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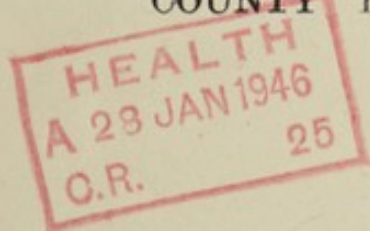
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COUNTY BOROUGH OF DARLINGTON.



REPORT

OF THE

ACTING

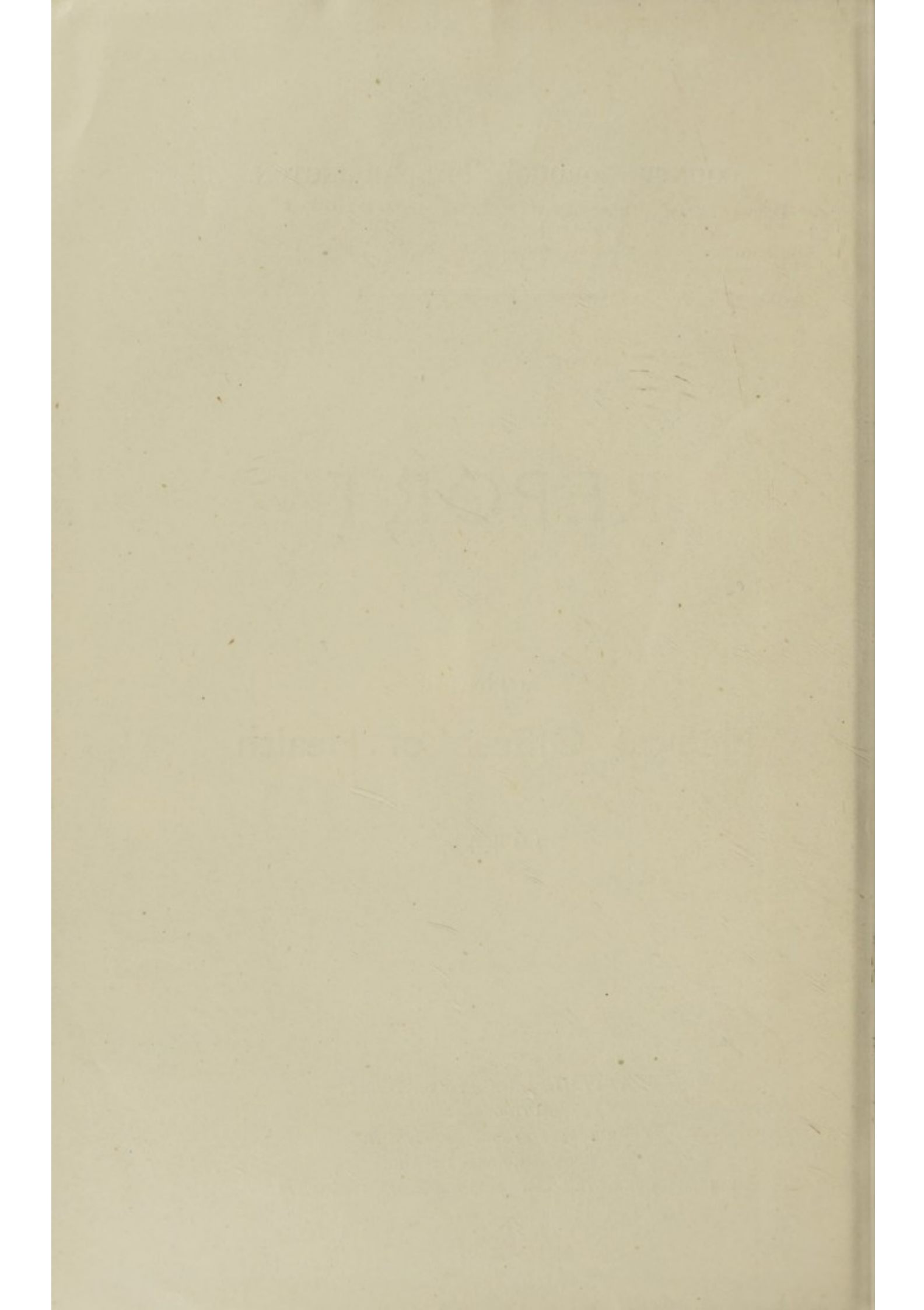
Medical Officer of Health

1944.

F. A. PAUL, L.R.C.P. & S., D.P.H.,
ACTING

MEDICAL OFFICER OF HEALTH
SCHOOL MEDICAL OFFICER

MEDICAL SUPERINTENDENT OF CORPORATION HOSPITALS.





COUNTY BOROUGH OF DARLINGTON.

ANNUAL REPORT

OF THE

SCHOOL MEDICAL OFFICER

FOR THE

Year ending 31st December, 1944.

DARLINGTON:

THE SKERNE PRINTING CO. (1927) LTD., GARDEN STREET.

ANNUAL REPORT, 1944.

Health Centre,
Greenbank,
Darlington.

*To the Chairman and Members
of the Education Committee.*

Ladies and Gentlemen,

I have the honour to submit for your consideration the Annual Report of the School Medical Services for 1944.

The regrettable untimely decease of your late School Medical Officer, with resulting increased pressure of work placed on me, must of necessity make this an even shorter report than has been compiled during war years.

With the ending of European hostilities we look forward to more help and a furtherance of our work.

I take this opportunity of thanking the Chairman, members of the Education Committee, and the Chief Education Officer for their support, and of expressing my deepest gratitude to the Staff for their willing and ready co-operation and assistance in supplying the figures and data necessary to compile this report.

F. A. PAUL,
Acting School Medical Officer.

MEMBERS OF THE EDUCATION COMMITTEE.

COUNCILLOR R. LUCK (*Chairman*).

ALD. A. J. BEST, J.P.	COUN. R. F. SCOTT, O.B.E.
ALD. S. HARDWICK, J.P.	COUN. C. HARRISON.
	COUN. B. DODD.
ALD. W. HESLOP, J.P.	COUN. J. CLAYTON, F.R.I.B.A.
ALD. J. D. HINKS, J.P.	LADY STARMER.
ALD. W. G. CHANDLER, M.B.E., J.P.	MISS O. M. STANTON, M.A.
ALD. T. E. HUDSON.	COUN. J. D. SINCLAIR, O.B.E., M.R.C.S.
COUN. J. BANKS.	L.R.C.P.
COUN. H. P. BELL, J.P. (<i>Vice- Chairman</i>).	COUN. J. W. WATSON.
	COUN. M. LYONETTE.

STAFF OF SCHOOL MEDICAL SERVICE.

School Medical Officer	....	....	G. A. DAWSON, M.D., D.P.H. (died 15th December, 1944).
Assistant School Medical Officers	....	....	FRANK A. PAUL, L.R.C.P., D.P.H. (Acting School Medical Officer from 16th December, 1944). WINIFRED M. RYAN, M.R.C.S., L.R.C.P.
Ophthalmologist	....	....	A. T. PATERSON, M.D., F.R.C.S. (Ed.), D.P.H. (Part-time).
School Dental Officers	....	....	MR. N. WILKINSON, L.D.S. (part-time). MR. T. H. SMAILES, L.D.S. (part-time). MRS. M. F. AUCKLAND, L.D.S. (part-time) (resigned 29th February, 1944).
Psychiatrist	....	....	MRS. B. E. RIDLEY, B.A. M.B., B.Ch. (part-time).
Nurses	....	....	GLADYS M. WHITTAKER (Senior Nurse). DORIS M. GOODINSON. LAURA ADDISON. KATHLEEN SHERRY.
Speech Therapist	....	....	MISS B. MAKGILL, AS.S.T. (part-time). (Resigned 7th December, 1944).
Clerks	....	....	AUDREY SMITH (Senior Clerk). PATRICIA HARRIS. JOSEPHINE CONWAY. ELLA OYSTON. ALISON SMALL (till 31st March, 1944). DOREEN DODGSON (from 28th Sept., 1944). MYRA PHILLIPS (from 17th April, 1944 till 31st August, 1944).

