	19	—	35
Died in Sanatorium	4	1	—	5
In Sanatorium December 31, 1927	16	11	—	27

LEASOWE HOSPITAL.

The twelve beds reserved by the Corporation at Leasowe Hospital for cases of *surgical tuberculosis* among Birkenhead residents have been in occupation throughout the year.

There were 12 cases in hospital at the beginning of the year; 9 new cases have been admitted during the year, and 9 have been discharged or died; leaving 12 patients in hospital at the end of December.

The localisation of the disease in the 21 patients under treatment during the year was as follows:—

Tuberculosis of spine	9
" hip	6
" knee	2
" elbow	1
" peritoneum	1
" finger	1
" face	1
	—
	21
	—

The 9 cases discharged or died were as follows:—

Tuberculosis of hip	1	quiescent
" knee	2	quiescent
" face	1	quiescent
" peritoneum	1	quiescent
" elbow	1	quiescent
" spine	3	1 died; 2 quiescent
	—	
	9	
	—	

TABLE T 1.

New cases notified for first time during the year.

PRIMARY NOTIFICATIONS												
Age periods.....	0-1	1-5	5-10	10-15	15-20	20-25	25-35	35-45	45-55	55-65	65 and up	Total
Respiratory—Males	—	2	5	2	9	11	32	44	38	8	—	151
Females	—	2	4	5	10	17	25	16	11	2	3	95
Non-respiratory—Males	5	22	14	8	7	2	3	1	1	1	—	64
Females	1	20	12	5	3	5	3	—	—	—	—	49
Totals.....	6	46	35	20	29	35	63	61	50	11	3	359

TABLE T 2.

Deaths from tuberculosis during the past thirteen years.

Year	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927
Deaths from tuberculosis of the lungs—													
Number	173	177	172	167	146	116	154	141	109	136	123	122	155
Rate per 1000	1.23	1.24	1.18	1.13	0.97	0.76	1.04	0.94	0.72	0.88	0.79	0.77	0.98
A Males—													
Number	105	104	89	97	73	55	68	77	67	75	61	68	97
Rate	0.74	0.72	0.61	0.65	0.48	0.36	0.46	0.51	0.44	0.48	0.39	0.43	0.61
B Females—													
Number.....	68	73	83	70	73	61	86	64	42	61	62	54	58
Rate	0.48	0.51	0.57	0.47	0.48	0.40	0.58	0.42	0.28	0.40	0.39	0.34	0.37
Deaths from other forms of tuberculosis—													
Number	67	61	69	66	38	56	40	50	43	51	35	39	45
Rate per 1000	0.47	0.42	0.46	0.44	0.25	0.36	0.27	0.32	0.28	0.33	0.22	0.24	0.28
A Males (all ages)													
Number	44	36	36	40	24	36	21	25	21	25	17	18	28
Rate	0.31	0.25	0.24	0.27	0.16	0.23	0.14	0.16	0.14	0.16	0.10	0.11	0.18
B Females (all ages)													
Number	23	25	33	26	14	20	19	25	22	26	18	21	17
Rate	0.16	0.17	0.22	0.17	0.09	0.13	0.13	0.16	0.14	0.17	0.11	0.13	0.10
C Children (un. 5 yrs)													
Number	42	44	44	36	22	26	17	21	20	26	22	24	22
Rate	0.29	0.30	0.30	0.24	0.14	0.17	0.11	0.15	0.13	0.17	0.13	0.15	0.13
Deaths from tuberculosis (all forms)—													
Number	240	238	241	233	184	172	194	191	152	187	158	161	200
Rate per 1000	1.70	1.66	1.66	1.58	1.23	1.13	1.31	1.28	1.00	1.21	1.15	1.02	1.26
<i>Rate per 1000</i> <i>England & Wales</i>	1.55	1.62	1.80	1.92	1.26	1.13	1.12	1.12	1.00	1.06	1.03	0.96	0.97

VENEREAL DISEASES.

ADMINISTRATIVE ARRANGEMENTS.

The diagnosis and treatment of cases of venereal disease have been carried on at the municipal clinic at the Birkenhead General Hospital for the past ten years. Since 1923 the arrangements have been as set out in the agreement of that year.

At this clinic during the past year Dr. Foster, assisted by Dr. Anderson, has dealt with male patients, and Dr. Deacon, assisted by Dr. Williams, with female patients.

The total number of attendances at the clinic this year showed an increase of 1,218, and the number of new cases an increase of 38.

Of the 575 new cases, 393 were residents of Birkenhead, 41 were from Cheshire County, and 63 from India.

In seaport towns such as Birkenhead the number of new cases tends to rise or fall with the increase or decrease of shipping. The Board of Trade's returns showed an upward tendency in 1927, and in the V.D. returns a corresponding increase was recorded, in spite of a fall in the number of local cases.

No new developments in the treatment of any of the forms of venereal diseases were introduced during the year.

A special clinic for children was opened at No. 9, Hamilton Square, on 4th October, 1926. Dr. Deacon was in charge, during the past year, of this clinic.

GENERAL NOTES.

Cases dealt with.—(a) General Hospital clinic. During the year 1,106 persons, comprising 764 males and 342 females, were dealt with at the clinic as out-patients.

The total attendances of out-patients was 11,684; the number of in-patient days was 367.

New patients numbered 394 males and 181 females; of these 182 were non-residents of Birkenhead. As is usual in seaports, sailors of many nationalities were treated at the clinic. Natives of Norway, Peru, Japan, Russia, Esthonia, Sweden, Denmark, India, and U.S.A. attended during the year. Residents of Cheshire county accounted for 41 of the 182.

(b) Hamilton Square clinic.—During the year 115 children (65 males and 50 females) were dealt with at the clinic as out-patients, the total attendances made being 841.

The new cases seen numbered 108, and were diagnosed as follows—

Syphilis (congenital in all cases)	62
Gonorrhœa	1
No venereal disease	45

Syphilis.—The arsenobenzene and bismuth preparations were chiefly used, as in previous years.

Gonorrhœa.—There have not been any fresh developments in the treatment of this disease.

Notes regarding special cases.—There was one case of nitritoid crisis after injection of arsenobenzene; the patient, in spite of warning, had unfortunately taken alcohol before attending the clinic. He made a speedy recovery and required only one night's attention in the ward.

General observations.—As compared with 1926 there has been an increase of almost 100% in the number of new cases seen at the clinic of females suffering from gonorrhœa; a most satisfactory feature, as the number of females suffering from this complaint who make no effort to get treatment is known to be very large. This is partly due to the fact that gonorrhœa does not cause the same intense pain and discomfort to the female as it does to the male; and in some cases the woman may be unaware that she is suffering from the disease. One woman was known last year to have infected three men in the course of ten days.

The Ministry of Health's Form V 44 has again proved of great value, especially in the treatment of seamen.

Bacteriological work.—(a) At the clinics 316 smears were examined for the presence of gonococci, 36 specimens were examined for the presence of spirochætes, and 34 were examined for other organisms.

(b) At the University of Liverpool, Professor Beattie examined 1,138 specimens, 634 of these being sent from the Birkenhead General Hospital clinic, 117 from the Hamilton Square clinic, and 387 from private medical practitioners. Of the specimens sent, 1,119 were for the Wassermann reaction and 19 for the detection of gonococci.

Treatment of Birkenhead patients carried out at other treatment centres.—So far as has been ascertained from official returns which have been received from other areas, Birkenhead patients attended other treatment centres as shown in Table V 3.

Issue of arsenobenzene compounds.—Arsenobenzene compounds were issued during the year by the Medical Officer of Health

- to the Medical Officers of the treatment centres at the General Hospital and at No. 9, Hamilton Square
- to the Medical Officer, Birkenhead Union Infirmary
- to three approved local practitioners.

TABLE V I.

Statement showing the services rendered at the Venereal Diseases Clinic at the Birkenhead General Hospital during the year, classified according to the diseases dealt with.

	Syphilis		Soft chancre		Gonorrhœa		Conditions other than venereal		Total	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1. Number of cases which—										
(a) at the beginning of the year under report were under treatment or observation for.....	210	132	4	—	152	28	—	—	366	160
(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 ...	3	1	—	—	1	—	—	—	4	1
Total—Items 1 (a) and 1 (b) ...	213	133	4	—	153	28	—	—	370	161
2 (a) Number of cases dealt with at the treatment centre during the year for the first time	119	94	17	—	146	48	112	39	394	181
Total—Items 1 (a), 1 (b) and 2 (a)	332	227	21	—	299	76	112	39	764	342
2 (b) Number of cases included in item 2 (a) known to have received previous treatment at other centres for the same infection	12	1	3	—	10	1	—	—	25	2
3. Number of persons who ceased to attend the out-patient clinic										
(a) before completing the first course of treatment for	19	23	1	—	16	17	—	—	36	40
(b) after one or more courses, but before completion of treatment for	5	4	—	—	—	—	—	—	5	4
(c) after completion of treatment, but before final tests as to cure, of	5	3	—	—	21	1	—	—	26	4
4. Number of persons transferred to other treatment centres after treatment for.....	49	2	9	—	40	2	—	—	98	4
5. Number of persons discharged from the out-patient clinic after completion of treatment and observation for	8	—	4	—	26	—	—	—	38	—
6. Number of persons who, on the 1st January, 1928, were under treatment or observation for ...	246	195	7	—	196	56	—	—	449	251
Total—Items 3, 4, 5 and 6	332	227	21	—	299	76	—	—	652	303
7. Out-patient attendances—										
(a) For individual attention by the Medical Officer	2682	1581	153	—	1683	785	313	105	4831	2471
(b) For intermediate treatment— <i>e.g.</i> , irrigations, dressings, &c..	36	—	15	—	4018	311	2	—	4071	311
Total attendances	2718	1581	168	—	6701	1096	315	105	8902	2782
8. Aggregate number of "in-patient days" of treatment given to persons who were suffering from	49	144	51	—	72	51	—	—	172	195
9. Examinations of pathological material—										
(a) Specimens which were examined at, and by the medical officer of, the treatment centre					36	315	3	—		
(b) Specimens from persons attending at the treatment centre, which were sent for examination to an approved laboratory ...					—	—	—	—	634	

TABLE V 3.

Statement showing particulars of Birkenhead cases treated at Venereal Diseases Clinics in other areas.

Name of town	No. of patients	Disease	Attendances at out-patient clinic	No. of in-patient days	Doses of arsenobenzine compounds given in		
					Out-patient clinic	In-patient department	
Liverpool (David Lewis Northern Hos.)	8	Syphilis	3	539	—	162	—
		Gonorrhœa	4				
		Conditions other than venereal	1				
(Stanley Hos.)	1	Gonorrhœa	1	2	—	—	—
(Royal Infirm.)	30	Syphilis	15	443	—	190	—
		Gonorrhœa	8				
		Conditions other than venereal	7				
(Seamen's Dispensary)	24	Syphilis	5	1111	—	50	—
		Soft chancre	1				
		Gonorrhœa	18				
(Royal Southern Hospital)	4	Syphilis	2	137	20	16	—
		Gonorrhœa	2				
Greenwich	4	Syphilis	3	12	24	—	5
		Conditions other than venereal	1				
South Shields ...	1	Gonorrhœa	1	14	—	—	—

OTHER INFECTIOUS DISEASES.

INFECTIOUS DISEASES WHICH ARE NOTIFIABLE.

The infectious diseases which (in addition to tuberculosis, already dealt with) were compulsorily notifiable to the Medical Officer of Health at any time during the past year are set out in Tables I 1 and I 2 below.

TABLE I 1.

Infectious diseases other than tuberculosis notified during 1927;
showing seasonal incidence.

Disease	Jan.	Feb.	Mar.	Apl.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Smallpox	—	—	—	—	—	—	—	—	—	—	—	—	—
Scarlatina	14	13	18	23	23	21	18	20	26	36	19	26	257
Diphtheria and membra- nous croup	21	14	8	13	9	13	10	7	3	21	25	22	166
Erysipelas	13	10	7	4	2	2	4	5	1	7	6	7	68
Typhus fever	—	—	—	—	—	—	—	—	—	—	—	—	—
Typhoid fever	1	1	1	—	—	1	1	—	—	—	—	—	5
Continued fever.....	—	—	—	—	—	—	—	—	—	—	—	—	—
Relapsing fever	—	—	—	—	—	—	—	—	—	—	—	—	—
Cerebro-spinal meningitis	—	2	1	—	1	—	1	—	—	—	—	—	5
Encephalitis lethargica (acute).....	—	—	—	—	1	—	—	1	1	1	—	3	7
Polio-encephalitis (acute)	—	—	—	—	—	—	—	—	—	—	—	—	—
Poliomyelitis (acute) ...	—	—	—	—	—	—	—	—	—	1	—	—	1
Puerperal pyrexia	1	2	—	6	3	1	1	1	—	1	4	1	21
Puerperal fever	3	—	1	3	1	—	—	—	5	1	1	—	15
Ophthalmia neonatorum	1	4	—	2	4	5	2	3	1	2	2	3	29
Cholera	—	—	—	—	—	—	—	—	—	—	—	—	—
Pneumonia	43	68	87	25	18	42	30	16	23	36	37	42	467
Malaria	—	—	—	—	—	—	2	—	—	—	—	—	2
Dysentery	—	1	—	—	—	—	—	1	—	—	—	—	2
Trench fever	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	97	115	123	76	62	85	69	54	60	106	94	104	1045

TABLE I 2.

Infectious diseases other than tuberculosis notified during 1927;
showing ages.

Disease	un.d. 1 yr.	1-2 yrs.	2-3 yrs.	3-4 yrs.	4-5 yrs.	5-10 yrs.	10-15 yrs.	15-20 yrs.	20-35 yrs.	35-45 yrs.	45-65 yrs.	65 yrs. up	Total
Smallpox	—	—	—	—	—	—	—	—	—	—	—	—	—
Scarlatina	—	3	9	19	19	115	52	17	18	4	1	—	257
Diphtheria and membra- nous croup	2	11	10	12	11	56	35	5	20	2	2	—	166
Erysipelas	3	—	1	—	—	4	2	4	10	18	20	6	68
Typhus fever	—	—	—	—	—	—	—	—	—	—	—	—	—
Typhoid fever	—	—	—	—	—	—	—	1	2	—	2	—	5
Continued fever.....	—	—	—	—	—	—	—	—	—	—	—	—	—
Relapsing fever	—	—	—	—	—	—	—	—	—	—	—	—	—
Cerebro-spinal meningitis	—	—	—	1	—	2	—	1	1	—	—	—	5
Encephalitis lethargica (acute).....	—	1	—	—	—	—	—	3	2	—	1	—	7
Polio-encephalitis (acute)	—	—	—	—	—	—	—	—	—	—	—	—	—
Poliomyelitis (acute).. ...	—	—	—	—	—	1	—	—	—	—	—	—	1
Puerperal pyrexia	—	—	—	—	—	—	—	—	19	2	—	—	21
Puerperal fever	—	—	—	—	—	—	—	—	11	4	—	—	15
Ophthalmia neonatorum	29	—	—	—	—	—	—	—	—	—	—	—	29
Cholera	—	—	—	—	—	—	—	—	—	—	—	—	—
Pneumonia.....	54	67	26	26	24	56	29	25	43	35	45	37	467
Malaria	—	—	—	—	—	—	—	—	—	—	2	—	2
Dysentery	—	—	—	—	—	—	—	—	—	2	—	—	2
Trench fever	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	88	82	46	58	54	234	118	56	126	67	73	43	1045

Case-rates of certain diseases.—The case-rates of certain diseases for Birkenhead, and for England and Wales, per 1,000 living, are set out below:—

	Case-rate per 1,000 living.	
	Birkenhead	England and Wales
Smallpox	—	0.38
Scarlet fever	1.63	2.16
Diphtheria	1.05	1.33
Enteric fever	0.03	0.09
Puerperal pyrexia	0.13	0.14
Puerperal fever	0.09	0.05
Erysipelas	0.43	0.38

Encephalitis lethargica.—7 cases were notified during the year. Of these 4 cases were treated in general hospitals and 3 were treated at home. 2 cases recovered and 5 cases died (M. 13 months and F. 18 years died at home, and M. 18 years and F. 31 and 15 years died at a general hospital).