Elementary Schools.

There are 21 schools with 9,266 children on the rolls. The average attendance throughout the year was 87.5%, lowest in November, 85.6% and highest in June, 90%.

Inspection.

Routine Medical Inspections were carried out in 3,520 cases, almost three times the number of last year's inspections. 3,035 special cases and re-examinations were also seen by the Assistant School Medical Officer.

Co-operation of Parents.

In spite of war difficulties parents continued to attend at medical inspections, more especially in the case of entrants and were anxious to carry out the advice given by the Medical Officer.

Nutrition Survey.

The standard of nutrition is still high and provision of meals and milk are the factors which contribute to this condition.

5,485 children were examined and classified as follows:—

A—Excellent	....	....	....	13.6%
B—Normal	....	....	....	82.3%
C—Slightly Subnormal	....	....	....	4%
D—Definite Malnutrition	....	....	....	0.1%

Provision of Milk.

The milk scheme continues to prove very satisfactory. 2,312,009 bottles were supplied during the year, of these 88,799 were provided free of cost.

Provision of Meals.

These are still of excellent quality and sufficiently varied to ensure a completely balanced diet throughout the year. 795,962 meals were taken during the year, of these 37,431 were free, an average of 4,328 per day.

Minor Ailments at the School Clinic.

These are many and varied. Clinics are held daily with a Medical Officer in attendance at Greenbank during each afternoon. 12,949 attendances were made for treatment and advice.

Impetigo.

420 cases received treatment, rather less than last year, the number then being 533. Possibly owing to lack of parental supervision a good many cases were more severe on arrival at the clinic than has been the case in recent years.

Scabies.

A war time skin disease and a disease which unless caught in the early stages can be very troublesome. The Benzyl Benzoate Emulsion treatment is largely used but cases with secondary infection must of necessity have various treatments according to the severity of the infection. 392 cases were treated.

Artificial Sunlight Treatment.

The number of cases treated this year is slightly higher than last year. No special pre-disposing cause is responsible for this, as is shown by the conditions given below, in comparison with last year's diseases. 142 cases received treatment as against 110 last year.

General Debility	....	....	....	....	....	64
Malnutrition	....	....	....	....	....	7
Catarrhal Conditions	....	....	....	....	....	27
Rickets	....	....	....	....	....	15
Rheumatism	....	....	....	....	....	7
Blepharitis and other eye conditions	....	....	....	....	....	3
Other conditions, alopecia, etc.	....	....	....	....	....	19

School Nurses.

During the year the Nurses paid 366 surprise visits to the schools and 1,248 were found to have unclean heads. Home visits and advice in school resulted in the number at the end of the year being reduced to 804.

For the purpose of following up defects other than cleanliness the Nurses paid 2,328 home visits, a very essential part of their work, which produced good results.

Evacuees.

These were examined by the Assistant School Medical Officer on arrival in the town in July. Minor ailments were treated by the School Nurses at the Rest Centre until billets were found for the evacuees.

SCHOOL CANTEENS.—MENUS.

Week I.

MONDAY.

Shepherd's Pie—Gravy—Peas.
Stewed Prunes—Custard.
Raw Carrot.

TUESDAY.

Roast Meat—Carrots—Potatoes—Gravy.
(Salad in Season).
Steamed Chocolate Pudding—Custard.
Cheese.

WEDNESDAY.

Meat and Potato Pie—Mashed Swedes—Gravy.
Semolina Pudding with Jam **or** Fruit.
Raw Carrot.

THURSDAY.

Lancashire Hot Pot—Greens—Gravy.
Jam Slices—Custard.
Cheese.

FRIDAY.

Sausage Meat Pie—Carrots—Potatoes—Gravy.
Steamed Ginger Pudding—Custard.
Cheese.

Week III.

MONDAY.

Fish Pie (or Mince)—Carrots—Potatoes—
Gravy.
Jam Slices—Custard.
Cheese.

TUESDAY.

Sausage Meat Pie—Greens—Potatoes—Gravy.
Stewed Prunes—Custard.
Cheese.

WEDNESDAY.

Roast Meat—Mashed Swedes—Potatoes—
Gravy.
Steamed Ginger Pudding—Custard.
Raw Carrot.

THURSDAY.

Meat & Potato Pie—Peas—Potatoes—Gravy.
Semolina Pudding with Jam **or** Fruit.

FRIDAY.

Cold Ham—Carrots—Potatoes—Gravy.
(Salad in Season).
Jam Slices—Custard. Cheese.

Week II.

Cold Spam—Carrots—Potatoes—Gravy.
(Salad in Season).
Sultana Squares—Custard.
Cheese.

Meat and Vegetable Stew—Mashed Swedes—
Potatoes.
Steamed Sponge Pudding—Custard.

Fish Pasty (or Roast Meat)—Greens—Potatoes
—Gravy.
Fruit Salad—Custard.
Cheese.

Mince—Carrots—Potatoes.
Steamed Sultana Pudding—Custard.
Cheese.

Cornish Pasty—Greens—Potatoes—Gravy.
Rice Pudding and Sultanas.
Raw Carrot.

Week IV.

Cornish Pasty—Carrots—Potatoes—Gravy.
Rice Pudding and Sultanas.
Cheese.

Lancashire Hot Pot—Greens.
Sultana Squares—Custard.
Raw Carrot.

Cold Spam—Carrots—Potatoes—Gravy.
(Salad in Season).
Steamed Sultana Pudding—Custard.
Cheese.

Shepherd's Pie—Mashed Swedes—Gravy.
Fruit Salad—Custard. Cheese.

Meat and Vegetable Stew—Greens—Potatoes.
Steamed Sponge Pudding—Custard.
Raw Carrot.

REPORT OF OPHTHALMOLOGIST.

Dr. A. T. PATERSON, M.D., F.R.C.S. (Ed.), D.P.H.

There is not much that can be said about the School Ophthalmic work that has not been said before. The noticeable diminution of external eye diseases continues and that can be attributed to better health among school children as a whole—this better health has been partly obtained by provision of milk and school dinners and general improvement in the cleanliness of the school child and provision for prompt treatment at the School Clinic of such minor eye diseases as are discovered or reported—all these things no doubt cost money but the money pays handsome dividends and never a loss. Cases of high myopia are also showing a diminution and this too can be credited to improved physique in the young growing child.

The provision of free spectacles is something I have always advocated and now has come to pass—the decision of the Education Authority to supply free a superior type of frame is a good one since it encourages the child to wear something that is pleasing to him or her and does away with any class distinction—the child of the poor man does not feel he is any different from the child of the better-off man—at least in so far as the type of spectacles he or she wears.

I should like here to pay a tribute to the late School Medical Officer (Dr. G. A. Dawson) whose tragic demise occurred during the past year. I had worked with him for nearly twenty years and never had a cross word with him—whatever were his shortcomings, and these were perhaps were due to his youth and lack of worldly experience when he followed Dr. Mostyn—yet his zeal for what he considered his duty cannot be denied—had his motto been “suaviter in modo” rather than “fortiter in re” he might still have been with us!

Nurse Whittaker in her assistance to me has been all that could be desired.

ARTHUR T. PATERSON.

DENTAL REPORT.

Whilst still working under the handicap of depleted staff, we have to report the continued improvement in the condition of the children's mouths.

The long term policy which we have pursued during the past four years is now bearing fruit.

All schools were examined during the course of the year and ten were examined a second time.

Elementary Schools.

Inspections	....	9,650
Requiring Treatment	....	3,031
Actually Treated	....	2,110
Fillings	....	814
Extractions	....	3,764

Special and Secondary Schools.

Barnard M.D.	....	38
Open Air	....	124
George Dent Nursery	....	89
Nursery Classes	....	229
Grammar	....	756
Girls' High	....	70
Technical	....	139

General Anæsthetics 655

NORMAN WILKINSON.

T. H. SMAILES.

Tonsils and Adenoids.

196 cases received operative treatment at the Memorial Hospital, an improvement on last year. There is still a long waiting list of Darlington school children. Under peace time conditions facilities for operative treatment will possibly improve.

Immunisation against Diphtheria.

The number of children immunised during the year was lower than the previous year. Propaganda methods are being improved, with a view to bringing more personal attention to each parent the urgent necessity of this protection for the child against diphtheria. The number immunised was 355.

Special Defects.

Rheumatism, Heart and Chorea cases are rather higher this year than last, due no doubt to the fact that a more full and detailed routine inspection was carried out. This being the only method whereby these cases can be discovered. Some have had Ultra Violet Ray treatment, others Open Air School treatment, whilst a few have benefited by a period at Wycliffe Convalescent Home. 80 children were found suffering from the above.

Blind.—Four are in residential institutions.

Deaf.—Two are in residential institutions, and eight travel to Stockton School for the Deaf.

Cripples.—Of 37 cripples, 3 are in Hospital, 9 at the Open Air School, 21 at elementary schools and 4 are not attending school.

Salters Lane Open Air School.

There were 83 children in attendance at the end of the year. New admissions were effected in 32 cases.

Barnard School for Mental Defectives.

At the end of the year 61 children were in attendance, 23 children have been admitted and 17 left. Of the 17 who left, 5 have been allowed to take up employment before the age of 16, 2 were de-certified and 4 were notified to the Local Authority. It has been very easy, owing to war conditions, for these children to find employment. After leaving school they are kept under special supervision.

Nursery School and Classes.

These have continued to do excellent work in caring for the children whose parents have been employed on war and essential work.

As far as possible they are each visited once a week by a School Nurse who advises on medical points and treatment of minor ailments.

Orange juice, cod liver oil being additional vitamins given and ferrous sulphate tablets for tonic purposes in necessitous cases.

Routine Medical Inspections are carried out by the Assistant School Medical Officer.

Defective Speech.

The special classes were carried on during 1944 until December when Miss Makgill returned to New Zealand. Many cases of distressing defects in speech were cured by Miss Makgill's patience and efficiency during the period of her duties in the town.

Seconday Schools.

Routine Medical Inspections were carried out at the four Secondary Schools. The health of the pupils was found to be satisfactory.

Medical Examinations of Staff.

99 teachers, clerks and others were examined and certified fit to commence duty or able to return to duty after prolonged illness.

Infectious Diseases and Deaths amongst School Children.

	<i>Cases.</i>	<i>Deaths.</i>
Scarlet Fever	100	—
Diphtheria	111	4
Measles and German Measles	50	—
Whooping Cough	22	—
Acute Primary Pneumonia	4	1
Cerebro Spinal Fever	1	—
Tuberculosis	9	3
Total	297	8

School Attendance Officers.

- | | |
|--|--------|
| (1) Certificates from private practitioners forwarded to Clinic | 1,008 |
| (2) Details of transfers, new admissions and leavers, etc. | Weekly |
| (3) Notices received from the Clinic of children excluded from school | Daily |
| (4) Medical records of migrants forwarded to or received from other authorities | Weekly |

Children and Young Persons Act, 1933.

	<i>Y.P's</i>	<i>Chn.</i>
(1) Medical examinations for purposes of Employment of Children Byelaws	—	188
(2) Medical examination for entry to Approved Schools	3	3
(3) " " " Remand Home	3	20
(4) " " to take part in entertainments....	—	1
(5) Special medical examinations in connection with Juvenile Court	—	11
(6) Special medical examinations in connection with Waifs and Strays Home	—	1

(b) (1) The following is a list of the names of the persons who have been appointed to the various committees of the Board of Directors of the American Telephone and Telegraph Company, for the year ending December 31, 1911.

(b) (2) The following is a list of the names of the persons who have been appointed to the various committees of the Board of Directors of the American Telephone and Telegraph Company, for the year ending December 31, 1912.

(b) (3) The following is a list of the names of the persons who have been appointed to the various committees of the Board of Directors of the American Telephone and Telegraph Company, for the year ending December 31, 1913.

(b) (4) The following is a list of the names of the persons who have been appointed to the various committees of the Board of Directors of the American Telephone and Telegraph Company, for the year ending December 31, 1914.

(b) (5) The following is a list of the names of the persons who have been appointed to the various committees of the Board of Directors of the American Telephone and Telegraph Company, for the year ending December 31, 1915.

(b) (6) The following is a list of the names of the persons who have been appointed to the various committees of the Board of Directors of the American Telephone and Telegraph Company, for the year ending December 31, 1916.

J. C. M. HOBBS

(b) (7) The following is a list of the names of the persons who have been appointed to the various committees of the Board of Directors of the American Telephone and Telegraph Company, for the year ending December 31, 1917.

(b) (8) The following is a list of the names of the persons who have been appointed to the various committees of the Board of Directors of the American Telephone and Telegraph Company, for the year ending December 31, 1918.

(b) (9) The following is a list of the names of the persons who have been appointed to the various committees of the Board of Directors of the American Telephone and Telegraph Company, for the year ending December 31, 1919.

(b) (10) The following is a list of the names of the persons who have been appointed to the various committees of the Board of Directors of the American Telephone and Telegraph Company, for the year ending December 31, 1920.

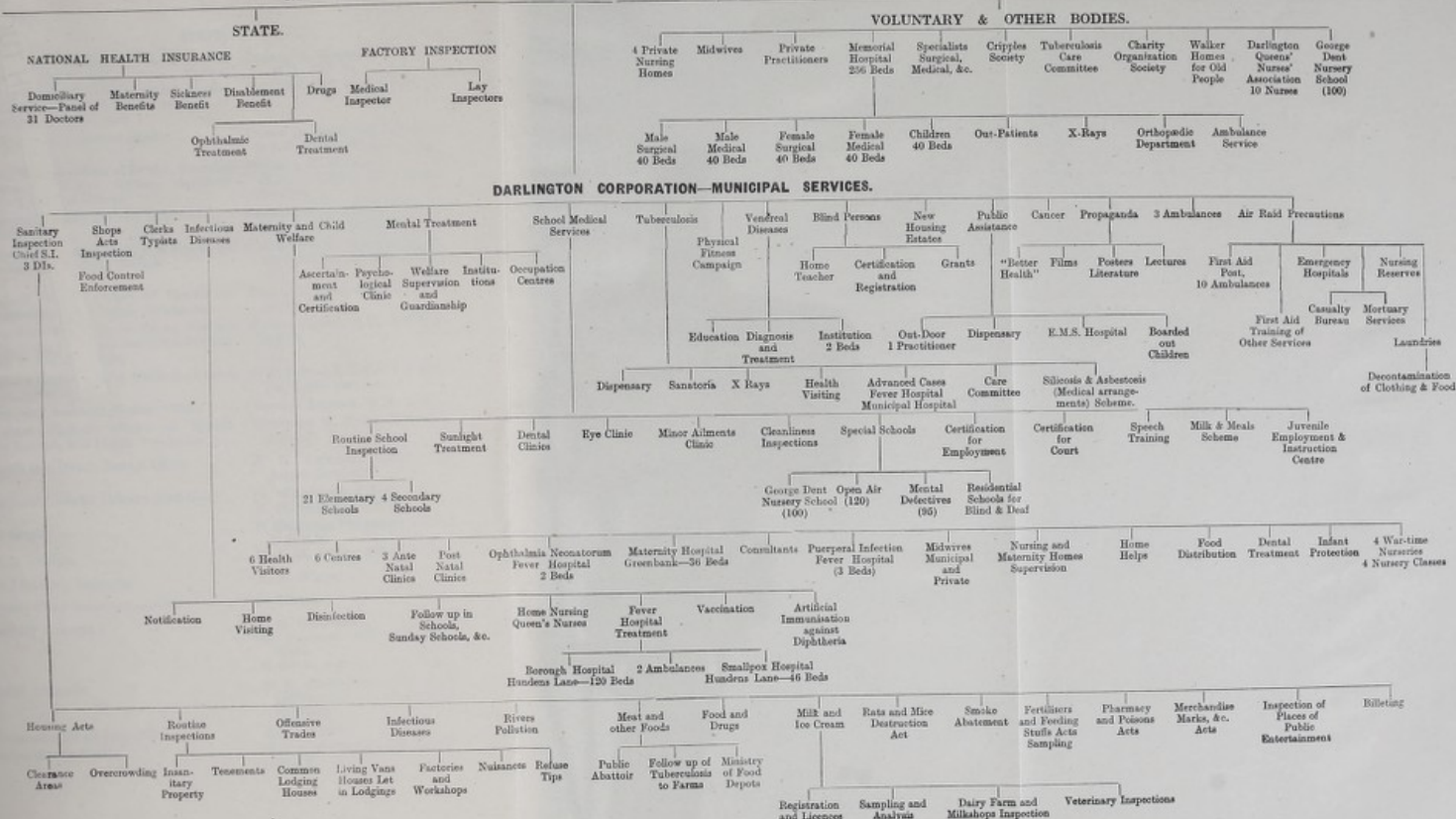
(b) (11) The following is a list of the names of the persons who have been appointed to the various committees of the Board of Directors of the American Telephone and Telegraph Company, for the year ending December 31, 1921.