The annual figures relating to notification of this disease are as follows:—

1919	4
1920	2
1921	3
1922	3
1923	14
1924	12
1925	13
1926	7
1927	7

Cerebro-spinal fever.—5 cases were notified during the year, viz.:—

1 male, 7 years of age; treated at Infectious Diseases Hospital, Birkenhead; died.

Male, 22 years of age; treated at Birkenhead Infirmary; died.

Female, 15 years of age; treated at Birkenhead Infirmary; recovered.

Male, 5 years of age; treated at home; died.

Male, 3 years of age; treated at home; died.

Smallpox.—There were no cases of smallpox notified in Birkenhead during the year. This disease was, however, present in epidemic form in many parts of England throughout the whole year, no less than 11,927 cases being notified.

DISINFECTION.

Books.—76 Public Library books were collected from infected houses and disinfected.

Dwellings.—265 house-disinfecting notices were served; 457 houses or parts of houses were disinfected during the year.

Bedding and clothes.—Infected bedding and clothes were collected from 418 dwellings and disinfected. In 35 further cases infected or discarded bedding and clothes were destroyed.

Visits and revisits paid to houses, etc., by the Infectious Diseases Inspector.—2,548 visits and revisits to property were made during the year in connection with disinfection after infectious diseases (including tuberculosis).

VACCINATION.

The following is the latest completed information relative to vaccination in the Borough and relates to the period 1st January, 1926, to 31st December, 1926, viz.:

No. of births	3299
Successfully vaccinated	2194
Insusceptible	20
Had smallpox	—
Number in respect of whom statutory declarations of conscientious objection have been received	579
Died unvaccinated	237
Postponements, removals, or cases not found, etc.	269

ISSUE OF DIPHTHERIA ANTITOXIN.

During the year, in accordance with the provisions of the Diphtheria Antitoxin (outside London) Order, 1910, diphtheria antitoxin was issued to 9 medical practitioners; a total of 200,000 units was given out.

IMMUNISATION AT CLINICS AGAINST DIPHTHERIA.

Since 1926 facilities have been offered to the mothers attending the infant welfare clinics to have their children immunised against diphtheria.

During the year ended 31st December, 1927, 184 children were presented at the various clinics for the first of a course of immunising injections. Of these, 86 completed the course before the end of the year, 37 had 2 injections and 61 had 1 injection. In addition, 32 children whose treatment was commenced in 1926 were given their final injections, making a total of 118 children completing the course in 1927. The number of children who received 3 or more injections in 1926 was 58, so that, from the date of the commencement of the treatment until the end of 1927, 176 children had received the full course of 3 or more injections.

Children who have received less than 3 injections cannot be said to have full opportunity of complete immunisation. Experience indicates that about 80% of cases who have had a full course will be immune, while the remaining 20% may require a further short course of treatment.

Details of treatment carried out in 1927 are set out below:—

Clinic	1 injection	2 injections	3 or more injections	Total	1926 cases completed	Total
Hamilton Square	42	22	44	108	14	122
Brassey Street	15	7	25	47	8	55
St. Paul's Road	1	4	4	9	6	15
Mount Grove	2	4	13	19	4	23
Duncan Street	1	—	—	1	—	1
Total	61	37	86	184	32	216

(Note.—For immunisation carried out at the Fever Hospital see page 64.)

HOME NURSING.

The arrangement made between the Corporation and the Birkenhead District Nursing Society, dating from 1st July, 1919, provides for the home nursing of cases of influenza and pneumonia. During the year 1927 the Society's nurses paid 933 visits in respect of 70 cases.

INFECTIOUS DISEASES HOSPITAL.

Cases treated during 1927.—At the beginning of the year there were 32 patients in the Infectious Diseases Hospital, Flaybrick Hill.

During the year 358 new cases were admitted; so that the cases under treatment in hospital at any time during 1927 numbered 390.

There were 329 discharges and 9 deaths during the year; leaving 52 patients in hospital on 31st December, 1927.

The diseases treated, together with the sex of the patients and particulars as to recoveries and deaths, are shown below.

TABLE I 3.

Patients sent in as suffering from	In hospital at beginning of year	Admitted during year	Died during year	Discharged cured during year	Remaining in hospital at end of year
Scarlet fever M.	10	82	1	84	7
..... F.	7	122	—	111	18
Diphtheria..... M.	6	71	6	57	14
..... F.	8	73	—	68	13
Enteric fever M.	—	1	—	1	—
..... F.	1	2	1	2	—
Cerebro-spinal meningitis ...M.	—	2	1	1	—
..... F.	—	—	—	—	—
Measles M.	—	—	—	—	—
..... F.	—	3	—	3	—
Chickenpox M.	—	1	—	1	—
..... F.	—	1	—	1	—
Total	32	358	9	329	52

Final diagnosis (all cases).—The final diagnosis arrived at in connection with the 338 patients who were discharged from, or died in, hospital during the year was as follows:—

Scarlet fever	176
Diphtheria	79
Tonsillitis	28
Measles	7
Peritonsillar abscess	5
Erythema	4
Rubella	3
“ Bacteriological ” diphtheria	3
Diphtheria carrier	3
*Scarlet fever and whooping cough	2
*Scarlet fever and diphtheria	2
Typhoid	2
*Scarlet fever and chickenpox	1
Urticaria	1
Laryngismus stridulus	1
Broncho pneumonia and empyema	1
Carrier of a virulent bacilli	1
Cervical adenitis	1
Chickenpox	1
Congenital syphilis	1
Epidemic cerebrospinal meningitis	1
Septic meningitis	1
Erysipelas and peritonsillar abscess	1
Rheumatic fever	1
Paratyphoid “ B ”	1
Injury to pharynx	1
No obvious disease	10

338

*Both present on admission.

Scarlet fever.—Of the cases who were discharged from, or died in, hospital during the year, 196 had been sent in as suffering from scarlet fever. Of these, 179 were found actually to be suffering from the disease. Of the latter cases, 1 died from the disease; this gives a case mortality of 0.56%.

Complications.—The complications met with among the 179 completed cases were as follows:—

9 suffered from otorrhœa	4.9%
9 suffered from secondary adenitis	4.9%
7 suffered from rhinitis	3.9%
3 suffered from arthritis	1.6%
2 suffered from scarlatinal nephritis	1.1%
1 suffered from mastoiditis	0.6%
1 suffered from peritonsillar abscess	0.6%
1 suffered from subphrenic abscess	0.6%

Average stay in hospital.—The average length of stay in hospital of all cases notified as scarlet fever was 34 days. For an uncomplicated case the usual period of isolation has been about 4 weeks.

Type of disease.—The type of disease remains mild and there is no sign of increasing severity. Complications have been low in their incidence, and only a very few were serious. The use of antiscarlatinal antitoxic serum has been continued.

Diphtheria.—

Cases discharged or died, notified as diphtheria	131
Cases found to be suffering from diphtheria on admission	81*
Deaths from diphtheria	5
Case mortality rate, approximately	6.17%

Another death occurred in a child admitted as diphtheria, but found to be suffering from broncho-pneumonia and empyema.

Of those cases which terminated in a fatal result, 3 died within 24 hours of admission.

Tracheotomy.—9 cases showed signs of laryngeal obstruction on admission, and it was found necessary to perform tracheotomy in 3 of these. 2 recovered and 1 died.

Average stay in hospital.—The average length of stay in hospital of all cases notified as diphtheria was 32.2 days.

Complications.—The complications met with among the 81 completed cases of diphtheria were as follows:—

7 suffered from paralysis of the palate
3 suffered from secondary adenitis
2 suffered from albuminuria
2 suffered from otorrhœa
1 suffered from paralysis of the legs
1 suffered from gland abscess

*This does not include 6 cases in which the bacillus diphtheriæ was found, but which presented no clinical signs of the disease.

- 1 suffered from late cardiac failure
- 1 suffered from bradycardia
- 1 developed measles after admission.

The case mortality rate is slightly higher this year, but in view of the relatively small number of cases dealt with this cannot be regarded as indicating any increase in severity. The number of cases of severe paralysis was less this year than last.

Immunisation.—The immunisation against diphtheria of members of the staff and patients suffering from diseases other than diphtheria has been continued. It is interesting to note that in the case of one child who was admitted to hospital this year with severe diphtheria, permission to immunise had been refused last year. The following table shows the work done at the Hospital since July 31st, 1927, as regards Schick testing and immunisation:—

No. of persons tested	104
No. of persons susceptible to diphtheria	64
No. of persons immune to diphtheria	40
No. of persons immunised	41

Other diseases.—

Typhoid fever.—4 cases were discharged in 1927; the diagnosis was confirmed in 3 of these. 1 case terminated fatally, death being due to a cause other than the typhoid, namely, pulmonary aneurysm.

Epidemic cerebro-spinal meningitis.—2 cases were admitted under this notification. The diagnosis was confirmed in 1 case, which recovered. The other case was found to be suffering from septic meningitis, and died.

Measles.—3 cases were admitted and discharged in 1927. All recovered; 1 case was complicated by broncho-pneumonia.

Chicken-pox.—2 cases were admitted and discharged in 1927. 1 case, in which the diagnosis was confirmed, recovered. The other was transferred to Tranmere Infirmary, the diagnosis not being confirmed.

General.—The commoner infectious diseases have not been specially prevalent during the past year; the figures being very similar to those of 1926. Towards the end of the year there was some increase in the number of cases of diphtheria admitted, but this will affect more the figures for 1928.

Training of nurses.—Courses of instruction have been given during the year by the resident Assistant Medical Officer and Matron to the probationer nurses in training. Six have passed the Final (Fever Nursing) Examination of the General Nursing Council, and seven the preliminary examination. As comprehensive a training is given as the resources at the hospital will permit. The requirements of the General Nursing Council as regards lectures are considerably exceeded,

and every endeavour is made to demonstrate methods and apparatus which, while not used in fever hospitals, are required for the State examination.

Infectious illness among staff.—1 probationer nurse contracted scarlet fever and made a good recovery.

E. P. Smith Memorial Fund.—No case received assistance from this fund during the year.

Accommodation.—Although the accommodation at the hospital has not been severely taxed in recent years, the Health Committee is aware that the number of beds available is below the standard generally recognised as a minimum, and the provision of additional ward pavilions is contemplated. This provision should be made at an early date. In this connection it may be pointed out that of scarlet fever, a disease which commonly shows a markedly amplified incidence every few years, there has been no considerable outbreak in Birkenhead since 1918 and 1919. An increase in the number of cases notified may, therefore, be expected in the near future; and although modern practice regards as desirable the removal to hospital only of the most urgent cases of this disease, a severe strain is in consequence likely to be thrown upon the resources of the institution.

MUNICIPAL LABORATORY.

Examination of clinical material.—The nature and number of the examinations of clinical material made at the Municipal Laboratory during 1927 is shown in the following table:—

Examination	Pos.	Neg.	Total
Sputum for <i>B. tuberculosis</i>	111	264	375
Cultures for <i>B. diphtheriæ</i>	50	197	247
Blood tests (Widal) against enteric group	9	7	16
	170	468	638

Other examinations were made as follows:—

Fæces for <i>B. Typhosus</i>	8
Urine for <i>B. Typhosus</i>	8
Urine	17
Miscellaneous	30
	63

Bacteriological examinations of water.—Examinations of the Alwen water supply were carried out at the laboratory during the year, on the lines indicated in my annual report for 1924. In all, 85 complete bacteriological examinations were made, samples being taken from the mains, and from the Alwen reservoir before and immediately after filtration.

The results obtained have again been very satisfactory and indicate that the water supply maintains its high level of bacteriological purity.

Bacteriological examination of milk.—(A) *The testing of graded milks.*—During the year the regular bacteriological examination of milk was carried out. 87 samples were examined. The work is undertaken primarily because of the introduction into the Borough of "designated milks" as laid down in the Milk (Special Designations) Order, 1923. These milks are:—

- (1) Certified milk.
- (2) Grade A (tuberculin tested) milk.
- (3) Grade A milk.
- (4) Pasteurised milk.

The bacteriological examinations consist of:—

- (a) The enumeration of the micro-organisms present per cubic centimetre.
- (b) Examination for the presence of *B. coli* in specified quantities of milk.

The examination of certified milk is carried out at the request of and for, the Ministry of Health, who grant licences for the production of this milk.

The Grade A milks are examined for the Corporation, who grant the licences for the retailing of this class of milk.

In addition to the designated milks, other samples of milk have been examined from time to time, but no routine examination is carried out on ordinary milk, for which no standard of bacteriological purity has been laid down.

The results obtained are set out on pages 36 and 37 of this report.

(B) *The examination of milk for tubercle bacilli.*—The detection of tubercle bacilli in milk calls for delicate tests. Frequently only one animal in a milking herd is affected with tuberculosis, its milk being mixed with that of the other animals in the herd. In a given sample the number of bacilli may be small, so small indeed as to escape detection by ordinary microscopical examination practically every time; the only reliable method of detection being by animal inoculation.

The procedure followed in the municipal laboratory, where the tests are carried out by Dr. Leete, is as follows. The milk is placed in large tubes holding 50 to 60 c.c.s and centrifuged at high speed for half an hour. By this means the cream is brought to the top, forming an almost solid plaque, and any organisms attached to the fat droplets which form the cream are carried up with it. The rest of the organisms, any dirt, the cellular and other debris from the milk are carried to the bottom of the tube and form a deposit there. The middle milk, which is very thin and practically free from organisms, is carefully syphoned off and discarded.

As a matter of routine, smears from the deposit are made, stained, and examined for tubercle bacilli; but owing to the relative scarcity mentioned they are seldom found by this method.

All of the deposit and half of the cream from the 60 c.c.'s sample are then mixed together, the total bulk of creamy material being then about 4 c.c.'s. This is divided into two equal portions, each of which is injected by means of a hypodermic syringe into the leg muscles of a cavy. If the sample contains living tubercle bacilli the local lymphatic glands become enlarged and tuberculous. As time goes on further glands are affected, and the disease would later on become general. Before this stage is reached, however, the animals are killed (a) four weeks after inoculation, if there is definite clinical evidence of tuberculosis, or (b) in any case at the end of eight weeks. A post-mortem examination is made on every animal, and any further bacteriological examinations which may be required, such as examinations of pus or of sections of glands, are performed.

The lesions of tuberculosis are very characteristic, and the relation of the disease to the point of inoculation quite clear; for example, the glands of the right leg which received the cream-deposit inoculum are found to be enlarged and definitely tuberculous, while those of the left leg are normal. If there is no evidence of tuberculosis in either of the inoculated animals it may be safely assumed that the milk does not contain living tubercle bacilli. Two animals are used for every sample, as there is a risk that an animal may be killed by the ordinary septic organisms that are found in dirty milk; if in such a case the animal dies before four weeks have elapsed it is of no value in the tuberculosis test. A second reason for using two animals is that the findings generally correspond, and thus each sample is doubly checked.

If tuberculosis is found in one, or, as usually happens, in both test animals, the milk is reported as tuberculous.

MENTAL DEFICIENCY.**ADMINISTRATIVE ARRANGEMENTS.**

Cases of mental deficiency fall into two categories—

- (a) Those which can be dealt with under the Mental Deficiency Act, 1913; for these the Mental Deficiency Committee is responsible.
- (b) Those which can be dealt with under the Elementary Education (Defective and Epileptic Children) Acts, 1899 and 1914; for these the Education Committee is responsible.

CASES COMING WITHIN THE PROVISIONS OF THE MENTAL DEFICIENCY ACT, 1913.