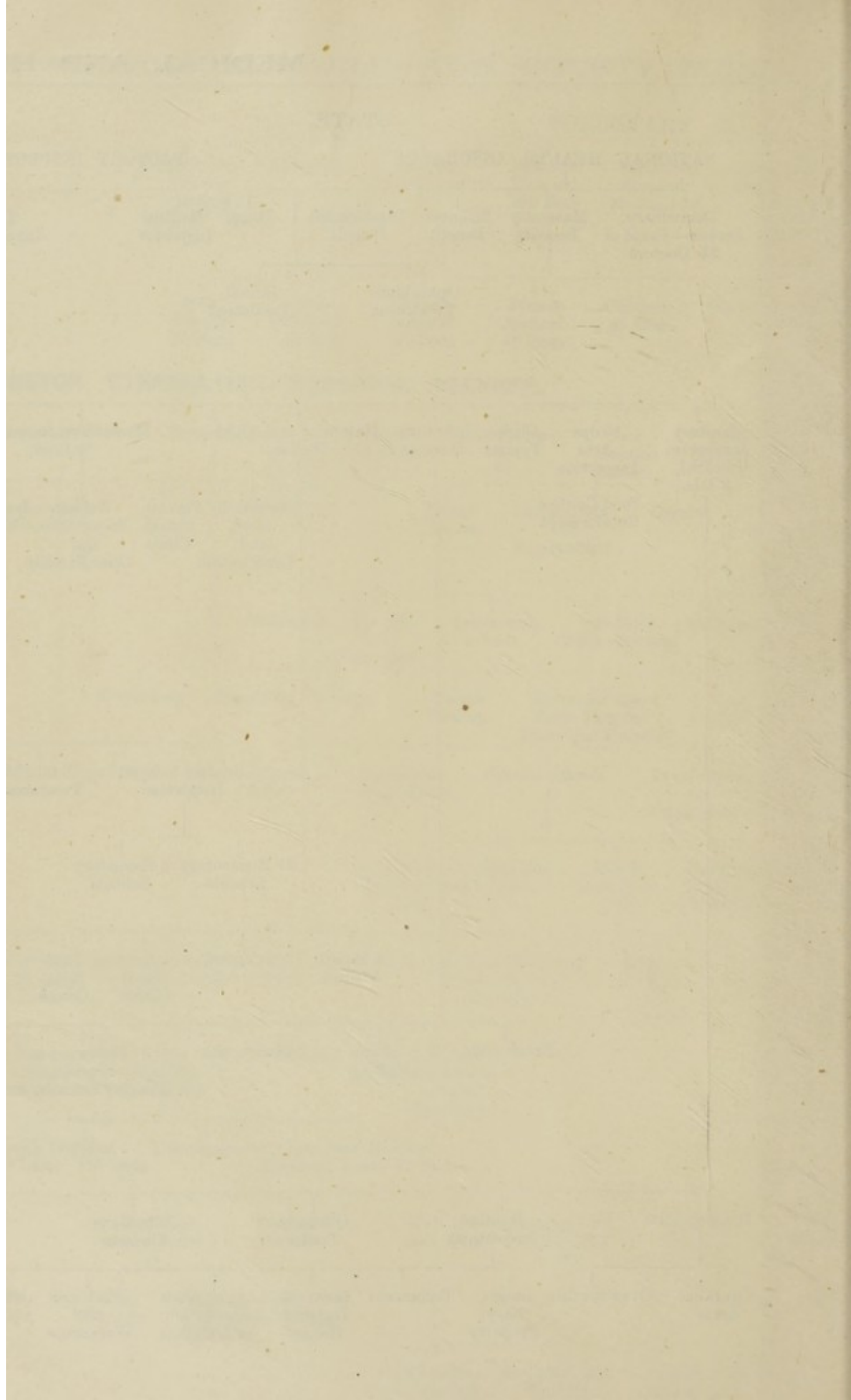
(b) (12) The following is a list of the names of the persons who have been appointed to the various committees of the Board of Directors of the American Telephone and Telegraph Company, for the year ending December 31, 1922.

(b) (13) The following is a list of the names of the persons who have been appointed to the various committees of the Board of Directors of the American Telephone and Telegraph Company, for the year ending December 31, 1923.

(b) (14) The following is a list of the names of the persons who have been appointed to the various committees of the Board of Directors of the American Telephone and Telegraph Company, for the year ending December 31, 1924.

MEDICAL AND HEALTH SERVICES IN DARLINGTON COUNTY BOROUGH-1944.





STAFF.

Medical Officer of Health, School Medical Officer, Chief Tuberculosis Medical Officer, Medical Certifier under Mental Deficiency Acts, Medical Examiner of Corporation Employees	GEORGE A. DAWSON, M.D., D.P.H. (Died 15th Dec., 1944)
Acting Medical Officer of Health	FRANK A. PAUL, L.R.C.P. & S., D.P.H. (from 15th Dec., 1944).
Deputy Medical Officer of Health, Venereal Diseases Medical Officer, Assistant School Medical Officer	WILLIAM E. ORCHARD, M.D., D.P.H. (on Active Service).
Temporary Deputy Medical Officer of Health	FRANK A. PAUL, L.R.C.P. & S., D.P.H. (till 15th Dec., 1944).
Temporary Assistant Medical Officer of Health for Maternity and Child Welfare	CATHERINE W. HARRIES, M.B., B.Ch., B.Sc. (til 4th April, 1944).
Assistant Medical Officer of Health for Tuberculosis and Public Assistance	FRANK A. PAUL, L.R.C.P. & S., D.P.H.
Temporary Part-time Assistant Medical Officer for Maternity and Child Welfare and Public Assistance	KAMEL GIRGIS, M.D., F.R.C.S., D.P.H.
Assistant Medical Officer, Public Assistance Committee	C. D. STONE, M.R.C.S., L.R.C.P. (on Active Service).
Temporary Assistant Medical Officer	ARTHUR INGHAM, M.B., Ch.B.
Assistant Medical Officer of Health, for Schools, and Public Vaccinator	WINIFRED M. RYAN, M.R.C.S., L.R.C.P.
Schools and Health Dental Officer	J. L. LIDDELL, L.D.S. (on Active Service).
Temporary Dental Officers (half-time)	N. WILKINSON, L.D.S. T. H. SMAILES, L.D.S.
Radiologist	W. CRICHTON FOTHERGILL, M.D., D.M.R.E.
Public Analyst	C. J. H. STOCK, B.Sc., F.I.C.
Chief Sanitary Inspector	A. E. WADE.
Deputy Chief Sanitary Inspector	F. WARD.
Sanitary Inspectors	J. H. BURROWS. A. CORNICK, (till 31st Oct., 1944). L. OATES, (till 31st Aug., 1944).
Shops Inspector	H. R. KIRK (seconded as Staff Officer, Civil Defence Casualty Services).
Temporary Shops Inspector	JAMES SMITH.
Senior Health Visitor	MISS A. M. McILWAINE, S.C.M., S.R.N.

District Health Visitors and Child Life Protection Officers				MISS E. H. FLEETHAM, H.V.C., S.C.M., S.R.N.
				MISS M. MILESTONE, H.V.C., S.C.M., S.R.N.
				MRS. V. W. ANDERSON, H.V.C., S.C.M., S.R.N.
				MISS E. WINCH, H.V.C., S.C.M., S.R.N.
				MISS E. HUNTER, H.V.C., S.C.M., S.R.N.
				MISS V. I. SMILES.
Matron Infectious Diseases and Smallpox Hospitals				MISS GAYNOR L. PRITCHARD, S.R.N., S.C.M., R.S.F.N.
Matron Maternity Hospital	....	....		MISS KATE I. KEMP, S.R.N., S.C.M.
Superintendent Nurse Municipal Hospital				MISS A. MORAN, S.R.N., S.C.M.
Mental Welfare Supervisor	....	....		MISS R. ROBINSON.
Blind Welfare and Tuberculosis Almoner	....			MISS N. BLACK.
<i>Municipal Midwives.</i>				<i>Matrons of Nurseries.</i>
MRS. E. HARRIS, S.C.M.			Station Road—	MRS. E. ALEXANDER, S.C.M.
MRS. F. R. HAWLEY, S.C.M.			Hundens Lane—	MRS. M. FORSTER, S.R.N.
MRS. I. WILSON, S.C.M.			Albert Hill—	MRS. A. W. KNOWLES, S.R.C.N. (to 19th August, 1944).
			" "	MISS D. S. OWEN, S.R.N. (from 20th Nov., 1944).
			North Road—	MRS. E. WILSON, S.R.N. (to 28th Dec., 1944).
Maternity and Child Welfare Home Help				MISS L. ROBINSON.
Matron, Queen's Nurses' Association	....			MISS HOLMES, S.R.N., S.C.M.
Registrar of Births, &c.	....	....		E. K. CORLETT.
Chief Clerk, Health Centre	....	....		E. C. STAINSBY.
Vaccination Officer	....	....		MISS DORIS HUTTON.
Clerical Staff	....	....		MISS F. E. GIBBON.
				MRS. D. A. MOUNSEY.
				MISS D. HUTTON.
				MISS F. I. GOODWILL.
				I. BURNLEY, } on
				S. DALEY, } Active
				D. G. WARDE } Service
Temporary Clerks	....	....		MRS. E. WARD.
				H. EVANS.
				MISS E. SCOTT.
				MRS. M. I. L. HOWLETT, (from 2nd Dec., 1943).
				MISS I. STOCKDALE, (from 22nd Nov., 1943).
V.D. Orderly	....	....		J. T. H. LITTON.
Home Visitor for Blind	....	....		C. F. COOKE.
Rat Catcher (part-time)	....	....		J. R. OXLEY.

ANNUAL REPORT, 1944.

To the Chairman and Members
of the Health Committee.

MR. CHAIRMAN AND GENTLEMEN,

It is with pleasure that I present the Annual Report on the health of the town for 1944. With the medical staff so depleted, especially through the tragic death of Dr. G. A. Dawson, your Medical Officer of Health, on the 15th December, 1944, many and varied duties have since that date fallen to my lot and this report must therefore necessarily be a brief one.

Under the present war-time conditions, one might expect to find a deterioration in the health of the people, but statistics show that the health of the town is eminently satisfactory.

The birth-rate was 19.8 per thousand, an appreciable increase from the previous year, when it was 16 per thousand. The death-rate of 12.5 per thousand, is a slight decrease on the previous year. With the end of the war one can look forward to a still greater increase in the birth-rate in the immediate post-war years and provision is being made to some extent for this at our Maternity Hospital. Illegitimate births still show an increase, being 96 during the year, which is approximately double that of the pre-war figure and an indication of the demoralising effect of war. The infantile mortality rate is considerably less, being 41.5.

Infectious Diseases.—Almost all of the infectious diseases showed an appreciable decline from the previous year. It is gratifying to see that there is a considerable decrease in the number of cases of diphtheria, for which immunisation is undoubtedly to a large extent responsible. Out of 209 cases of diphtheria, 10 deaths occurred and these were in persons not immunised. No serious outbreak of infectious disease occurred during the year.

Venereal Diseases.—During the year we had under treatment ³⁵²~~345~~ new cases, an increase from 1943 when the figure was 326. Of the 352 new cases, 224 were non-venereal, the latter figure showing no material alteration from the previous year. Fifty-five new cases of Syphilis occurred during the year, a figure considerably more than in 1943 when the number of new cases of syphilis was 38. New cases of gonorrhoea during the year numbered 73, a slight decrease from the previous year when the corresponding figure was 82.

The employment of a contact tracer for our 33B cases has received much consideration. The problem in Darlington is a serious one owing to our close proximity to Catterick and other places where large numbers of army and air force personnel are stationed. At the moment, contact tracing is done by our Health Visitors, but frequently the information is so scanty as to be almost useless and so the majority of the 33B cases notified to us are never traced.

Tuberculosis.—During 1944, 1,280 persons attended the Dispensary as compared with 1,348 during 1943. Under Memo. 266T., 11 patients were in receipt of grants at the beginning of the year, 14 more were added to the list during the year, and 8 patients remained on the register at the end of the year.

These patients are seen by me at the Dispensary once a month and the length of time during which they are in receipt of the grant varies from six to eighteen months, the average time being about one year. Unfortunately most cases seen at the Dispensary for the first time are found on examination to be too advanced to warrant the making of any allowance under this scheme. The early cases for which the grant was originally intended form only a small proportion of the cases attending the Dispensary for the first time because such cases are so often symptomless and fail to develop symptoms until the disease has reached the advanced incurable stage.

War-time Nurseries.—In September 1944 the fifth and last war-time nursery on our programme with accommodation for 80 children was opened at Eastbourne Park by the Mayoress, Mrs. Trees. Since there was no demand for another night nursery, it was equipped for day use only. The work done by these war-time nurseries has been excellent in caring for the children of war-workers.

Maternity and Child Welfare.—The Maternity Hospital at Greenbank had a record year during which there were 726 admissions. It is hoped in the near future to increase the number of maternity beds to meet the growing demand.

The total number of attendances of mothers and infants at the Maternity and Child Welfare Centres was 19,289, which is a slight increase over the previous year.

Illegitimate Children born in 1944.—There were 53 illegitimate births notified during 1944 including eight stillbirths. In addition the Health Visitor visited thirteen illegitimate children of married women (see table below. Of the three children who died one was from prematurity (one day old), the second from prematurity and convulsions at three weeks and the third from Chronic Pneumonia at 4 months. Eight babies were adopted, five through the Newcastle Adoption Society and three in Darlington. Three children were legitimised by marriage.

The general care of the illegitimate children born in 1944 is good. Seven needed frequent supervision monthly and in some cases weekly, where the children were born in unsatisfactory homes. The Health Visitors have visited the homes of the remaining illegitimate children approximately once in three months, whilst some were seen in the day Nurseries.

A report on the illegitimate children is submitted to the Medical Officer of Health each month.

Illegitimate Children, 1944.