The following classes of persons who are mentally defective are deemed to be defectives within the meaning of the Mental Deficiency Act, 1913:—

- (a) Idiots; that is to say, persons so deeply defective in mind from birth or from an early age as to be unable to guard themselves against common physical dangers;
- (b) Imbeciles; that is to say, persons in whose case there exists from birth or from an early age mental defectiveness not amounting to idiocy, yet so pronounced that they are incapable of managing themselves or their affairs, *or, in the case of children, of being taught to do so*;
- (c) Feeble-minded persons; that is to say, persons in whose case there exists from birth or from an early age mental defectiveness not amounting to imbecility, yet so pronounced that they require care, supervision, and control for their own protection or for the protection of others, *or, in the case of children, that they, by reason of such defectiveness, appear to be permanently incapable of receiving proper benefit from the instruction in ordinary schools*;
- (d) Moral imbeciles; that is to say, persons who from an early age display some permanent mental defect coupled with strong vicious or criminal propensities on which punishment has had little or no deterrent effect.

It will be seen from the above definitions that certain special provisions are made with regard to children. Briefly, the effect of these is that a mentally defective child remains under the care of the Local Education Authority if he can be taught in one of the schools provided by that authority—the term “ordinary” in paragraph (c) being taken to include “special” schools for mentally defective children.

The Local Education Authority must, however, give notice to the Local Mental Deficiency Authority in the case of all children over the age of seven

- (a) who have been ascertained to be incapable by reason of mental defect of receiving benefit or further benefit in special schools or classes, or who cannot be instructed in a special school or class without detriment to the interests of the other children.

or as respects whom the Board of Education certify that there are special circumstances which render it desirable that they should be dealt with under this Act by way of supervision or guardianship ;

- (b) who on or before attaining the age of sixteen are about to be withdrawn or discharged from a special school or class, and in whose case the local education authority are of opinion that it would be to their benefit that they should be sent to an institution or placed under guardianship.

The Special School for mentally defective children provided by the Local Education Authority is referred to in another section of this report (page 106). An After-Care Committee carries out general supervision in connection with children on leaving this school; the number of cases being dealt with at the end of 1927 was 178.

During the past year 11 new cases came under the care of the Mental Deficiency Committee.

1 case was sent to an institution by judicial order.

8 cases were placed under supervision pending institutional vacancies arising; 3 cases were placed under home supervision; 4 cases died during the year; 1 case left the district.

11 first visits and 212 revisits were paid to the homes of mental defectives by the Health Nurses.

At the end of 1927 there were under the care of the Mental Deficiency Committee 319 cases, as set out in the following table:—

In institutions (placed by the Mental Deficiency Committee under judicial orders)—

	Males	Females	Total
Ashton House (Birkenhead)	0	1	1
Birkenhead Union Institution	6	6	12
Caterham Institution (Surrey)	1	0	1
Chester Union Institution	0	2	2
Royal Albert Institution (Lancaster)	7	2	9
Sandlebridge Colony (Cheshire)	1	4	5
Stoke Park Colony (Bristol)	4	3	7
Whittington Hall (Chesterfield)	0	1	1
	<hr/>	<hr/>	<hr/>
	19	19	38

In institutions (placed by the Birkenhead Board of Guardians, or by parents; not under judicial order)—

Birkenhead Union Institution	7	9	16
Sandlebridge Colony (Cheshire)	1	1	2
County Mental Hospital (Cheshire)	1	1	2
Royal Albert Institution (Lancaster)	6	2	8
	<hr/>	<hr/>	<hr/>
	15	13	28

In Rampton State Institution (placed by Board of Control—cases which have become too violent for retention in ordinary institutions)	3	1	4
Under home supervision—			
(a) Cases discharged from institutions on “ licence ”	4	6	10
(b) Cases which should be in institutions	20	7	27
(c) Others (including ex-Special School cases, 178 in number)	136	74	210
Under guardianship	0	2	2
	<hr/>	<hr/>	<hr/>
	160	89	249
	<hr/>	<hr/>	<hr/>
Total	197	122	319

Scarcity of institutional accommodation.—It will be seen that in the above table 27 cases at present under home supervision are classed as cases which should be in institutions. Adding to these the 28 cases which are in institutions but are not under order, and for which provision should be made by the Local Mental Deficiency Authority, we have a total of 55 cases, as at the end of 1927, for whom institutional accommodation should be provided.

The difficulties which have been experienced in endeavouring to discover accommodation for these cases, and the urgent need for the provision of adequate local accommodation, were fully discussed in my annual report for 1925.

CASES DEALT WITH UNDER THE ELEMENTARY EDUCATION (DEFECTIVE AND EPILEPTIC CHILDREN) ACTS, 1899 and 1914.

The cases of mental deficiency in children which come under the care of the Local Education Authority are children over the age of 7 and under the age of 16 who, not being imbecile, and not being merely dull or backward, are defective; that is to say, children who by reason of mental defect are incapable of receiving proper benefit from the instruction in the ordinary public elementary schools, *but are not incapable by reason of that defect of receiving benefit from instruction in such special classes or schools as may be provided by the Local Education Authority for mentally defective children.*

CASES COMING WITHIN THE PROVISIONS OF THE BLIND PERSONS ACT, 1920.

The following classes of persons are included in the category of mental defectives by the Ministry of Health for the purposes of the Blind Persons Act, 1920:—

Blind persons suffering from epilepsy, fits or nervous disability.

WELFARE OF THE BLIND.

ADMINISTRATIVE ARRANGEMENTS.

The administrative arrangements throughout the year were as set out in my annual report for 1923.

GENERAL FACTS REGARDING BLIND PERSONS IN BIRKENHEAD.

Number and ages of blind persons.—The total number of blind persons in Birkenhead coming within the scope of the Blind Persons Act, 1920, at the end of the year was 167; of these 94 were males and 73 females.

Age.	M.	F.	Total.
0— 5	—	—	—
5—16	3	4	7
16—21	5	—	5
21—30	5	4	9
30—40	7	1	8
40—50	9	7	16
50—60	17	12	29
60—70	23	26	49
Over70	25	19	44
Total	94	73	167

Age incidence of blindness.—So far as can be ascertained the age of onset of blindness is set out below:—

Age at onset of blindness	M.	F.	Total.
0— 1	19	13	32
1— 5	3	1	4
5—10	1	3	4
10—20	9	6	15
20—30	3	2	5
30—40	10	4	14
40—50	10	9	19
50—60	15	17	32
60—70	13	8	21
Over70	11	5	16
Not ascertained	—	5	5
Total	94	73	167

Blind persons who are otherwise defective.—Twenty-nine of the blind persons on the register were handicapped in addition by other physical or mental defects:—

Welfare of the blind

	M.	F.	Total.
Mentally defective	3	1	4
Deaf	7	6	13
Deaf and dumb	1	—	1
Otherwise physically defective	5	6	11
	<hr/> 16	<hr/> 13	<hr/> 29

Children under 16 years of age.—These numbered 7; 3 boys and 4 girls. 2 boys and 3 girls were attending school; the other boy and girl were not attending school.

Conditions as regards employment.—The following table shows the position of blind persons in the area over the age of 16 with reference to employment:—

	M.	F.	Total.
Employed	24	3	27
Trained but unemployed...	4	5	9
Under training	2	—	2
Not trained, but probably trainable	5	4	9
Probably unemployable ...	56	57	113
	<hr/> 91	<hr/> 69	<hr/> 160

The occupations of the employed blind in the area were as follows:—

Agents, collectors, etc. ... ..	...	...	...	1
Basket and cane workers	...	...	..	7
Brush makers ... ..	...	...	...	4
Mat makers ... ..	...	...	...	1
Home teachers ... ..	...	...	...	1
Knitters ... ..	...	...	...	1
Musicians and music teachers	...	...	...	1
Newsvendors ... ..	...	...	...	1
Tuners ... ..	...	...	...	3
Miscellaneous ... ..	...	...	...	7
				<hr/>
Total ... ..	...	...	...	27

Home visiting of blind persons.—The Health Nurses paid 34 first visits and 261 revisits to blind persons in the area.

HOUSING AND GENERAL SANITATION.

ADMINISTRATIVE ARRANGEMENTS.

The staff engaged on the work of housing and general sanitary inspection consisted, at the end of the year, of the Chief Inspector, one housing inspector, and eight sanitary inspectors.

The eight sanitary inspectors devoted such time to the work of housing inspection as their other duties permitted.

GENERAL.

Area of the Borough.—The area of the Borough (land and inland water) was at the time of the 1921 census 3,924 statute acres. This area is largely built over, or otherwise occupied, by domestic buildings, docks, factories, railway stations, and sidings, etc.

Number of dwelling houses in the Borough.—The approximate number of dwelling houses of all descriptions within the Borough, excluding institutions, on 31st December, 1927, was 29,537.

New dwellings erected, 1921-1927.—The new dwellings erected in the Borough between the date of the census and the end of 1927 were as follows:—

(1) Between the date of the census and 31st December, 1926		
(a) With State assistance under the Housing Acts, 1919-1925		
(i) By the Local Authority	958	
(ii) By other bodies or persons	477	
(b) Other	340	
		1775
(2) During 1927		
(a) With State assistance under the Housing Acts, 1919 or 1925		
(i) By the Local Authority	450	
(ii) By other bodies or persons	88	
(b) Other	89	
		627
		2402

1 house was erected during the year which did not comply with the building byelaws. (This was a bungalow on small holdings.)

Uninhabited property.—The following is a return of uninhabited property in Birkenhead for the past year:—

Wards	Half-year ended 30th June, 1927					Half-year ended 31st Dec., 1927				
	Private houses	Shops	Cot-tages	Dock cottag's	Total	Private houses	Shops	Cot-tages	Dock cottag's	Total
Argyle, Grange and Cleveland...	5	16	2	63	86	8	12	—	44	64
Cloughton and Oxtou	68	4	2	—	74	81	9	4	—	94
Clifton, Egerton, Mersey and Bebington ...	82	11	—	—	93	187	10	—	—	197
Totals ..	155	31	4	63	253	276	31	4	44	355

The total uninhabited and unoccupied property, 31st December, 1926, was 290, so that there was an increase of 65 at the end of 1927 as compared with the previous year.

ADMINISTRATIVE ACTION TAKEN IN CONNECTION WITH HOUSING AND GENERAL SANITATION.

(a) Mainly under Housing Acts.

During the twelve months ending December 31st, 1927, the following work was carried out by the department under the provisions of the Housing Acts and Regulations (the arrangement is based on that suggested by the Ministry of Health):—

Inspection.

- (1) Total number of dwelling-houses inspected for housing defects (under Public Health or Housing Acts); all these houses were also recorded under the Housing (Inspection of District) Regulations, 1910, or the Housing (Consolidated) Regulations, 1925 1093
- (2) Number of dwelling-houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation 5
- (3) 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 941

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 7

Action under statutory powers.

A. Proceedings under Section 3 of the Housing Act, 1925.

- (1) Number of dwelling-houses in respect of which notices were served requiring repairs 934
- (2) Number of dwelling-houses which were rendered fit after service of formal notices—

(a) by owners	
(1) Houses in respect of which notices were served during 1927	306
(2) Houses in respect of which notices were served prior to 1st January, 1927	749
(b) by local authority in default of owners	31
	<hr/>
Total	1086
	<hr/>

(3) Number of dwelling-houses in respect of which closing orders became operative in pursuance of declarations by owner of intention to close

B. Proceedings also taken under the Public Health Acts in connection with above properties.

(1) Number of dwelling-houses in respect of which notices were served requiring defects to be remedied	626
(2) Number of dwelling-houses in which defects were remedied after service of formal notices—	
(a) by owners	619
(b) by local authority in default of owners ...	—

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	5
(2) Number of dwelling-houses in respect of which closing orders were made	—
(3) Number of dwelling-houses in respect of which closing orders were determined, the dwelling-houses having been rendered fit	—
(4) Number of dwelling-houses in respect of which demolition orders were made.....	5
(5) Number of dwelling-houses demolished in pursuance of demolition orders	42
(6) Number of dwelling-houses demolished after the making of closing orders, but without service of demolition orders	2

(b) Mainly under Public Health Acts.

In addition to the housing work outlined above, other work, of which the following is a summary, was carried out by the inspectors during the year. (The work of scavenging, removal of refuse, and care of sewers is entirely dealt with by the Borough Engineer and Surveyor's department.)

Number of houses inspected (not included in preceding section)	6323
Number of re-inspections of houses	41831
Number of unhealthy conditions reported and investigated	6205
Number of formal notices given	1261
Number of informal notices given	3753
Number remedied after formal notice and without proceedings	1261

Number of cases in which proceedings had to be taken	—
Number abated after proceedings.....	—
Defects referred for action:—	
(a) to Borough Engineer and Surveyor	243
(b) to Water Engineer	305
(c) to Borough Treasurer	125
Number of excavations made for the purpose of testing the condition of house drains	136
Number of smoke tests applied to drains of premises reconstructed under the supervision of this department	291
Number of water tests applied to drains	123
Number of smoke tests applied to the drains of new buildings, in conjunction with the Borough Engineer and Surveyor's department	145
Number of smoke observations taken	14
Number of smoke nuisances from factory and other chimneys reported to the Health Committee	—
Number of schools specially examined by the sanitary inspectors	20
Number of cowsheds inspected	10
Number of inspections of dairies and milkshops	859
Number of inspections <i>re</i> offensive trades	110
Number of sewer ventilators inspected	10
Number of street gullies inspected	4
Number of caravans inspected	66
Number of caravans re-inspected	83
Number of back passages inspected	47
Number of investigations regarding the keeping of pigs, fowls, and other animals	41
Miscellaneous inspections (not included above)	693

(c) **Actual defects in domestic dwellings dealt with under (a) and (b) above.**

The following is a summary of sanitary improvements effected at dwelling houses during the year under the provisions of the Public Health and Housing Acts:—

<i>Houses—</i>		
Roofs repaired..	1413	New sash cords provided ...
Chimney stacks pointed or repaired	622	Window fasteners renewed... 863
Rainwater gutters repaired or renewed	678	Windows made to open
Down spouts repaired or re- newed	421	Firegrates repaired
Down spouts disconnected from drains	36	Ovens repaired or renewed... 297
Walls pointed or repaired ...	2483	Plastering to firegrates re- paired
Lighting improved	22	Hearthstones repaired or re- newed
Ventilation improved	74	Floors relaid or repaired... 1772
Windows repaired	594	Skirting boards repaired or renewed
		Wall plaster repaired
		Ceiling plaster repaired

Walls cleansed.....	1903	Drains disconnected from sewer	9
Ceilings cleansed.....	1768	Drains—inspection chambers provided	3
Doors repaired.....	1021	Drains ventilated	11
Door fasteners repaired or renewed	2059	Drains cleansed	845
Sinks repaired or renewed ...	243	Self-cleansing gulleys provided	79
Sink waste pipes repaired ...	336	<i>Water closets—</i>	
Sink waste pipes trapped ...	14	Roofs repaired.....	561
Washing boilers repaired ...	356	Walls repaired.....	607
Washing boilers—new pans provided	61	New basins fixed.....	218
Washing boilers—firegrates repaired	265	Connections repaired	534
Washing boilers—flues repaired	87	Cisterns repaired or renewed.	222
Dampness remedied	93	New flush pipes fixed	53
Nuisances from animals abated	35	Provided with a sufficient supply of water	155
Yard surfaces relaid or repaired	1027	Doors repaired or renewed ...	422
Yard surfaces—proper means of drainage provided	20	Seats repaired or renewed...	250
Sufficient water supply provided	8	<i>Ashpits—</i>	
<i>Drainage—</i>		Provided with roofs	16
New drains constructed	20	Provided with doors	58
Old drains reconstructed.....	288	Roofs repaired.....	108
Drains repaired	239	Walls repaired.....	120
		Cemented inside ..	98
		Abolished.....	203
		Ashbins provided.....	1341
		<i>Miscellaneous—</i>	
		(not included above)	3490

(d) Increase of Rent and Mortgage Interest (Restriction) Acts, 1920-1923.

During the year no applications for certificates under section 2 of the Act were received.

(e) Theatres, music halls, &c.

(Ministry of Health Circular No. 120, dated 25th August, 1920).

93 visits were made to theatres, music halls and other places of entertainment, with a view to ascertaining whether conditions as to ventilation, structure of dressing rooms, &c., were satisfactory.

(f) Rats and mice.

The following is a summary of the work carried out by the district inspectors under the provisions of the Rats and Mice (Destruction) Act, 1919.

No. of premises inspected	97
No. of visits and re-visits	235
No. of notices served on occupiers	80
No. of notices served on owners	69
No. of premises satisfactorily dealt with	81
No. of premises still under observation or where work is being carried out	5

(g) Inspection of lodging houses, &c.

During the year the inspector of common lodging houses, &c. paid regular visits to common lodging houses, and houses let in lodgings, and to the Corporation tenement dwellings.

Registered common lodging houses (15 in number):	
Day inspections	4012
Night inspections	159
Insanitary conditions reported and dealt with	43
Houses let in lodgings (333 in number):	
Day inspections	2181
Night inspections	—
Insanitary conditions reported and dealt with	239
Corporation tenement dwellings (132 in number, visited weekly):	
No. of visits	3648
Insanitary conditions reported and dealt with	321

FACTORIES, WORKSHOPS AND WORKPLACES.**FACTORY AND WORKSHOP ACTS, 1901 AND 1907.**

The Factory and Workshop Act, 1901 (s. 132), requires the Medical Officer of Health in his annual report to the Council to report specifically on the administration of that Act in workshops and work-places. The following is a summary of the work carried out during the year.

1.—Inspection of factories, workshops and workplaces.

Premises	No. of		
	Inspections	Written notices	Prosecutions
Factories (including Factory Laundries)	5	2	—
Workshops (including Workshop Laundries) ...	985	66	—
Workplaces (other than Outworkers' premises)...	25	—	—
Total.....	1015	68	—

2.—Defects found in factories, workshops and workplaces.

Particulars	No. of defects			Number of prosecutions
	Found	Remedied	Referred to H.M. Inspector	
<i>Nuisances under the Public Health Acts*</i> —				
Want of cleanliness	92	92	—	—
Want of ventilation	—	—	—	—
Overcrowding	2	2	—	—
Want of drainage of floors	—	—	—	—
Other nuisances.....	9	9	—	—
Sanitary accommodation—				
Insufficient ..	—	—	—	—
Unsuitable or defective	8	8	—	—
Not separate for sexes	1	1	—	—
<i>Offences under the Factory & Workshops' Acts</i> —				
Illegal occupation of underground bake-house (s. 101).....	—	—	—	—
Other offences	6	6	6	—
(Excluding offences relating to outwork and offences under the Sections mentioned in the Schedule to the Ministry of Health (Factories and Workshops Transfer of Powers) Order, 1921.)				
Total.....	118	118	6	—

*Including those specified in sections 2, 3, 7 and 8 of the Factory and Workshop Act, 1901, as remediable under the Public Health Acts.

Home work.—Lists were received from employers as follows:—

From employers sending twice in the year—3 lists (8 workmen).

From employers sending once in the year—4 lists (2 contractors, 8 workmen).

In each case the work handled was the making of wearing apparel.

Registered workshops.—The workshops on the register at the end of the year were:—

Bakehouses	61
Confectioners	47
Boot repairers	62
Cabinet making and upholstery	36
Dressmaking	38
Millinery	23
Tailoring	35
Laundries	29
Joinery and carpentry	14
Saddlery and harness making	7
Smiths	17
Wagon repairers	6
Motor and cycle repairers	11
Other workshops	51
	437

Other matters.

Workshops removed from the register	103
New workshops opened and placed on register ...	2
Underground bakehouses discontinued	—
Number of underground bakehouses on the register at the end of the year	22
Instances of failure to affix abstract dealt with...	7

RAG FLOCK ACT, 1911.

Pursuant to the provisions of the above Act, 15 visits were made.

At the time of these visits the rag flock being used or stored on the premises was to all appearance in a satisfactory condition; no samples were, therefore, taken for the purpose of analysis.

POISONS AND PHARMACY ACT, 1908, AND ORDERS, 1909.

Visits were made to 4 shops and premises in the Borough, in which insecticides containing poison were likely to be kept for sale, but no infringement of the Act was reported.

HEALTH EDUCATION.

Jubilee celebrations.—At the end of June was held the Jubilee Celebration of the incorporation of the Borough. Advantage was taken of the great numbers of sightseers in the streets to display in Grange Road (in premises kindly lent by the Birkenhead and District Co-operative Society) an exhibition illustrative of the improvements in the public health during the past half-century. The reduction in the death-rates from various diseases and in the infantile and general death-rates, and the consequent increase in the expectation of life, were graphically depicted in diagrams. Particulars of the health services maintained by the Corporation, and simple statistics showing their cost to the community, completed an exhibition that aroused a large amount of interest and was commented upon very favourably by the local Press.

Extension of Health Education work.—It was thought desirable this year to substitute for a short period of intensive propaganda (such as last year's "Health Week") a continuous and more widely-spread educational campaign. The appointment by the Merseyside Boroughs Health Education Committee of a lecturer-organiser enabled a beginning to be made with this plan. Dr. John Hall, M.A., took up duties at the middle of the year, and spent a considerable time making preliminary arrangements for lectures and talks in schools and various works, and to voluntary organisations.

During the early part of the year lectures were delivered by Dr. Deacon and others to audiences totalling 400.

Below is set out a list of the lectures and meetings held during the year.

Feb. 9th	E. F. Callister Club	Girls	85	Dr. Deacon
16th	Prenton Women's Temperance Assoc.	Women	45	Dr. Deacon
24th	Shaftesbury Boys' Club	Older boys	45	Dr. Foster
Mar. 25th	E. F. Callister Club	Members & visitors	100	Dr. Christine Hanson
30th	Free Library	Midwives	36	Dr. Deacon
Apr. 6th	E. F. Callister Club	Older girls	30	Dr. Deacon
May 13th	Park High School	Senior boys	60	Dr. Foster
Nov. 12th	Shaftesbury Boys' Club	Older boys	12	Dr. Hall
16th	Bessborough Road Unitarian Church	Women	20	Dr. Hall
23rd	Christ Church Girls' Club	Girls	30	Dr. Hall
Dec. 14th	Beechercroft Settlement	Women	60	Dr. Hall

In October, the Committee issued the first number of the local edition of "Better Health," a monthly magazine published by the Society of Medical Officers of Health for the purpose of indicating "how every individual citizen, young and old, can do something in the national campaign against sickness and disease." The local portion of each number has contained a message from a member of the Town Council and a brief article describing some branch of the health services of the Borough.

Practically the whole of the first issue (of 2,000 copies) was distributed free of charge to the schools, but a certain proportion of succeeding issues was put on sale at the clinics and at newsagents. There is evidence of a considerable amount of appreciation by parents and others of the value of a publication of this kind, and teachers especially have paid their tribute to its usefulness.

MATERNITY AND CHILD WELFARE.

ADMINISTRATIVE ARRANGEMENTS.

General arrangements.—Provision has been made by the local authority for carrying out the requirements of:—

1. The Notification of Births Acts, 1907 and 1915.
2. The Midwives' Acts, 1902 and 1918.
3. The Maternity and Child Welfare Act, 1918.
4. The Midwives and Maternity Homes Act, 1926.

The authority's scheme now includes:—

1. Inspection of midwives practising in the area.
2. Health visiting.
3. The provision of four postnatal clinics.
4. The provision of an antenatal clinic.
5. The supply of free milk, etc., for necessitous mothers and infants.
6. Home visiting in connection with cases admitted to the Birkenhead Day and Resident Nurseries.
7. The provision of treatment at the General Hospital, and at the Maternity Hospital, of cases of complications arising before, during, and after confinement, and of cases of confinement where the home conditions are bad.
8. The payment in whole or in part of fees to medical practitioners called in by midwives to attend to difficult cases of confinement.
9. The payment in whole or in part of fees to midwives in attendance upon temporarily necessitous cases.
10. The provision of home nursing for children under five suffering from certain diseases, and for expectant and nursing mothers.
11. Financial support of certain institutions engaged in work in the interests of mothers and infants belonging to the Borough, namely, The Birkenhead Day and Resident Nurseries, The Birkenhead and Wirral Invalid Children's Association and St. Faith's Home for Mothers and Babies.

The infant welfare or postnatal clinics are held at Hamilton Square, Brassey Street, St. Paul's Road, and Mount Grove. The Hamilton Square clinic was opened in 1916; Brassey Street and St. Paul's Road clinics in 1919; the Mount Grove clinic in 1923.

During the past year the number of clinic sessions at the St. Paul's Road clinic was increased from one to two per week.

The antenatal clinic, which is held at No. 9, Hamilton Square, was opened in 1920.

The arrangements for home nursing came into force on 1st July, 1919. An agreement between the Corporation and the Birkenhead District Nursing Society provides for the nursing at home of cases of ophthalmia neonatorum; of measles, whooping cough, epidemic

diarrhœa, and poliomyelitis in children under the age of five years; and of illnesses of women associated with pregnancy and confinement.

As was pointed out in last year's annual report, the great increase in the work of the centres has taxed severely the accommodation available. This accommodation is mainly makeshift in nature. During the past year the Maternity and Child Welfare Committee have decided on the provision of a properly designed and equipped clinic at the North End of the Borough; and similar provision at the South End is contemplated.

Staff.—The executive medical staff engaged on maternity and child welfare work at the end of the year consisted of Dr. Deacon (ante-natal clinic, and Hamilton Square and Brassey Street postnatal clinics; Dr. Leete (St. Paul's Road postnatal clinic); and Dr. Foster (Mount Grove postnatal clinic).

In addition to the Chief Health Nurse and the Inspector of Midwives, the equivalent of the whole time of six nurses was available for infant welfare work at the beginning of 1927. Early in the year this number was increased to seven, an additional health nurse being appointed on the staff.

INSPECTION AND SUPERVISION OF MIDWIVES.

Work under this section is concerned with the administration of the Midwives' Acts, 1902 and 1918; the visiting of the homes of midwives, inspecting their instruments, etc., advising them on the details of their work and on their duties as set out in the above Acts, and in the rules issued by the Central Midwives' Board.

Number of midwives.—During the year 1927, 75 midwives entered their names on the local register as practising in the Borough. Of these, 5 subsequently left the district, and their names have been removed from the register accordingly. 4 midwives gave notice of change of addresses, 1 midwife died, and 1 midwife was removed from the roll by the Central Midwives' Board.

Of the 75 midwives, 69 were trained and 6 untrained.

Number of cases attended by midwives.—The cases attended by midwives alone (no doctor being in attendance) numbered 2,549; over three-quarters of the total births in the Borough.

Visits of inspection.—The inspector of midwives paid 165 quarterly and 183 special visits of inspection.

Interviews in office.—69 midwives were interviewed during the year.

Cases of puerperal fever and puerperal pyrexia in practice of midwives.—The inspector investigated 15 cases of puerperal fever and

9 cases of puerperal pyrexia. No deaths were certified during the year as having been due to these conditions.

Cases requiring medical help.—408 cases were notified by midwives in which medical aid had been called in, as against 421 last year. The inspector made 258 special enquiries regarding cases requiring medical help.

Notifications received from midwives.—45 cases of stillbirths were notified; 10 cases were notified of infants receiving artificial feeding; 6 cases were notified in which death (all infants) had occurred in the practice of midwives; 2 cases of laying out a dead body were notified.

Supply of silver nitrate to midwives.—Supplies of a colloid preparation of silver nitrate were issued to 2 midwives at cost price.

Ophthalmia neonatorum.—29 cases were notified during the year.

Notified	Treated at home	Treated in hospital	Vision unimpaired	Vision impaired	Total blindness	Deaths
29	27	2	29	—	—	—

Employment of, or subsidy to, practising midwives by the local authority.—No practising midwives are employed or subsidised by the Birkenhead Local Supervising Authority.

HOME VISITING OF EXPECTANT MOTHERS, MOTHERS, AND YOUNG CHILDREN.

Home visiting.—The following is a summary of the visits paid by the health nurses in connection with expectant mothers, mothers, and young children:—

- 2579 routine first visits were paid to infants.
- 3446 routine revisits were paid to infants under 1 year.
- 11098 routine visits were paid to children over 1 year and under 5 years old.
- 38 first visits and 4 revisits were paid in connection with the investigation of stillbirths.
- 420 visits were paid in connection with cases of pneumonia.
- 25 cases of ophthalmia neonatorum were visited and kept under supervision.
- 136 first visits were paid to expectant mothers.
- 28 revisits were paid to expectant mothers.
- 194 visits were made in connection with deaths of infants.
- 3469 visits were made in connection with miscellaneous matters.

Cases reported for special action.—The following cases after being visited were reported for special action:—

- 4 cases of sanitary defects in houses were passed to the Chief Sanitary Inspector.
- 3 cases were referred to the Invalid Children's Association.
- 1 case was referred to the Society for the Prevention of Cruelty to Children.

POSTNATAL CLINICS.

The main features of the work carried out at these clinics were set out in my annual report for 1923.

At the end of the year the clinics were being held as follows:—

- Hamilton Square clinic: Monday and Wednesday afternoons, 2 to 5 p.m.
- Brassey Street clinic: Thursday afternoon, 2 to 5 p.m.
- St. Paul's Road clinic: Tuesday and Friday afternoons, 2 to 5 p.m.
- Mount Grove clinic: Friday afternoon, 2 to 5 p.m.

The following table gives an indication of the work done at the clinics during the year:—

	Hamilton Sq. (97 sessions)		Brassey Street (50 sessions)		St. Paul's Road (85 sessions)		Mount Grove (50 sessions)	
	Ist visits	Re-visits	Ist visits	Re-visits	Ist visits	Re-visits	Ist visits	Re-visits
Attendances made by infants under 12 months	462	5600	276	3887	264	2551	167	2027
Attendances made by children aged 1—2 years.....	13	991	13	791	15	545	16	387
Attendances made by children aged 2—5 years.....	18	477	10	382	14	159	6	148
Examinations of children by Doctor.....	490	5834	306	3631	286	1518	184	1146
Mothers advised by Doctor regarding their own health...	44	104	22	142	39	25	40	37

Voluntary workers.—The work done by the voluntary assistants at the various clinics continues to be of the greatest value; I have to express hearty appreciation of the services which they render so freely week after week throughout the year.

Supply of Milk.—Dried milk was sold at the clinics to suitable cases.

During the year supplies of milk were given free under the Milk (Mothers and Children) Order, 1919, to

- 182 expectant mothers
- 203 nursing mothers
- 194 children.

Milk is given only to—

- (a) Nursing mothers who are actually suckling their children ;
- (b) Expectant mothers in the last three months of pregnancy ;
- (c) Children up to twelve months whose mothers are unable to nurse them ;

and to these only when the doctors at the clinics have satisfied themselves, by a medical examination of the cases on whose behalf the applications have been made, that the supply is essential on grounds of health.

ANTENATAL CLINIC.

At the Birkenhead antenatal clinic 49 sessions were held during the year ; 511 new cases were seen, and 1,901 revisits were made. The total attendances thus numbered 2,412 visits.

Condition with regard to pregnancy.—The condition of the 511 cases with regard to pregnancy, at the time of their first attendance, was as follows:—

- (a) 85 were in their first pregnancy.
- (b) 309 were in their second or subsequent pregnancy (66 of these patients had attended the clinic during a previous pregnancy ; 10 had attended during two previous pregnancies ; 1 had attended during three previous pregnancies ; and 1 had attended during four previous pregnancies.
- (c) 117 were not pregnant (13 attended the clinic for a second year and 3 for a third year).