1—Notified as illegitimate	53
2—Unnotified as illegitimate but found as such on routine visiting	13
Stillbirths (included in 1 and 2)	8
Deaths under one year	3
Transfers out-adopted	8
Adopted in town	3
Transfers in	11
Legitimised by marriage of parents	3

Premature Infants.—The following Table gives the information about premature Infants :—

Number of premature babies notified who were born—

(1)	(a)	At home	....	....	....	....	40
	(b)	In hospital	....	....	....	....	70
(ii)	The number of those born at home—						
	(a)	who were nursed entirely at home	....	....	....	....	27
	(b)	who died during the first 24 hours	....	....	....	....	4
	(c)	who survived at the end of one month	....	....	....	....	15
(iii)	The number of those born in hospital—						
	(a)	who died during the first 24 hours	....	....	....	....	5
	(b)	who survived at the end of one month	....	....	....	....	42

Scabies and Verminous Heads.—There were 392 cases of scabies and 1,248 cases of verminous heads. The treatment with benzyl benzoate has given excellent results in the former condition, and even the worst cases are generally cured after three applications. Very satisfactory results have been obtained in the latter conditions by the use of lethane oil.

Rats and Mice (Destruction) Act, 1919.—As in former years, the administration of this Act was carried out by the Health Department., The Sanitary Inspectors visit and inspect premises where rats or mice are alleged to exist.

An official Rat-Catcher (part-time) is employed who acts under the supervision of the Health Department.

The whole of the properties owned or controlled by the Corporation are under the constant supervision of the Rat-Catcher. The number of rats killed by him during 1944, was 703, but these figures do not include the rats that were poisoned. Seven informal notices were served and complied with.

In addition to the work done by the Health Department, there is an Organisation in the Borough styled the Darlington Ratting Club, who do very good work.

The following are the principal places at which the rats have been destroyed :—

Harrowgate Hill Tip	....	....	....	....	1
Clifton Road Tip	....	....	....	....	8
Hundens Lane Tip	....	....	....	....	361
Corporation Yard	....	....	....	....	20
Sundry Premises	....	....	....	....	313

Water Supply.—The following information has been kindly provided by the Water Engineer, Ernest Minors, Esq., B.Sc., A.M.Inst.C.E., to whom I am indebted.

The supply is taken from the River Tees and purified by means of pressure filters. It will be recalled that when this plant was first put into operation in 1926 the standard of purification was not altogether satisfactory but this was rectified by introducing sodium aluminate into the water in addition to the alumina ferric and this resulted in a considerable saving in the

use of wash water and an improvement in the final quality of the water. The Darlington Waterworks were the first in England to adopt this method which is now used in many other installations.

Chlorination has been continued throughout the war years and the analyses which are made every week by the Borough Analyst of the raw, filtered and chlorinated water have, in every instance, been satisfactory from a bacteriological standpoint. To counteract the possibility of plumbo-solvency, lime is added before the water leaves the Works.

During the war years the consumption of water has increased even more rapidly than in the years prior to 1939—how much may be seen from the table which follows :—

<i>Year ending 31st March.</i>	<i>Gallons pumped.</i>
1939	1,286,590,000
1940	1,363,100,000
1941	1,593,520,000
1942	1,670,190,000
1943	1,726,350,000
1944	1,863,230,000

As a consequence it became necessary in 1942 to install a new battery of seven pressure filters and a new Town's water pump and now a further battery of filters and an additional raw water pump are being erected.

So far as quantity of water is concerned, that there are ample supplies available in the River Tees is shown by the following records taken when the River was flowing at its lowest recorded level in 1938.

	<i>Galls. per day.</i>
Water pumped by Tees Valley Water Board	6,500,000
Water pumped by Darlington Corporation	4,700,000
Flowing over Weir	22,000,000
Total	33,200,000

The water is pumped direct to the town and to a service reservoir at Harrowgate Hill which was enlarged and covered in just prior to the outbreak of War. The capacity of the Reservoir is now 7 million gallons.

In order to guard against the possibility of typhoid infection it has been and will be the regular practice to examine all employees of the Water Undertaking before they commence work.

Rivers and Streams.—The slow running River Skerne enters the town at its east boundary at Haughton-le-Skerne, from whence it flows west and then south. It is crossed by 12 road bridges and is the natural channel for flood-water in the case of heavy rain.

Although some two years ago the evidence of pollution was well marked at the point where the River enters the town, recent analyses have shown that there is an improvement in the quality of the water, nevertheless, it will take some years yet before the River bed cleanses itself of the colliery washings deposited over a period of years. Analyses will continue to be made.

Active steps have been taken to see that pollution does not take place in the Town itself and the majority of the manufacturers concerned are co-operating with the Corporation to see that offensive effluents are not discharged into the River.

The larger articles of refuse put into the River by irresponsible persons are now removed twice a year by the Corporation.

Swimming Baths.—The Public Swimming Baths are situated in Gladstone Street, and consist of two large Pools. The First Class Bath is used largely in the summer and covered during the winter to form a spacious Public Hall accommodating an audience of over 1,500. The Second Class Pool is kept open during the greater part of the year.

Every precaution is taken in Darlington by continuous filtration and chlorination to produce a clear, sparkling, attractive water free from germs of disease, and of a bacterial purity approximating to that of drinking water. The continuous treatment, completed every four hours, affords also important economies in heating and water supply. Accurate dosage of coagulant sodium aluminate and gaseous chlorine is ensured by routine checking with methyl orange and orthotolidine indicators.

Sewerage and Sewage Disposal.—The sewerage of the town is receiving the attention of the Council, and a scheme for constructing a new main outfall sewer from the centre of the town to the sewerage Disposal Works has been prepared, but its construction has been held up owing to the Treasury declining to give sanction to the works being proceeded with.

Storm water relief sewers are being constructed to relieve the older sewers which were designed on the combined system.

From time to time the older sewers are being replaced with modern sewers. The more recently developed areas are being sewered on the separate system, the surface water being discharged into the Cocker Beck and River Skerne.

The whole of the sewage is treated at the Stressholme Sewage Works. All sewage now receives preliminary treatment in sedimentation tanks and about one-half of the total flow is treated in the newly completed Sewage Purification Works consisting of detritus and sedimentation tanks, percolating filters, humus and storm water tanks, and the remaining quantity is treated by broad irrigation on the Stressholme Farm. A satisfactory effluent is being produced at the new works, and the effluent from the land has been greatly improved by the relief it has been possible to give in consequence of the construction of the new works.

Disposal of the Dead.—Three large Cemeteries and a Crematorium all recently extended provide adequate places for disposal.

I should like to take this opportunity of expressing my thanks to all the members of my staff and to the Committee and Council for their loyalty and support.

I am, Mr. Chairman and Gentlemen,

Your obedient Servant,

F. A. PAUL,

Acting Medical Officer of Health.

VITAL STATISTICS.

The figures for birth and death-rates are based on our own returns corrected for inward and outward transfers.

During the year ended 31st December, 1944, the number of births assignable to the Borough was 1,541 births, 827 of males and 714 of females. Excluding the deaths of 148 non-residents, there were 968 deaths, 455 of males and 465 of females and 48 transfers. These figures give a birth-rate of 19.8, and a death-rate of 12.5 per 1,000 of an estimated population of 77,640 compared with 16.0 and 13.5 last year. Figures for England and Wales, birth rate 17.6, death rate 11.6, Infantile Mortality 46.

The deaths occurred at the following ages :—

Under 1 week	23	}	Total 66	1— 2 years	8
1— 2 weeks	5			2— 5 „	12
2— 3 „	4			5—15 „	19
3— 4 „	4			15—25 „	28
1— 3 months	16			25—45 „	77
3— 6 „	8			45—65 „	244
6— 9 „	3			65—75 „	240
9—12 „	3			75 years and upwards	274

Still-births registered, 54 ; Infantile Mortality Rate, 41.5 per 1,000 births.

Illegitimate Infants Born, Males, 46 ; Females, 50 ; Total, 96. Died, 5.

Institutional Deaths :—	Residents.	Non-Residents.	Total.
Municipal Institution	121	19	140
Memorial Hospital	144	118	262
Borough Isolation Hospital	17	5	22
Greenbank Maternity Hospital	22	3	25
Nursing Homes	5	3	8
Institutions outside Borough....	25	—	—

Inquests held, 54.

Uncertified Deaths, 50.