Attendances.—The attendances made during the year were as follows:—

Attendances made by the new cases as classified above:	
(a)	120
(b)	2081
(c)	155
Attendances made during 1927 by patients who were attending the clinic at the end of 1926	
	56
	2412

Abnormalities.—The abnormalities or diseases found to be present in the new cases who attended the clinic during 1927 were as follows:—

- (a) Women who came to the clinic in their first pregnancy

Abnormality	No. of cases
Albuminuria	1
Contracted pelvis (Caesarean section required).....	1

(b) Women who came to the clinic in their second or subsequent pregnancy

Abnormality	No. of cases
Venereal disease	10
Albuminuria	1
Puerperal fever	1
Tuberculosis	1
Contracted pelvis (Cæsarean section required)	1
Other defects	2

(c) Women who were not pregnant when they first attended the clinic

Abnormality	No. of cases
Retroversion of uterus	17
Venereal disease	13
Debility after confinement	9
Conditions associated with menopause	5
Prolapse of uterus	5
Rheumatism	5
Nephritis	3
Other defects	28

Progress of pregnancies.

- (a) Of the 85 women who came in their first pregnancy
 61 were delivered before the end of 1927, having 33 boys and 31 girls (including 3 sets of twins and 3 stillborn children)
 2 had miscarriages
 22 were not delivered before the end of the year.
- (b) Of the 309 in their second or subsequent pregnancy
 204 were delivered before the end of the year, having 106 boys and 102 girls (including 4 sets of twins and 5 stillborn children)
 9 had miscarriages (including 1 of triplets)
 4 left the district
 92 were not delivered before the end of the year.

Maternity outfits.—7 outfits were lent out and 6 were returned during the year. 1 outfit was still in use at the end of the year.

General remarks.—It should be noted that there has been a steady increase in the numbers of new cases coming to the antenatal

clinic year by year since it was opened in 1920; during all this time the clinic has been in the charge of Dr. Mary Deacon.

The increase in numbers for 1927 as compared with 1926 (511 as against 483) is entirely due to an increase in the attendance of women in their *first pregnancy*. This is a point of the highest importance. It means that more and more women are being brought to the clinic and examined before their first confinement. Many of the midwives in the Borough are now bringing their first-pregnancy patients to the clinic as a routine measure for examination and advice.

OTHER PROVISION MADE BY THE LOCAL AUTHORITY.

Cases dealt with at the General Hospital.—During the year 7 cases were admitted into the General Hospital under the terms of the agreement; the number of bed days being 184.

Cases dealt with at Maternity Hospital.—During the year 13 cases were admitted into the Maternity Hospital under the terms of the agreement; the number of bed days being 342.

Cases dealt with by the Birkenhead District Nursing Society.—During the year the Society's nurses paid 1,008 visits to 67 cases, under the agreement between the Society and the Corporation. In addition 1,462 visits were paid to 88 cases in children under 5 years of age not included in the agreement.

Cases of confinements attended by medical practitioners.—In 121 cases where doctors were called in to difficult cases of confinement the doctors' fees were paid by the Corporation under the provisions of the Midwives' Act, 1918. Recovery of the fees paid were made in 2 of the cases.

Cases of temporarily necessitous cases attended by midwives.—In 38 cases where midwives attended temporarily necessitous cases of confinement the midwives' fees were paid by the Corporation under the provisions of the Maternity and Child Welfare Act, 1918.

AGENCIES ASSISTED BY THE LOCAL AUTHORITY.

The Corporation gives financial support to certain other institutions, etc., for general services rendered in connection with maternity and child welfare work.

Birkenhead Day and Resident Nurseries.—Here accommodation is provided for 17 children.

Birkenhead and Wirral Invalid Children's Association.—Arrangements are made by this association to send children to convalescent

homes, and to provide massage treatment for cases of infantile paralysis, etc.

St. Faith's Home for Mothers and Babies.—Here accommodation is provided for unmarried mothers and their children—22 beds for babies and 12 for mothers.

The grants made by the Corporation to the above agencies for the current financial year were as follows:—

Birkenhead Day and Resident Nurseries	£100
Birkenhead and Wirral Invalid Children's Association	40
St. Faith's Home for Mothers and Babies	50
	—
	£190
	—

AGENCIES NOT PROVIDED OR ASSISTED BY THE LOCAL AUTHORITY.

Other agencies whose work in Birkenhead touches the welfare of mothers and infants, but which are not provided or assisted by the Birkenhead Corporation, are the following:—

- The Birkenhead Union.
- The Birkenhead and Wirral Children's Hospital.
- The Charity Organisation Society.
- The Society for the Prevention of Cruelty to Children.
- The Naval and Military War Pensions Committee.
- The Sisters of Charity (St. Elizabeth's) Welfare Centre, Cloughton Road, Birkenhead.
- The Gynæcological Clinic at the General Hospital.

INVESTIGATION REGARDING PREMATURELY BORN INFANTS.

At the request of the Ministry of Health an investigation was carried out regarding certain prematurely born infants with a view to seeing how many survived during their first year of life. The cases selected were those infants born in the Birkenhead Maternity Hospital. The investigation dealt with 12 infants born in 1925 and 11 infants born in 1926.

The following results were obtained, viz.:—

Prematurely born infants.	Born in year 1925.	Born in year 1926.
Number investigated.....	12	11
Period of intra uterine life	7 mos. (4) | 7½ mos. (1) 8 ,, (7)	6 mos. (1) | 6½ mos. (1) 8 ,, (6) | Not known (3)
Cause of prematurity ... (if known)	Multiple gestation ... (3) Antepartum hæmorrh. (2) Hydramnios (2) Severe cough (2) Albuminuria (1) Not known (2)	Loss of rest, due to nursing ailing relative (1) Hæmorrhage due to heavy lifting (1) Albuminuria (1) Not known (8)
Condition of child when mother leaving hospital	Healthy..... (9) Ailing (1) Dead (2)	Healthy..... (5) Ailing (3) Dead (3)
Condition at end of 12 months	Alive, healthy (7) Dead (3) Causes of death— Gastro enteritis ... (1) (2 months old) Infantile debility (1) (10 weeks old) Broncho pneumonia (1) (17 weeks old)	Alive, healthy (2) Left district, no in- formation available (3) Dead (3) Causes of death— General debility .. (1) (1 month old) Convulsions and diarrhœa (1) (7 weeks old) Pneumonia (1) (3 weeks old)
NOTES :—	Of the 12 cases investigated, 3 were triplets, all of whom died before reaching the age of 12 months. 2 were twins, both of whom were alive at the end of 12 months. 2 were twins, of whom one died before 12 months and 1 lived over 12 months.	Of the 11 cases investigated, 2 were twins who left the area before the investiga- tion was made. 2 were twins, of whom one died before 12 months and 1 lived over 12 months.

MATERNITY HOMES.

Under the provisions of the Midwives' and Maternity Homes Act, 1926, no person is allowed, as from 1st January, 1927, to carry on a Maternity Home unless he or she is registered by the Local Supervising Authority.

The number of applications for registration received during 1927 was 16.

Of these, 4 were subsequently withdrawn.

The number of Homes registered was 10.

2 orders were made refusing, and none cancelling, registration.

No appeals were made against orders made.

1 application was received and granted for exemption from registration—from the Birkenhead General Hospital.

HEALTH OF SCHOOL CHILDREN

ADMINISTRATIVE ARRANGEMENTS

Staff.—On 23rd July Dr. D. G. Anderson joined the staff; filling a vacancy caused by the resignation of Dr. W. D. Hood, who had been appointed an Assistant Medical Officer at Croydon.

Mr. P. Wilson Smith, L.D.S., R.F.P.S. (GLAS.), School Dental Surgeon, has been responsible for dental inspection and treatment during the past year.

On 1st November Miss E. M. Warlow, L.D.S., took up duty as Assistant Dental Surgeon.

Dr. Deacon, Dr. Williams and Dr. Foster have carried out school medical service duties throughout the year, Dr. Foster having charge of the X-Rays Clinic at the Birkenhead and Wirral Children's Hospital.

Recent developments.—The appointment of Miss Warlow, to which reference is made above, marked an important step in the development of the dental work of the school medical service. When a decision was made in 1920 to embark on this work it was contemplated that a sufficient staff would be engaged in the course of the next few years to secure the annual inspection of the teeth of all the children attending the schools in the Borough, and the provision of treatment for those whose parents could not obtain this privately. Unfortunately, a period of great financial stringency supervened; the developments contemplated by the Education Committee were held up; and only now, after the lapse of nearly seven years, has it been found possible to revert to the programme originally planned.

It will be recalled that the children inspected by Mr. Wilson Smith (who took up duty in 1921), when the scheme was first put into operation, were those aged 6, 7 and 8 years—children born in the years 1914, 1915, and 1916. The arrest in the development of the scheme has made it necessary for dental inspection and treatment to be, in the main, limited in subsequent years to *these individual children*; thus, for example, the children who were examined in 1921 as seven-year-olds, were examined, for the last time, as thirteen-year-olds, in 1927. A section of the school population has thus had the benefit of annual inspection and treatment; and the results of Mr. Wilson Smith's work are apparent in the excellent state of the teeth of hundreds of these children.

The following table shows the number of children in each age-group examined year by year:—

Year	AGE								Total
	6	7	8	9	10	11	12	13	
1921.....	1321	1374	...	...	...	...	...	..	2695
1922.....	1061	1646	515	...	...	...	...	...	3222
1923.....	...	1353	2260	169	...	...	...	...	3782
1924.....	...	...	895	2418	1354	...	...	...	4667
1925.....	...	...	40	1564	2782	1509	...	...	5895
1926.....	...	...	...	810	1546	1622	1051	...	5029
1927.....	...	...	...	...	989	2258	2127	1234	6608

During the coming year (1928) the annual re-inspection of these children in the original age-group who are still at school will be continued—children now 12 and 13 years old. In addition, however, new groups will be taken up at the other end of the school-age scale—in the first instance children born in 1922 and 1923. (The object of taking the youngest children is to secure the earliest possible attention to the secondary or permanent teeth, which generally erupt at about six years of age.)

Between the older and the younger children will remain an intermediate section, comprising something between one-third and one-half of the school population, which cannot be taken up until a further extension of dental staff is made.

For the present it has been arranged for Mr. Wilson Smith to carry out inspections in schools in the southern half of the Borough; Miss Warlow in the northern half.

The extension of the work necessitated the fitting up of an additional surgery at the clinic in Mount Grove. This was carried out during the past year at a total cost (covering alterations to premises plumbing, provision of equipment, etc.), of £154 1s. 3d.

Prospective arrangements calling for consideration.

1. *Partially blind children.*—I have again to urge the need for the formation of special classes for partially blind children. Out of 53 children in this category who were on the register at the end of 1926, 20 were found on examination during 1927 to have deteriorated. Much of this deterioration might have been prevented if suitable provision had been made for the children in special classes.

2. *Open-air school.*—In my annual report for 1920, and in subsequent annual reports, I emphasised the desirability of establishing an open-air school in country environment for physically sub-normal children. There is an irrefutable body of evidence to show the value of such schools; and it is universally agreed that for certain types of weakly, delicate children open-air treatment is the *only* treatment which has any real and permanent value. From among the 24,000 children in the Birkenhead elementary schools there would be no difficulty in selecting several hundreds who are deriving not benefit, but harm, from their attendance in ordinary schools, and who would gain greatly in physical condition and mental alertness if they were transferred for a period to open-air school conditions.

3. *Provision of operative treatment for cases of nose and throat obstruction.*—It was hoped that during the past year an arrangement for the provision of facilities for this form of treatment would be made at the Birkenhead and Wirral Children's Hospital. Up to the present, however, the Hospital Committee in view of present demands on the Hospital accommodation have not found it possible to take on this work.

GENERAL NOTES.

Some notes on progress made during recent years may be of interest.

1. *Medical inspections.*—There has been a progressive increase in the number of routine and special examinations made:

	1923	1924	1925	1926	1927
Routine Examinations ...	7221	7529	7618	7246	7713
Special Examinations ...	*	*	3385	3283	3658
Re-Examinations ...	*	*	5390	7381	7895
Totals ....	...	...	16393	17913	19266

*Statistics not taken out in these years.

2. *Eye examinations.*—The number of refractions done has increased markedly during the last two years:

1923	1924	1925	1926	1927
697	567	692	713	921

3. *General defects.*—There has been some decline in the percentage of children found at routine inspections to have defects requiring attention:

1923	1924	1925	1926	1927
20·7	20·8	22·3	21·7	16·3

4. *Skin diseases.*—There has been a progressive decline in cases of ringworm of the scalp (see note, page 10):

1923	1924	1925	1926	1927
214	153	111	*111	83

*During 1926 the X-Rays apparatus was out of order for about 6 months.

Cases of impetigo have also been fewer, after increasing for several years:

1923	1924	1925	1926	1927
444	473	609	616	475

5. There is a distinct improvement in the condition of the children as regards cleanliness. As I have pointed out in previous reports, the standard adopted is an exceptionally severe one, and one which, probably, is adopted in few other areas. The Health Nurses record every case where the general cleanliness of a child—skin and clothing—appears to be below what is compatible with decent care in the home, or where there is the *slightest* evidence of infection with parasites.

More examinations were carried out by the nurses during 1927 than in any previous year:

	1923	1924	1925	1926	1927
Average number of visits paid per school	16·6	12·3	18·5	18·0	17·5
Examinations	23476	19696	43848	40433	48193
Children recorded as not clean	7565	5218	5130	3067	2669
Compulsorily cleansed... ..	...	30	24	17	30
Prosecutions ... ..	...	...	...	...	1

MEDICAL INSPECTION AND TREATMENT (ELEMENTARY SCHOOLS).

(A) INSPECTION.

Number of elementary schools and school children.—The number of elementary schools in the borough is:

Council Schools	17	
Voluntary Schools	18	Total 35

The recognised accommodation of these schools on the 31st December, 1927, was:

Council Schools	14,324	
Voluntary Schools	11,817	Total 26,141

The average number of scholars on the rolls during the year was:

Council Schools	12,356	
Voluntary Schools	11,509	Total 23,865

The average attendance was:

Council Schools	11,147	
Voluntary Schools	10,341	Total 21,488

Children inspected.—The following elementary school children were medically inspected during the year:—

1. At Routine Inspections	7713
2. At Special Inspections in the ordinary schools	168
3. As prospective entrants to the Institute for Boys, the Girls' Secondary School, Park High School, Rock Ferry High School, Higher Tranmere High School for Girls, The Convent Secondary School, St. Francis Xavier's College and the Catholic Institute	323
4. As entrants to the Cloughton Road Special School for Mental Defectives	21
5. Under the Employment of Children Bye-laws	107
Total	8332

Re-examination of defective children.—During the year 3,228 re-examinations of defective children were made by the Assistant Medical Officers.

Co-operation of parents.—Parents attended at the examination of 5,412 (70.2 per cent.) of the 7,713 children dealt with at routine inspections; and 312 (96.5 per cent.) of the 323 prospective entrants to secondary schools.

Increasing appreciation of the work of the school medical service is evidenced by a steadily rising percentage of parents' attendances—

1922	59.2%
1923	60.4%
1924	62.9%
1925	66.7%
1926	68.1%
1927	70.2%

Vaccination.—In the ordinary inspections children were examined as to vaccination marks. Of the 7,713 children examined

1643 (21.3%) showed no marks.
2982 (38.7%) showed one mark.
810 (10.5%) showed two marks.
317 (4.1%) showed three marks.
1961 (25.4%) showed four or more marks.

The following figures show the percentage of infants vaccinated year by year during the last ten years:

Year	Percentage
1917	85.3
1918	86.6
1919	84.6
1920	81.8
1921	81.7
1922	80.6
1923	78.2
1924	78.9
1925	77.1
1926	76.6
1927	78.6

Infectious diseases.—Enquiry was made at each inspection as to the infectious diseases from which the children had suffered in the past. The information elicited is summarised in Table S 5.

Defects found requiring medical or dental treatment.—Out of the 7,881 children inspected at routine and special inspections, 1,436 were found to have defects requiring medical attention. The defects found were as follows:—

	Code Group.	Special Cases.
<i>Skin Diseases</i>		
Ringworm	6	1
Scabies	10	1
Impetigo	27	20
Other diseases	13	—
<i>Eye Defects</i>		
Defective vision and squint (for further details see Table S 2)	293	68
External eye disease	47	7
<i>Ear Defects</i>		
Defective hearing	15	2
Ear disease	35	10
<i>Teeth defects</i>	245	5
<i>Nose and Throat Defects</i>		
Enlarged tonsils	136	4
Enlarged tonsils and adenoids	64	—
Adenoids	28	4
<i>Pulmonary Tuberculosis</i>		
Definite	—	—
Suspected	7	—
<i>Non-Pulmonary Tuberculosis</i>		
Glands	7	—
Other forms	3	—
<i>Other Defects or Diseases</i>	342	45

A full statement regarding the defects found, setting out the number of defective children, is given in Table S 2. In Table S 6 the defective children are classified according to the schools attended.

(B) TREATMENT.

The parents or guardians of all children found at routine examinations to be defective are informed immediately of the need for medical advice or treatment. They are later visited at their homes by the Health Nurses and urged to obtain this advice or treatment, the Assistant Medical Officers making periodical re-examinations in the schools to ascertain what action has been taken.

During the past year the Health Nurses paid 853 visits to the homes of defective children in connection with "following up"—717 first visits and 136 re-visits; and 3,090 re-examinations of defective children were made by the Assistant Medical Officers. In addition, the Nurses paid 51 special visits.

Treatment of children found, at medical inspections held during 1927, to be suffering from defects which required medical attention.—As has been stated above, 1,436 out of the 7,881 children examined at routine and special inspections in elementary schools during 1927 were found to be suffering from defects requiring medical attention; of these

1,436, 436 or 30.3 per cent. received treatment before the end of the year.

Details of the various types of ailment treated will be found in Table S 4.

Treatment carried out at the Eye Clinic.—Children who were found by the Assistant Medical Officers to require spectacles, and whose parents were not in a position to secure the necessary attention privately, were seen at the Eye Clinic by Dr. Williams; Mr. Norman Wilson as usual assisting with this work.

During the year 522 new cases were examined, 629 children attended for re-examination, and 783 pairs of spectacles were supplied. The total cost of all the spectacles which were ordered during the year was £155 10s. 4d., of which the parents were expected to pay £148 0s. 3d. The total sum collected during the year (including arrears from previous years) was £155 14s. 2d.

The following is a summary of the visual defects of new cases for whom spectacles were prescribed during the year:—

First Eye	Second Eye	
Hypermetropia	Hypermetropia	182
Hypermetropia	Normal	3
Hypermetropia	Hypermetropic astigmatism	40
Hypermetropia	Myopic Astigmatism	1
Hypermetropia	Mixed Astigmatism	2
Hypermetropia	Myopia	1
Hypermetropic astigmatism ..	Hypermetropic Astigmatism ..	98
Hypermetropic astigmatism ..	Normal	2
Hypermetropic astigmatism ..	Myopia	1
Hypermetropic astigmatism ..	Myopic Astigmatism	1
Hypermetropic astigmatism ..	Mixed Astigmatism	3
Myopia	Myopia	67
Myopia	Normal	4
Myopia	Myopic Astigmatism	10
Myopia	Mixed Astigmatism	3
Myopic astigmatism	Myopic Astigmatism	22
Myopic astigmatism	Normal	3
Myopic astigmatism	Mixed Astigmatism	3
Mixed astigmatism	Mixed Astigmatism	24
Mixed astigmatism	Normal	3
	<hr/>	
		473

49 children who were submitted to refraction were found to be emmetropic and not in need of spectacles.

The following conditions were also recorded among the new cases who attended the clinic:—

Leucoma	15
Amblyopia	7
Nystagmus	1
Coloboma of iris and choroid	1
Macular disease	1

The new cases of strabismus noted during the year were as follows:—

Convergent:	Right eye, 44;	left eye, 83;	alternating, 13.
Divergent:	Right eye, 1;	left eye, 1.	

Blind and partially blind children.(1) *Totally blind children.*

At the beginning of 1927 there were 13 *totally blind* children of school age on the register. During the year the names of 2 children were taken off, leaving 11 at the end of the year.

(2) *Partially blind children.*

At the beginning of 1927 there were 53 *partially blind* children of school age on the register. During the year the names of 6 children were removed (on their becoming over school age), and 8 new cases were added. At the end of 1927 there were 55 cases on the register. All these children (30 boys and 25 girls) were attending ordinary elementary schools.

Myopia	10
Myopia and nystagmus	3
Myopic astigmatism	29
Myopic astigmatism and nystagmus	1
Congenital cataract	1
Corneal nebulae	1
Hypermetropic astigmatism and nystagmus	1
Hypermetropic astigmatism and retino-choroiditis	3
Hypermetropia and retino-choroiditis	2
Optic atrophy	2
Dislocated lenses	1
Interstitial keratitis	1
	—
	55
	—

Of the 41 children in the myopic group who were on the register in 1926, and who were re-examined during 1927, the visual condition of 20 had grown worse. 3 of the new cases in the myopic group were under 6 years of age.

Treatment of ringworm carried out at the X-Rays Clinic.—During the year 50 cases were treated for ringworm at the X-Rays Clinic by Dr. Foster. 255 exposures to X-Rays were given. The duration of exposure is carefully checked by the use of pastilles, and averaged 15 minutes.

Ringworm is now no longer endemic in Birkenhead. In 1925 there were about 40 cases being treated with ointments or awaiting treatment by X-Rays, and all these were potential carriers of the disease, as was evidenced by the number of new cases occurring in a certain street in the centre of the town where there were several untreated cases.

These arrears were cleared up by the end of 1926, and now each newly-notified case is X-Rayed within a fortnight of its discovery.

A great difficulty experienced in the eradication of ringworm was the treatment of children under 5 years of age, who were disseminators of the disease but were unsuitable for X-Rays treatment. Fear of the apparatus, or their extreme youth, made it difficult to keep them motionless under the exposure of the rays.

To meet this difficulty trial was made last year of a new method of treatment, viz., by thallium acetate. This is a white, water-soluble salt, and is given by the mouth in a little sugared water, the greatest care being paid to accurate dosage, 9 milligrammes being given for every kilogramme of body weight. The physiological action is somewhat indefinite, but it is known to act on the sympathetic nerve fibres which run to the papillæ of the hair roots.

Four children, viz., two girls aged 2 6-12 and 3 9-12, and two boys aged 1 11-12 and 4, were treated last year.

The hair begins to fall out about the tenth day, and epilation is complete in three weeks. The four cases treated by this method were completely cured.

Treatment carried out at the General School Clinic.—Details of the work of this clinic, where cases of external eye disease, ear inflammation, skin disease, etc., are treated, will be found in Tables S 4 and S 7.

The number of children who received treatment at the Clinic was 2,362; the total attendances numbered 11,940.

Treatment carried out at the Orthopædic clinic.—This clinic, which was opened in November, 1925, was held during the earlier part of the year at the premises in Albion Street occupied by the Birkenhead and Wirral Invalid Children's Association, and afterwards at the Association's new premises at 43 Hamilton Square.

The surgeon, Dr. Hartley Martin, attended on the third Saturday in each month; and extra clinics were held in October and December because of the large number of cases requiring re-examination. The after-care sister attended weekly.

The clinic deals with all forms of crippling disease in children. The cost of the clinic is distributed as follows:—

- (a) Tuberculous cases (all ages): Health Committee.
- (b) Non-tuberculous cases under school age: Maternity and Child Welfare Committee.
- (c) Non-tuberculous cases of school age: Education Committee.

During 1927, 102 new cases were dealt with, as compared with 124 in the previous year:—

Tuberculous cases	8
Non-tuberculous cases—	
Under school age	49
Of school age	44
Over school age	1
	102

There were 460 re-examinations made, as compared with 202 in 1926;

Tuberculous cases	49
Non-tuberculous cases—	
Under school age	160
Of school age	243
Over school age	8
	460

Attendances for massage or remedial exercises were made as follows:

Tuberculous cases	88
Non-tuberculous cases—	
Under school age	235
Of school age	1031
Over school age	—

In the following table Dr. Hartley Martin sets out a classification of cases dealt with, and shows the results of treatment:

Diagnosis	Remaining 1926	1927			Remaining 1928			Discharges 1927					
		New cases			1928			Cured	Relieved	Left district	Refused treatment	Unsuitable	Died
		School age			School age								
		Under	Of	Over	Under	Of	Over						
Infantile Paralysis . . .	19	...	1	1	1	14	2	...	...	1	3	2	...
Spastic Paralysis	15	4	3	...	5	13	...	...	...	...	3	1	...
Rickets	35	28	9	...	44	14	...	5	2	...	4	3	...
Tuberculous	19	1	7	...	2	20	...	4	...	...	...	...	1
Non-Tuberculous	4	3	2	...	1	5	...	...	...	1	1	1	..
Congenital Deform.	7	3	3	...	5	3	...	3	...	2	...	...	...
Acquired Deform.	31	5	19	...	7	32	...	4	4	...	2	6	...
Diagnosis	1	6	7	...	4	3	...	...	...	...	...	7	...
Totals... ..	131	50	51	1	69	102	2	16	6	4	13	20	1

Hospital treatment.—It will be seen that of the 273 cases that have been on the register and regarded as suitable for treatment during the past year, 24 (or 8.8%) required hospital treatment and were admitted to the Children's Hospital, Leasowe. These cases comprise:

	Cases.	Stay in hospital varied from	
		Days.	Average.
Rickets	15	4-273	48
Acquired deformities	4	3-254	78
Congenital deformities	1	17	17
Infantile paralysis	2	3-61	32
Spastic paralysis	1	56	56
Non-tuberculous osteitis	1	112	112

The total number of days in hospital was 1,285 (3.5 beds occupied throughout the year).

In addition to the above, 13 cases were referred to the hospital for X-Ray examination, and 12 cases for the application of plaster of Paris splints.

Massage and remedial exercises.—This work is, by arrangement, carried out by the Birkenhead and Wirral Invalid Children's Association. An average of 27 cases have been treated per month, the monthly numbers varying from 20 to 36, and these cases have made 1,475 attendances, averaging 123 per month, but as many as 193 treatments have been given in one month. 29 new cases have been given treatment during the year, and in 13 cases treatment has been terminated. There is a small list of 9 cases awaiting the commencement of treatment.

The value of this work has been enhanced since the opening of the new premises in Hamilton Square. The part-time services of an additional Masseuse has allowed a greater number of cases to be treated and the increased space available has allowed classes to be inaugurated for those cases which require remedial exercises as distinct from massage. The larger rooms allotted for the examination of cases and as waiting rooms have facilitated the work of the clinic, but as on an average 36 cases are seen in a three-hour session, there is still opportunity for improving the arrangements. At the end of the year there was a waiting list of 9 cases for massage and remedial treatment; it is to be hoped that in the near future it will be found possible to deal with cases as soon as treatment is prescribed by the orthopædic surgeon.

The assistance of the Invalid Children's Association, however, cannot be too highly estimated, and their co-operation in ascertainment, treatment (especially in assisting the parents in obtaining splints, appliances, and surgical boots), and after-care, is invaluable.

The recent institution of artificial sunlight by the Association is an interesting development, and it is hoped that it will assist in the prevention of rickets and reduce the large number of cases of severe rickety deformity presented for treatment.

Growth of the work.—Dr. Hartley Martin points out that the clerical work of the clinic is becoming onerous, and that more assistance will be required if complete case-recording is to be maintained. The services of the After-Care Sister are now needed for more than one half-day per week and it is hoped that opportunities for increasing this important side of the work (the education of the parent in the requirements of splint handling, etc.) will be given.

The work of the past year, with the exception of the increased efficiency of the massage and remedial exercise treatment, has been that of consolidation rather than progress, and there is much yet to be done in the way of improved ascertainment of disease and of the provision of preventive orthopædic measures.

Treatment of uncleanness.—The average number of visits paid during 1927 by the Health Nurses to each school in the Borough was 17.5; the total examinations numbering 48,193.

The number of individual children found by the Health Nurses to require attention was 2,669, as compared with 3,067 in 1926. In every case the parents were informed. In 43 cases of persistent neglect notices were served; and 30 children were compulsorily cleansed at the cleansing station. The Nurses paid 20 visits to the homes of children (16 first visits, 4 re-visits).

The parent of a child attending the Rock Ferry Council School was prosecuted for allowing the child to become verminous after cleansing at the cleansing station, and was fined five shillings.

DENTAL INSPECTION AND TREATMENT (ELEMENTARY SCHOOLS)

(A) INSPECTION.

Scope of past year's work.—The work of dental inspection and treatment proceeded during 1927 on the lines of the curtailed scheme decided upon by the Education Committee and described in my annual report for 1922. This scheme was concerned chiefly with the periodical re-inspection and treatment of *those children who had been examined in the original dental inspection* which was carried out during 1921 and the first part of 1922; children born in the years 1914, 1915, and 1916 being dealt with.

Number inspected.—6,608 children were dentally inspected during the year as follows:—

Aged ten years	989
Aged eleven years	2258
Aged twelve years	2127
Aged thirteen years	1234
	6608

The figures for the preceding year (1926) were:—

Aged nine years	810
Aged ten years	1546
Aged eleven years	1622
Aged twelve years	1051
	5029

Number requiring dental treatment.—Of the 6,608 children inspected, 4,166 (63.0%) were selected as requiring treatment, the parents being advised to obtain this treatment privately, or, if unable to do this, at the Dental Clinic.

Cleanliness of teeth.—The children examined were classified according to cleanliness of teeth as follows:—

Clean	1765
Fairly clean	3620
Dirty	1223
	6608

Condition of gums.—The following figures show the condition of the gums of the children examined:—

Gums healthy	5348
Gums inflamed	990
Gums septic	270
	<hr/>
	6608
	<hr/>

Condition of bite.—This was found to be as set out below:—

Bite good	4721
Bite fair	1467
Bite bad	420
	<hr/>
	6608
	<hr/>

(B) TREATMENT.

Notices were sent out to the parents of the 4,166 children found to require dental treatment, with the following results:—

Refused to have treatment done	550	(13.2%)
Stated that treatment would be obtained privately ...	1147	(27.5%)
Requested treatment at the Dental Clinic	2469	(59.2%)
	<hr/>	
	4166	
	<hr/>	

Treatment at the Dental Clinic.—Of the 2,469 children for whom treatment at the clinic was requested

1811 were treated before the end of the year
527 did not attend when sent for
131 were awaiting treatment at the end of the year
<hr/>
2469
<hr/>

In addition to the above 1,811 children treated at the clinic following on inspections held in 1927, 64 were treated who had been inspected in 1926 and had not been treated before the end of that year; and 335 children who were brought by the parents on their own initiative to the clinic were also treated. The total number of children treated at the clinic during 1927 was therefore

Following on 1926 inspections	64
Following on 1927 inspections	1811
Brought by parents on their own initiative	335
	<hr/>
	2210
	<hr/>

Details of treatment carried out.—This was as follows:—

Temporary teeth extracted	1321
Temporary teeth filled	4
Permanent teeth extracted	804
Permanent teeth filled	1770
Total extractions	2125
Total fillings	1774
Anæsthetics—general	—
local	1425
Sealings	1215
Dressings	557

The total number of attendances at the clinic numbered 2,631.

The number of treatments completed during the year was 2,108. 1,029 parents paid 1s. each and 43 parents 6d. each for treatment; the total amount paid being £52 10s. 6d.

MEDICAL INSPECTION AND TREATMENT (SECONDARY SCHOOLS AND CONTINUATION SCHOOLS.)

The powers and duties of local education authorities with regard to medical inspection and treatment in secondary schools and continuation schools are set out in Section 80 of the Education Act, 1921.