Deaths occurred from the following causes:—

WARD	Harrowgate Hill	North Road	Cockerton	Northgate	Pierremont	Central	North-East	Eastbourne	West	South	TOTAL	Inward Transfers	GRAND TOTAL
1 Typhoid and paratyphoid fevers ...	...	...	...	...	...	...	...	...	...	...	...	...	...
2 Cerebro-spinal fever ...	...	...	...	...	...	...	...	1	...	...	1	...	1
3 Scarlet fever ...	...	...	...	...	...	...	...	...	...	...	...	...	...
4 Whooping cough ...	...	1	...	1	1	...	...	...	...	...	3	...	3
5 Diphtheria ...	...	...	...	1	1	1	2	4	1	...	10	...	10
6 Tuberculosis of respiratory system ...	10	2	3	3	1	9	4	5	4	5	46	3	49
7 Other forms of tuberculosis ...	2	2	1	2	...	3	1	...	...	1	12	1	13
8 Syphilitic disease ...	...	...	...	1	...	...	...	...	...	...	1	3	4
9 Influenza ...	...	...	...	...	...	...	1	...	1	...	2	...	2
10 Measles ...	...	...	...	...	...	...	...	...	...	...	...	...	...
11 Acute poliomyelitis and polioencephalitis ...	...	...	...	...	...	...	...	...	...	...	...	...	...
12 Acute infectious encephalitis ...	...	...	...	1	...	...	...	...	...	...	2	...	2
13M Cancer of buccal cavity and œsophagus ...	...	1	1	1	...	...	1	1	...	...	5	...	5
13F Cancer of uterus ...	1	2	2	1	...	1	...	2	...	1	10	...	10
14 Cancer of stomach and duodenum ...	4	1	2	6	...	5	4	...	2	...	24	...	24
15 Cancer of breast ...	...	3	1	1	1	1	2	...	2	4	15	1	16
16 Cancer of all other sites ...	8	5	8	5	3	8	8	14	13	9	81	4	85
17 Diabetes ...	1	...	2	1	...	...	...	...	1	1	6	1	7
18 Intra-cranial vascular lesions ...	3	3	1	4	5	2	7	7	3	6	41	1	42
19 Heart disease ...	9	21	17	15	17	18	14	20	10	27	168	8	176
20 Other diseases of the circulatory system ...	5	5	5	13	10	7	8	11	8	14	86	4	90
21 Bronchitis... ...	9	5	3	5	4	5	5	4	2	2	44	...	44
22 Pneumonia ...	2	6	4	3	1	8	5	7	2	3	41	...	41
23 Other respiratory diseases ...	3	2	1	...	1	...	1	2	1	...	11	...	11
24 Ulceration of the stomach or duodenum ...	1	...	...	1	...	...	...	1	1	...	4	...	4
25 Diarrhœa (under 2 years of age) ...	...	1	...	1	...	1	...	2	1	...	6	...	6
26 Appendicitis ...	2	1	...	1	...	1	...	1	2	...	8	...	8
27 Other digestive diseases ...	4	1	3	2	1	5	1	1	7	2	27	4	31
28 Nephritis ...	5	1	2	1	2	5	3	2	3	6	30	1	31
29 Puerperal and post-abortive sepsis ...	...	...	...	...	...	...	...	1	...	...	1	...	1
30 Other maternal causes ...	...	...	...	...	2	1	...	1	...	...	4	...	4
31 Premature birth ...	2	4	3	2	1	...	2	2	...	...	16	...	16
32 Congenital malformations, birth injury, infantile disease ...	2	2	2	...	2	4	1	3	...	2	18	2	20
33 Suicide ...	...	1	...	...	1	...	1	1	...	3	7	2	9
34 Road traffic accidents ...	2	2	...	...	...	4	...	3	1	1	13	2	15
35 Other violent causes ...	2	1	2	2	4	3	1	3	2	...	20	6	26
36 All other causes ...	12	16	17	8	10	17	16	21	20	20	157	5	162
Totals ...	90	89	80	82	68	109	88	120	87	107	920	48	968

INCIDENCE OF INFECTIOUS DISEASES.

DISEASE.	Borough Cases				Cases removed to and Deaths in Isolation Hospital							
	Total Cases Notified		Total Deaths		From Borough				From Rural and other Districts			
					Cases		Deaths		Cases		Deaths	
	C.	M.	C.	M.	C.	M.	C.	M.	C.	M.	C.	M.
Smallpox ... ..	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	169	1	...	...	129	...	...	...	28	48	...	...
Diphtheria	208	1	10	...	201	1	9	...	19	7	1	...
Typhoid and Para-typhoid Fevers	...	...	...	...	...	...	...	...	...	...	...	...
Erysipelas	32	...	...	...	12	...	...	...	...	6	...	...
Ophthalmia Neonatorum ...	4	...	...	...	1	...	...	...	1	...	...	...
Puerperal Pyrexia	8	...	...	...	3	...	...	...	4	...	1	...
Babies with Mothers ... ..	...	...	...	...	4	...	...	...	2	...	...	...
Pneumonia	57	...	41	...	4	...	...	...	...	...	...	...
Measles and German Measles	111	1	...	...	6	1	...	...	...	5	...	...
Encephalitis Lethargica ...	...	...	2	...	...	...	...	...	...	...	...	...
Pulmonary Tuberculosis ...	72	7	46	...	16	1	3	...	...	...	...	...
Other forms of Tuberculosis	15	3	12	...	2	...	...	...	...	...	...	...
Whooping Cough	67	...	3	...	4	...	2	...	2	...	2	...
Cerebro-spinal Fever	4	...	1	...	3	...	...	...	6	2	1	...
Acute Poliomyelitis ... ..	...	...	...	...	...	...	...	...	1	2	...	...
Dysentery	1	...	...	...	1	...	...	...	...	...	...	...
Other Conditions ... ..	...	...	...	...	62	2	3	...	8	17	...	...
Malaria Relapse ... ..	...	...	...	...	...	...	...	...	...	...	...	...
Icterus Neonatorum ... ..	...	...	...	...	...	...	...	...	...	...	...	...
Totals	748	13	115	...	448	5	17	...	71	87	5	...

MUNICIPAL INSTITUTION (Hospital Section), YARM ROAD :—

	Men.	Women.	Children.	Total.
In	37	49	0	86
Admitted	248	225	57	530
Discharged	156	144	52	352
Deaths	70	70	0	140
Remaining	59	60	5	124

Rate-aided persons of unsound mind not included above :—

Residential	8 Men.	11 Women	Total 19
Out-relief	3 „	8 „	„ 11

MATERNITY AND CHILD WELFARE.

NOTIFIED BIRTHS :—	Males		Females		Total	
	Leg.	Ill.	Leg.	Ill.	Leg.	Ill.
Live-Births	850	25	721	23	1,571	48
Still-Births	30	4	25	3	55	7
Total	880	29	746	26	1,626	55
By Midwives ... ..	...	458	397	...	855	...
By Doctors ... ..	...	6	8	...	14	...
By Parents ... ..	...	1	0	...	1	...
By Midwives in Institutions	...	444	367	...	811	...
By Doctors in Institutions	...	0	0	...	0	...

		In	Patients Admitted	Discharged	Deaths	Remaining	Days' Treatment
Greenbank Maternity Hospital	....	19	726	715	5	25	10,214

CHILD LIFE PROTECTION.—4 on Register, 4 new, 1 child returned to London with his foster parents, 2 children were returned to their parents, 1 child was sent to an approved school, 0 child attained the age of 9 years, 4 now on Register. 54 visits and 115 office interviews. In addition many telephone enquiries were dealt with regarding suitable homes, adoptions, and such matters.

CENTRES.—Mothers and Babies, attendances, 19,289. Ante-natals 6,833.
21,663 lbs. Dried Milk sold. 9 lbs. free.

DENTAL TREATMENT.—Mothers, 19; Children under 5 years, 6; Total 25.
Total attendances, 42; Extractions, 69; Dentures, supplied to 2 persons
Anæsthetics, 1; Scalings, 0; Repairs to Dentures, 0; Fillings, 2; other
operations, 7.