Schools at which medical inspection is carried out.—Medical inspection is arranged for at the following schools:—

	No. on Roll.
<i>(a) Provided by the Local Education Authority—</i>	
The Birkenhead Institute (Boys)	511
The Girls' Secondary School	373
Park High School (Boys)	219
Rock Ferry High School (Boys)	251
<i>(b) Not provided by the Local Education Authority—</i>	
The Higher Tranmere High School for Girls	226
The Convent Secondary School	320

There are no continuation schools provided by the local education authority at which medical inspection has to be carried out.

Scope of medical inspection.—The existing arrangements provide for the examination once in each year of every child in the schools inspected; and for the re-examination of children found to be defective.

The opinion of the Board of Education in this connection is expressed in Circular 1153:—"In view of the many defects that may arise during the critical period of adolescence, the Board attach great importance to arrangements being made for all pupils to come annually, as a matter of routine, under medical supervision."

Birkenhead Institute.—At the annual inspection 500 children were inspected. Included in that number there were 77 children now examined for the first time as secondary school children. 136 were found to have defects requiring medical or dental advice, the defects found being as follows:—

Defective teeth	48
Defective vision	47
Nose and throat defects	18
Deformities	2
Heart disease	6
Skin diseases	1
Other defects	29

Girls' Secondary School.—At the annual inspection 349 girls were examined.

Included in the above total (349) there were 59 children now examined for the first time as secondary school children.

Of the 349 children examined, 24 were found to have defects requiring medical or dental attention; the defects found being as follows:—

Defective teeth	12
Defective vision	13
Skin disease	1

All the children found to be defective were kept under observation and re-inspected later in the year. By the end of the year 22 out of the 24 had received appropriate treatment as shown below:—

	Treated by end of year	Per- centage.
Defective teeth	10	85
Defective vision	12	92
Skin diseases	1	100

Rock Ferry High School.—At the annual inspection* 218 children were inspected. 64 were found to have defects requiring medical or dental advice, the defects found being as follows:—

Defective teeth	26
Defective vision	30
Nose and throat defects	5
Deformities	1
Heart	1
Other defects	6

*In addition 98 children who were not examined in 1926 were inspected at the beginning of 1927.

Park High School.—At the annual inspection 170 children were inspected. 49 were found to have defects requiring medical or dental advice, the defects found being as follows:—

Defective teeth	21
Defective vision	13
Nose and throat defects.....	5
Ear defect	1
Heart	4
Other defects	8

Higher Tranmere High School for Girls.—At the annual inspection 62 children were inspected. 12 were found to have defects requiring medical or dental advice, the defects found being as follows:—

Defective teeth	4
Defective vision	6

Convent F.C.J.—At the annual inspection 241 children were inspected. 35 were found to have defects requiring medical or dental advice, the defects found being as follows:—

Defective teeth	27
Defective vision	8
Nose and throat defects	1
Deformities	1

MISCELLANEOUS

Examination of entrants to the Girls' Secondary School, the Birkenhead Institute, Park High School, Rock Ferry High School, Higher Tranmere High School for Girls, The Convent Secondary School, St. Francis Xavier's College, and the Catholic Institute.—During the year 323 elementary school children were examined with a view to their admission to the above schools. 89 were found to require treatment for 98 defects, the latter being as follows:—

Defective teeth	49
Defective vision	14
Nose and throat defects	17
Deformities	1
Heart	4
Skin diseases	1
Other defects	12
	98

Cloughton Road Special Council School for Mentally Defective Children.—The accommodation at the Special School for the year 1927 was 154. The average number on the rolls during the year was 128, and the average daily attendance was 109.

Eleven visits were paid to the school during the year by the Assistant School Medical Officer, Dr. Deacon. At these visits 6 examinations were held of children suspected to be mentally deficient, with reference to their suitability for admission to the Special School. The results were as follows:—

Total number examined—Boys	17	
Girls	4	
	21	
Number certified for admission—Boys	12	
Girls	4	
	16	
Number not certified for admission—		
(a) Regarded as fit for ordinary school—Boys	4	
Girls	—	
	4	
(b) Recommended for admission to School for the Deaf—Boys	1	
Girls	—	
	1	

22 children were permitted to leave the school after medical examination, as follows:—

Fit for work	11
Left over 16 years of age	3
Transferred to elementary schools	2
Admitted to residential institution (Lancaster)	1
Left district (emigrated to Canada)	1
Referred to Mental Deficiency Act Committee	4
	22

Of the 11 children who left to take up work—

- 2 are employed as domestic servants;
- 1 is employed in a coal yard;
- 1 is employed as a labourer;
- 1 is employed in a firewood factory;
- 2 are employed by dairymen;
- 2 are employed by greengrocers;
- 1 is employed by a chemist;
- 1 is employed on a farm.

The average ages of the children attending the school, and their classification, are shown below:—

Class	Boys		Girls	
	Average chronological age	* Average educational age	Average chronological age	* Average educational age
1	13	9	—	—
2	—	—	12	8½
3	11	7½	10½	7
4	9½	6	10	6
5	8½	5	8½	5
6	8	4	11	4½

*Educational age based on Dr. Cyril Burt's Educational Age Tests.

School dinners have been provided throughout the year at a cost to the parent of 2d. per day.

Daily average supplied	85
Total cost for the year	£141

The weekly menu was:—

- Monday*.....Scotch broth; boiled pudding.
- Tuesday*.....Irish stew; milk pudding.
- Wednesday*...Meat pie and vegetables.
- Thursday*.....Irish stew; milk pudding.
- Friday*.....Potato pie; fruit (when possible).

There is in connection with the school an active voluntary After-Care Association which supervises the non-notifiable mentally defectives who have passed out of the school at the ages of 14 to 16. The objects of such supervision are:—

- 1.—To keep in touch with all Special School cases who are not certifiable as mental defectives under the Mental Deficiency Acts;
- 2.—To take such action as may be necessary in those cases who need special assistance or who have become unsuitable for home supervision;
- 3.—To collect statistical and other information which will be of assistance to the Local Authority in the further development of the training of the mentally defective members of the community.

From time to time arrangements have been made to link up the home and school (*e.g.*, by evening meetings), and to encourage further efforts in self-improvement.

The members of the Association are strongly of the opinion that those boys and girls leaving the Special School at 16 and failing to obtain employment should be given further vocational training in day work centres, and it is hoped that provision will be made for such training as soon as expedient.

The following table gives particulars of the (260) cases passed out of the Special Council School during the last ten years at the ages of 14 to 16 which can still be traced:—

	In regular employment	Useful at home	Unemployable	Married	Deceased	Left District	Institutions and Blind or Deaf Schools
Males	113	...	†9	3	10	14	18
Females	32	*27	—	7	9	9	12
Total	145	27	9	7	19	23	30

* 6 are notified cases.

† 4 are notified cases.

Provision of meals.—No figures are available for the calendar year 1927. During the financial year, 1st April, 1927, to 31st March, 1928, 1,409 children have been supplied with 107,058 meals. Meals were provided five days per week, with the exception of Bank and Public Holidays.

Birkenhead and Wirral Invalid Children's Association.—During the year cases of deformity, paralysis, etc., were from time to time referred to this Association, and valuable assistance was given—massage and other suitable treatment being provided.

The following table shows the number of massage cases among children of school age dealt with by the Association during the year:—

	Sent from School Clinics	Other cases	Total
Children under treatment at the end of 1926	27	23	50
New children treated during the year	34	12	46
Children re-started, changed to clinic Dr., or reached school age	9	3	12
Children discharged during the year—Sent to hospitals or died	18	5	23
Children who ceased attending before completion of treatment or left the town	8	4	12
Children under treatment at end of 1927	44	29	73

The 70 cases referred from the school clinics to the Association were as follows:—

Disease	No. of cases
Scoliosis	7
Chest deformity	17
Infantile paralysis	10
Spastic paralysis	3
Bronchitis (chronic)	2
Post-pneumonia	3
Debility	3
Round shoulders	10
Absence of tibia	1
Deformed toes	1
Claw foot	3
Acquired deformity of knee	1
Flat feet	2
Wry neck	4
Post injuries	3
	—
	70
	—

Assistance has also been given to children of school age in the following ways:—

	Sent from School Clinics	Other cases	Total
Children supplied with milk	125	341	466
Children supplied with tonics	230	327	557
Children supplied with surgical apparatus.. ..	44	75	119
Children sent to convalescent and country hospitals	48	76	124

In every case the parents pay something towards the cost of treatment.

TABLE S 1.

Return of Medical Inspections during 1927 (see note *a*).

A.—ROUTINE MEDICAL INSPECTIONS.

Number of Code Group Inspections (see note <i>b</i>)	
Entrants	2848
Intermediates	2427
Leavers	2438
	Total
	7713
Number of other routine inspections (see note <i>c</i>)	
	—

B.—OTHER INSPECTIONS.

Number of special inspections (see note <i>d</i>)	3658
Number of re-inspections (see note <i>e</i>)	7895
	Total
	11553

NOTES ON TABLE S 1.

(*a*) The return refers to a complete calendar year.

(*b*) This heading relates solely to the routine medical inspection of the three ordinary age groups, *i.e.*, to medical inspections carried out:—

- (i) in compliance with Article 7 of the Consolidated Regulations relating to Special Services—Grant Regulations No. 19;
- (ii) on the school premises (or at a place specially sanctioned by the Board under Article 44 (*h*) of the Code);
- (iii) for the purpose of making a report on each child on the lines of the approved Schedule set out in Circular 582.

(*c*) Under this heading may be recorded *routine* inspections, if any, of children who do not fall under the three code age-groups, *e.g.*, *routine* inspections of a fourth age-group or of other groups of children, as distinct from those who are individually selected on account of some suspected ill-health for a "Special" Inspection.

(*d*) A Special Inspection is a medical inspection by the School Medical Officer himself or by one of the Assistant Medical Officers on his staff of a child specially selected or referred for such inspection, *i.e.*, not inspected at a routine medical inspection as defined above. Such children may be selected during a visit to the school or may be referred for inspection by the teachers, health nurses, attendance officers, parents, or otherwise. It is immaterial for the purpose of this heading whether the children are inspected at the school or at the Inspection Clinic or elsewhere. If a child happens to come before the School Medical Officer for special inspection during a year in which it falls into one of the routine groups, its routine inspection is entered in Part A of Table S 1 and its special inspection in Part B. The inspection to be recorded under the heading of special inspections is only the first inspection of the child so referred for a particular defect. If a child who has been specially inspected for one defect is subsequently specially inspected for another defect, such subsequent inspection is recorded as a special inspection and not as a re-inspection.

(*e*) Under this heading are entered the medical inspections of children who as the result of a routine or special inspection come up later on for subsequent re-inspection, whether at the school or at the inspection clinic. The first inspection in every case is entered as a routine or special inspection as the case may be. Every subsequent inspection of the same defect is entered as a re-inspection.

Nothing is included under the head of special inspections or re-inspections except such inspections as are defined above. Attendances for treatment by a nurse or for examinations by anyone other than a doctor on the staff of the School Medical Service are not recorded as medical inspections. If, however, at any such attendance, a child is also examined by a member of the authority's medical staff, this is recorded as a special inspection or re-inspection as the case may be, even if treatment is also given; but such attendance may also of course be recorded as an attendance for treatment.

TABLE S 2.

A. Return of Defects found by Medical Inspection during the year ended 31st December, 1927.

Defect or disease (1)	Routine Inspections		Special Inspections	
	No. of defects		No. of defects	
	Requiring treatment (2)	Requiring to be kept under observation, but not requiring treatment (3)	Requiring treatment (4)	Requiring to be kept under observation, but not requiring treatment (5)
<i>Malnutrition</i>	22	4	34	—
<i>Uncleanliness</i>	—	—	—	—
(See Table S 4, Group V.)				
<i>Skin</i>.....Ringworm—Scalp	4	—	79	—
Body	2	—	52	—
Scabies	10	—	36	—
Impetigo.....	27	—	448	—
Other diseases (non-tuberculous).....	13	2	135	—
<i>Eye</i>				
Blepharitis	22	2	89	—
Conjunctivitis	10	—	123	—
Keratitis	—	—	10	—
Corneal opacities	4	—	7	—
Defective vision (excluding squint)...	305	79	111	—
Squint.....	88	4	33	—
Other conditions	11	2	82	—
<i>Ear</i>				
Defective hearing	15	7	23	—
Otitis media	31	5	118	—
Other ear diseases	4	—	22	—
<i>Nose and throat</i>.....Enlarged tonsils only	136	60	43	—
Adenoids only	64	13	17	—
Enlarged tonsils and adenoids.....	28	5	3	—
Other conditions	14	8	193	—
<i>Enlarged cervical glands (non-tuberculous)</i>	30	22	12	—
<i>Defective speech</i>	7	6	5	1
<i>Teeth</i>				
Dental diseases (see note a)	245	2	53	—
(See Table S 4, Group IV.)				
<i>Heart and circulation</i> —				
Heart disease—Organic	14	10	9	—
Functional	26	18	13	1
Anæmia	24	11	46	—
<i>Lungs</i>				
Bronchitis	54	18	89	—
Other non-tuberculous diseases	39	18	182	1
<i>Tuberculosis</i> ...Pulmonary—Definite	—	—	2	—
Suspected.....	7	3	8	—
Non-pulmonary—Glands	7	3	2	—
Spine	—	—	—	—
Hip	—	—	—	—
Other bones and joints	2	—	—	—
Skin	—	—	—	—
Other forms.....	1	1	—	—
<i>Nervous system</i>.....Epilepsy	—	1	4	—
Chorea.....	2	1	7	—
Other conditions	2	3	2	—
<i>Deformities</i> ....Rickets	3	—	1	—
Spinal curvature	3	—	—	—
Other forms	19	5	12	—
<i>Other defects and diseases</i>	97	25	1492	—

TABLE S 2—Continued.

B. Number of *individual children* (see note *b*) found at *routine* medical inspection to require treatment (excluding uncleanliness and dental diseases).

Group. (1)	Number of children.		Percentage of children found to require treatment (4)
	Inspected (see note <i>c</i>). (2)	Found to require treatment. (3)	
CODE GROUPS:			
Entrants	2848	487	17.1
Intermediates.	2427	362	14.9
Leavers	2438	421	17.3
Total (code groups)	7713	1270	16.3
Other routine inspections	—	—	—

NOTES ON TABLE S 2.

(a) The figures included in this space refer to the findings of the Medical Staff and not those resulting from dental inspection in the schools by the School Dental Surgeon. The findings of the School Dental Surgeon are recorded in Table S 4 Group IV

(b) No individual child is counted more than once in this part of Table S 2, *i.e.*, under B., even if it is found to be suffering from more than one defect.

(c) The figures in this column are the same as those given in Table S 1 A.

TABLE S 3.

Return of all exceptional children in the area (see note a).

			Boys	Girls	Total
<i>Blind</i> (including partially blind) (see note b)	(i) Suitable for training in a school or class for the totally blind	Attending certified schools or classes for the blind	7	4	11
		Attending public elementary schools (see note c)	-	-	-
		At other institutions	-	-	-
		At no school or institution	-	-	-
	(ii) Suitable for training in a school or class for the partially blind	Attending certified schools or classes for the blind.....	-	-	-
		Attending public elementary schools (see note c)	30	25	55
		At other institutions	-	-	-
		At no school or institution	-	-	-
<i>Deaf</i> (including deaf and dumb and partially deaf) (see note d)	(i) Suitable for training in a school or class for the totally deaf or deaf and dumb	Attending certified schools or classes for the deaf	5	8	13
		Attending public elementary schools (see note c)	-	-	-
		At other institutions	-	-	-
		At no school or institution	-	-	-
	(ii) Suitable for training in a school or class for the partially deaf	Attending certified schools or classes for the deaf.....	-	-	-
		Attending public elementary schools (see note c)	4	1	5
		At other institutions	-	-	-
		At no school or institution	-	-	-
<i>Mentally defective</i>	Feeble-minded (cases not notifiable to the Local Control Authority.) (see note e.)	Attending certified schools for mentally defective children.....	78	52	130
		Attending public elementary schools (see note c)	-	-	-
		At other institutions	-	-	-
		At no school or institution	-	-	-
	Notified to the Local Control Authority during the year	Feeble-minded.....	3	4	7
		Imbeciles	-	1	1
	Idiots	-	-	-	
<i>Epileptics</i>	Suffering from severe epilepsy (see note f)	Attending certified special schools for epileptics	1	2	3
		In institutions other than certified special schools	-	-	-
		Attending public elementary schools (see note c)	-	-	-
		At no school or institution	1	-	1
	Suffering from epilepsy which is not severe (see note g)	Attending public elementary schools (see note c)	-	2	2
		At no school or institution	-	-	-
<i>Physically defective</i>	Infectious pulmonary and glandular tuberculosis (see note h)	At sanatoria or sanatorium schools approved by the Ministry of Health or the Board	-	-	-
		At other institutions	3	1	4
		At no school or institution	3	1	4
	Non-infectious but active pulmonary and glandular tuberculosis (see note h)	At sanatoria or sanatorium schools approved by the Ministry of Health or the Board	3	2	5
		At certified residential open air schools	-	-	-
		At certified day open air schools	-	-	-
		At public elementary schools (see note c).....	1	3	4
		At other institutions	-	-	-
		At no school or institution	1	-	1

TABLE S 3—Continued.

<i>Physically defective (continued)</i>	Delicate children (<i>e.g.</i> , pre-or latent tuberculosis, malnutrition, debility, anemia, etc.) (see note <i>h</i>)*	At certified residential open air schools	-	-	-
		At certified day open air schools.....	-	-	-
		At public elementary schools (see note <i>c</i>).....	17	25	42
		At other institutions	1	1	2
		At no school or institution	-	-	-
	Active non-pulmonary tuberculosis (see note <i>h</i>)	At sanatoria or hospital schools approved by the Ministry of Health or the Board	10	10	20
		At public elementary schools (see note <i>c</i>).....	4	2	6
		At other institutions	1	-	1
		At no school or institution	1	1	2
	Crippled children (other than those with active tuberculous disease), <i>e.g.</i> , children suffering from paralysis, &c., and including those with severe heart disease (see note <i>h</i>)	At certified hospital schools	-	-	-
		At certified residential cripple schools	1	-	1
		At certified day cripple schools	-	-	-
		At public elementary schools (see note <i>c</i>).....	25	27	52
		At other institutions	-	-	-
		At no school or institution	-	-	-

*A complete record of these children has not been kept, as there is no open-air school available.

NOTES ON TABLE S 3.

(a) This Table is a return of all children in the area for whom the Local Education Authority are responsible and who (except in the case of children suffering from epilepsy which is not severe) have been ascertained to be blind, deaf, defective or epileptic within the meaning of Part V of the Education Act 1921. It is the statutory duty of every Local Education Authority formally to ascertain all defective children in their area irrespective of the actual provision now made for their instruction in Special Schools. It is assumed by the Board of Education that every authority will have a complete list of such children compiled from returns made continuously during the year and kept constantly up to date. In order to secure uniformity, authorities are requested to make up this Table from their list of defective children as it stands on the last day of each calendar year.

Children who are living in residential schools in the area but who come from other areas are not included in this Table; but children are included who are living in residential schools outside the area and who are being maintained there by the authority.

For the purpose of this Table no child is included whose defect has not been ascertained by the School Medical Officer or a medical member of the authority's staff.

The definitions of defective children as given in the Act are as follows—

A blind child is a child who is too blind to be able to read the ordinary school books used by children.

A deaf child is a child who is too deaf to be taught in a class of hearing children in an elementary school.

Mentally and physically defective children are children who, not being imbecile and not being merely dull and backward, are defective, that is to say, children who by reason of mental or physical defect are incapable of receiving proper benefit from the instruction in the ordinary public elementary schools, but are not incapable by reason of that defect of receiving benefit from instruction in such special classes or schools as under Part V of the Act may be provided for defective children.

Epileptic children are children who, not being idiots or imbeciles, are unfit by reason of severe epilepsy to attend the ordinary public elementary schools.

NOTES ON TABLE S 3—Continued.

(b) For the purpose of this return the Board require that children who are blind within the meaning of the Act should be divided into two categories, *i.e.*, (1) those who are totally blind or so blind that they can only be appropriately taught in a school or class for totally blind children, and (2) those who though they cannot read ordinary school books, or cannot read them without injury to their eyesight, have such power of vision that they can appropriately be taught in a school or class for the partially blind.

It should be understood that children who are able by means of suitable glasses to read the ordinary school books used by children without fatigue or injury to their vision are not included in this Table.

(c) The Board emphasises the fact that it should be understood that none of the children in this Table (except children suffering from epilepsy which is not severe) should in fact be attending public elementary schools. When the heading is retained, it is merely because at present the insufficiency of Special School accommodation makes it impossible to do better for some defective children than to allow them to attend the ordinary school. No space is left for the entry of children with infectious pulmonary tuberculosis attending public elementary schools, as these children should, of course, be promptly excluded from such schools.

(d) Children who are deaf within the meaning of the Act are classified for the purpose of this Table as (1) totally deaf or so deaf that they can only be appropriately taught in a school or class for the totally deaf, and (2) partially deaf, *i.e.*, those who can appropriately be taught in a school or class for the partially deaf.

(e) This category includes only those children for whose education and maintenance the Local Education Authority are responsible, and who are not eligible for notification to the Local Control Authority under the Mental Deficiency Act.

(f) In this part of the Table only those children are included who are epileptic within the meaning of the Act.

(For practical purposes the Board are of opinion that children who are subject to attacks of major epilepsy in school should be recorded as "severe" cases and excluded from ordinary public elementary schools.)

(g) In this part of the Table are entered the remainder of the epileptic children in the area, *i.e.*, children whose disease is of such a kind as not to unfit them for attendance at an ordinary public elementary school.

(h) The exact classification of physically defective is admittedly a matter of difficulty. The Board request School Medical Officers to record these defective children as accurately as possible under the selected sub-headings, taking care that *no child is entered under more than one sub-heading.*

TABLE S 4.

Return of Defects treated during the year ended 31st December, 1927
(see note a).

TREATMENT TABLE.

Group I.—Minor Ailments (excluding uncleanness, for which see Group V).

Defect or disease (1)	Number of defects treated, or under treatment during the year		
	Under the Authority's scheme (see note b.) (2)	Otherwise (3)	Total (4)
<i>Skin</i> —Ringworm—scalp	79	—	79
body	51	2	53
Scabies	35	—	35
Impetigo	428	4	432
Other skin diseases	135	6	141
<i>Minor eye defects</i>	287	5	292
(external and other, but excluding cases falling in Group II.)			
<i>Minor ear defects</i>	151	10	161
(see note c)			
<i>Miscellaneous</i>	1462	16	1478
(e.g., minor injuries, bruises, sores, chilblains, &c.)			
Total	2628	43	2671

Group II.—Defective Vision and Squint (excluding minor eye defects treated as minor ailments—Group I.)

Defect or disease (1)	Number of defects dealt with			
	Under the Authority's scheme (see note b.) (2)	Submitted to refraction by private practitioner or at hospital, apart from the Authority's scheme (3)	Otherwise (4)	Total (5)
Errors of refraction (including squint) (operations for squint should be recorded separately in the body of the report)	921	23	—	944
Other defect or disease of the eyes (excluding those recorded in Group I)	19	—	—	19
Total	940	23	—	963

Total number of children for whom spectacles were prescribed—

(a) Under the Authority's scheme 897
(b) Otherwise 23

Total number of children who obtained or received spectacles—

(a) Under the Authority's scheme 783
(b) Otherwise 23

TABLE S 4—Continued.

Group III.—Treatment of Defects of Nose and Throat.

Number of defects.				
Received operative treatment.			Received other forms of treatment.	Total number treated.
Under the Authority's scheme, in clinic or hospital (see note <i>b</i>), (1)	By private practitioner or hospital, apart from the Authority's scheme. (2)	Total. (3)		
—	26	26	107	133

Group IV.—Dental Defects.

(1) Number of children who were—			
(a) Inspected by the Dentist—			
Routine age groups—aged 10		989	
aged 11		2258	
aged 12		2127	
aged 13		1234	
Special (see note <i>d</i>)		—	6608
(b) Found to require treatment			4165
(c) Actually treated			1811
(d) Re-treated during the year as the result of periodical examination (see note <i>e</i>)			403
(2) Half-days devoted to—			
Inspection		73	
Treatment		306	
		—	379
(3) Attendances made by children for treatment			2631
(4) Fillings.....			
Permanent teeth		1770	
Temporary teeth		4	
		—	1774
(5) Extractions.....			
Permanent teeth		804	
Temporary teeth		1321	
		—	2125
(6) Administrations of general anæsthetics for extractions			—
(7) Other operations.....			
Permanent teeth		472	
Temporary teeth		85	
		—	557
Scalings			1215
Local anæsthetics			1425

Group V.—Uncleanliness and Verminous Conditions (see note *f*).

(i) Average number of visits per school made during the year by Health Nurses	17.5
(ii) Total number of examinations of children in the schools by Health Nurses	48193
(iii) Number of individual children found unclean	2669
(iv) Number of children cleansed under arrangements made by the Local Education Authority	30
(v) Number of cases in which legal proceedings were taken—	
(a) Under the Education Act, 1921	1
(b) Under School Attendance Byelaws	—

NOTES ON TABLE S 4.

(a) The Table deals with all defects treated during the year, however they were brought to the Authority's notice, *i.e.*, whether by routine inspection, special inspection, or otherwise, during the year in question or previously.

(b) This heading includes all cases that received treatment under definite arrangements or agreements for treatment made by the Local Education Authority and sanctioned by the Board of Education under Sections 16 and 80 of the Education Act, 1921. Cases which, after being recommended for treatment or advised to obtain it, actually received treatment by private practitioners, or by means of direct application to Hospitals, or by the use of hospital tickets supplied by private persons, etc., are entered under other headings.

(c) The Board request that if any treatment is given for more serious diseases of the ear (*e.g.*, operative treatment in hospital) it should not be recorded here but in the body of the School Medical Officer's Annual Report.

(d) The heading "Specials" in this Table relates to all children inspected by the School Dentist otherwise than in the course of the routine inspection of children in one of the age groups covered by the Authority's approved scheme, namely, to children specially selected by him, or referred by medical officers, parents, teachers, etc., on account of urgency. The number inspected in each age group is separately shown, as well as the total, but under "Specials" only the total number is given.

(e) It should be understood that all the cases entered under this head are also entered under head (c)

(f) A statement as to the arrangements made by the Local Education Authority for cleansing verminous children and a record of the cases in which legal proceedings were taken are included in the body of the School Medical Officer's report.

N.B—Groups I—V above cover all the defects for which treatment is normally provided as part of the School Medical Service. The Board request that particulars as to the measures adopted by the Authority for providing treatment for other types of defect (*e.g.*, for orthopædic treatment) or for securing improvement in types of defect which do not fall to be treated under the Authority's own scheme and for which the Authority neither incur expenditure nor accept any responsibility, together with a statement of the effect of the measures taken, should be included in the body of the School Medical Officer's report; such particulars following the headings of Table S 2.

TABLE S 5.

Past Infectious Diseases (Elementary School Children).

(1) Children aged 3—7	No. of Cases. Percentage.	
No Infectious Disease	522	18.3
Measles	2004	70.4
Whooping Cough	1276	44.6
Scarlet Fever	86	3.0
Diphtheria	52	1.8
Chicken Pox	899	31.6
Mumps	368	12.7
(2) Children aged 8—14	No. of Cases. Percentage.	
No Infectious Disease	295	6.1
Measles	4336	89.1
Whooping Cough	2872	59.0
Scarlet Fever	349	7.2
Diphtheria	142	2.9
Chicken Pox	2198	45.2
Mumps	1171	30.2

Note.—The same child may have had more than one of these diseases

TABLE S 6.

Number of children examined at Routine Medical Inspections in the Schools and number found defective in each School.

SCHOOL.	Entrants	Intermediates	Leavers	Total ordinary inspections	Parents present	*Number of defective children	Number of defects found	CLASSIFICATION OF DEFECTS													Totals				
								Malnutrition	Skin diseases	Eyes	Ears	Nose and throat	Cervical glands (non-tuberculous)	Defective speech	Teeth	Heart and circulation	Lungs	Tuberculosis (pulmonary)	Tuberculosis (non-pulmonary)	Nervous system		Deformities	Other defects and diseases		
Bidston Avenue	145	90	86	321	240	67	75	—	1	20	3	12	4	—	17	4	4	1	1	—	—	—	8	75	
Brassey Street Infants ..	83	47	—	130	105	21	24	—	1	5	2	5	—	1	3	1	1	1	—	1	—	—	—	3	24
Cathcart Street	118	98	62	278	198	72	80	1	2	13	6	24	1	1	10	6	8	—	1	—	—	—	3	4	80
Hemingford St. Infants..	94	58	—	152	146	8	10	—	1	2	—	2	—	—	3	—	—	—	—	—	—	—	1	1	10
Laird Street.....	130	99	75	304	243	120	140	3	4	19	6	50	6	—	19	5	15	—	1	—	—	—	2	10	140
Mersey Park	151	120	77	348	272	41	44	1	2	14	2	7	—	—	3	3	7	—	1	—	—	—	3	1	44
Pilgrim Street.....	100	90	49	239	190	37	44	—	1	19	2	5	1	—	9	1	3	—	—	—	—	—	1	2	44
Rock Ferry	140	100	135	375	249	63	66	1	5	15	1	14	—	1	13	4	6	—	—	—	—	—	—	5	66
The Woodlands	106	98	77	281	213	37	40	—	3	5	1	8	1	—	16	1	1	—	—	—	—	—	—	4	40
Well Lane.....	120	95	84	299	223	31	31	1	1	15	1	4	—	1	3	1	1	1	—	—	—	—	1	1	31
Woodchurch Road	134	143	85	362	287	32	32	1	1	17	—	4	1	—	2	2	2	—	—	—	—	—	1	1	32
Park Road Temporary	59	19	—	78	65	7	7	—	—	2	—	—	—	—	1	1	1	—	—	—	—	—	1	1	7
Cleveland Street ,, ...	68	51	—	119	104	13	14	—	—	6	2	5	—	—	1	—	—	—	—	—	—	—	—	—	14
Price Street ,, ..	—	2	20	22	16	7	7	—	—	2	—	—	1	—	2	—	—	—	—	—	—	—	1	1	7
Trinity Street ,, ...	71	65	97	233	153	60	65	4	2	22	3	13	2	1	4	5	4	1	—	—	—	—	—	4	65
Cloughton H.G.	90	103	113	306	228	38	39	1	1	22	2	6	—	—	3	1	—	—	—	—	—	—	1	1	39

TABLE S 7.
Defects dealt with at the Minor Ailments Clinic month by month.

Month	NUMBER OF ATTENDANCES FOR TREATMENT								RESULTS	
	Ringworm	Impetigo	Scabies	Eye diseases	Ear diseases	Other defects	Total No. of attendances	No. cured	No. of new cases	
January	55	263	—	196	121	306	941	42	193	
February	32	296	5	225	138	477	1173	50	199	
March	75	378	7	250	133	464	1307	62	213	
April	57	258	4	155	128	338	940	28	169	
May	53	321	3	215	164	488	1244	55	252	
June	41	299	1	204	105	484	1134	48	169	
July	3	20	—	16	6	27	72	—	7	
August	20	119	9	79	25	220	472	18	137	
September	23	240	8	213	79	547	1110	60	244	
October	20	171	5	248	119	657	1220	36	250	
November	33	244	4	259	128	839	1507	79	280	
December	18	105	6	139	73	479	820	26	131	
Totals	430	2714	52	2199	1219	5326	11940	504	2244	