HOME HELPS.—Cases, 75. Days' Service, 807.

MIDWIVES' ACTS.—Emergency calls to Doctors, 169. Inspector's Visits, 120.

HEALTH VISITORS :—	First Visits	Re- Visits	Total Visits
Expectant Mothers.....	312	48	360
Infants under 1 year	1,462	3,314	4,776
Children 1 to 5 years	—	6,509	6,509
Infectious Diseases	109	6	115
Infant Deaths	37	4	41
Still-Births	45	—	45
Miscellaneous Visits	731	110	841
Maternal Deaths	—	1	1
Illegitimate Children	53	347	400
Adoptions	17	24	41

QUEEN'S NURSES' ASSOCIATION :—

Maternity Cases	134	2,123	2,257
Midwifery Cases	276	4,313	4,589
Ophthalmia Neonatorum	1	13	14
Acute Primary Pneumonia	13	229	242
Children under 5 years	154	993	1,147
Ante-Natal Cases	—	2,640	2,640
Post-Natal Cases	—	362	362

VACCINATION :—

Births Registered, 1,639; Successful Vaccinations, 431; Conscientious
Objections, 985; Insusceptibility, 3; Died before Vaccination under
1 year 63.

DIPHTHERIA IMMUNISATION.—608 under 5 years, 256 at 5—15 years.
Total since 1935, 8,864.

VENEREAL DISEASES CLINIC.

	Darlington			Other Authorities	
	Males	Females		Males	Females
Suspected Venereal Diseases—New Cases	107	137	....	49	75
Non-Venereal Diseases	58	101	....	16	49
Total Attendances of all persons	2,055	1,520	....	509	577
In-patient Days .....	—	—	....	—	—

TUBERCULOSIS.

Sanatoria	In			Admitted			Discharged			Deaths			Remaining		
	M.	F.	C.	M.	F.	C.	M.	F.	C.	M.	F.	C.	M.	F.	C.
Stannington	—	—	2	—	—	—	—	—	1	—	—	—	—	—	1
Hollywood Hall	1	—	—	—	—	—	1	—	—	—	—	—	—	—	—
Blencathra	3	4	—	7	5	—	7	8	—	—	—	—	3	1	—
Borough Isolation Hospital	—	2	—	—	16	3	—	12	2	—	3	1	—	3	—
Memorial Hospital	—	—	—	3	8	10	2	8	8	—	—	—	1	—	2
Municipal Institution	8	—	—	26	5	7	18	3	6	5	1	1	11	1	—
Poole Sanatorium	8	2	—	12	8	—	15	4	—	—	—	—	5	6	—
Nayland, Colchester	—	—	—	—	1	—	—	1	—	—	—	—	—	—	—
Winterton	—	—	—	1	2	—	1	2	—	—	—	—	—	—	—
Orthopædic Hospital, Kirbymoorside	—	—	2	—	—	—	—	—	1	—	—	—	—	—	1

Apparatus provided or repaired for 3 necessitous patients as follows :—

New Surgical Boots & Shoes (2 cases). New Spinal Support (1 case).

Railway Warrants issued—24.

Fares paid—2.

X-ray examinations—

Dispensary

Ultra Violet Rays—2.

Dr. Fothergill

148

Total 194

DOMICILIARY VISITS :—

Health Visitors

First Visits. Re-visits. Total.

Queen's Nurses' Association

79

760

839

13

457

470

Total

92

1217

1309

Dispensary Attendances—1,309.

Other Consultations—27.

Doctors' Home Visits—27.

Letters—244.

Average Attendances.

War-time Nurseries.

On Roll.

Day.

Night.

Hundens Lane

69

44

18

Station Road

20

16

—

Albert Hill

47

36

19

North Road (opened 26/1/1944)

54

33

15

Eastbourne (opened 25/9/1944)

41

24

—

CLASSES,—St. William's R.C.

31

26

—

Rise Carr

72

47

—

Borough Road

60

46

—

Corporation Road

87

69

—

REPORT OF THE SENIOR SANITARY INSPECTOR, 1944.

Analysis of Inspections, 1944.

Under Public Health and Housing Acts	2,523
Van Dwellings	77
Common Lodging Houses	6
Overcrowded Houses	10
Interviews with Owners and Builders	849
Yards and Courts	93
Total Inspections of Housing Conditions	3,558
Abattoir	530
Emergency Slaughter	369
Bakehouses	85
Cowsheds	90
Milk Retailers	143
Ice Cream Premises	5
Fried Fish Shops and Offensive Trades	49
Markets	185
Food premises other than Bakehouses	345
Sampling	259
Canned Food and Provisions	248
Inspections with reference to Food	2,308
Verminous Premises	60
Pharmacy and Poisons Act	6
Visits after Infectious Disease	444
Factories, Workshops, etc.	165
Drain Testing	94
Rat Inspections	736
Piggeries	68
Investigation of Complaints	709
Places of Public Entertainment	33
Sundry Inspections	214
Public Conveniences	24
Scabies	103
Ineffective Visits	380
Swine Fever Contacts	184
Total of other Inspections	3,220
Shelters	26
Collection of Gas Masks	57
Static Water Mosquito Control	4
Total Visits in connection with Civil Defence	87
1. Housing Conditions	3,558
2. Food	2,308
3. Other Inspections	3,220
4. Civil Defence	87
Total Visits	9,173

Food and Drugs Act, 1938.—During the year 129 samples of milk and 2 informal samples of Pudding Mixture have been taken for analysis.

The 129 samples of milk included 118 informal, and 11 formal samples. One hundred and seven informal and 10 formal samples complied with the standard of the Sale of Milk Regulations, 1939. Five informal samples were below standard in non-fatty solids, but their freezing points shewed that they were not adulterated, the deficiency being due to natural causes. One informal sample and one formal sample of pasteurised milk shewed 1.90% and 1.00% added water respectively, in consequence the pasteurising plant was minutely examined when a very small leakage was discovered in one of the pipes. This was remedied immediately. One informal sample contained 4% added water. As the source of this supply was outside the Borough the details were passed on to the Durham County Court officials for their attention. Four informal samples were 1.67%, 1.67%, 3.40% and 5% respectively deficient in fat. Letters of warning were sent.

The samples of Pudding Mixture complied with the statement printed on the labels.

Milk (Special Designation) Orders, 1936-1943.

Nineteen licences were in force under the Orders as :—

Accredited—9 Producers, 2 Supplementary, 1 Bottling.

Tuberculin Tested—4 Bottling.

Tuberculin Tested Certified—1 Supplementary.

Pasteurised—2.

Fifty-six samples of Designated milk were examined comprising 38 Tuberculin Tested, 6 Accredited and 12 Pasteurised.

Nine samples of Tuberculin Tested, 2 Accredited and 2 of Pasteurised milk failed to pass the required test. Of the 9 samples of Tuberculin Tested milk, 5 were of milk 18 hours old when tested. Two Accredited samples failed in the test for *Bacillus Coli*; whilst one sample of Pasteurised milk failed in the Phosphatase Test and one in the Methylene Blue Test. In both these latter cases it appeared that labour difficulties contributed, in that returned milk has been taken out on the round in mistake by a newly appointed employee.

Twelve samples of Tuberculin tested Milk (included in the 56 samples) were taken on behalf of the Ministry of Health from a supply coming into the Borough and licensed by the Ministry, 11 complied with the required test, 1 just failed but must be considered satisfactory, the sample was delayed 24 hours on the railway due to some cause unknown to us.

Bacteriological Examination of Undesignated Milk.—Seventy-six samples of Undesignated Milk were taken and submitted for Bacteriological Examination.

Twenty-five were of Accredited standard in purity, 32.9%, 10 samples were just under this standard—13.15%, 29 samples were not of satisfactory purity—38.13%, and 12 samples were of a most unsatisfactory degree of impurity—13.16%.

These results shew that only 46% of undesignated supplies of milk were satisfactory whilst 54% were far from satisfactory. It is to be regretted that the purity of the milk has so deteriorated. Investigations have revealed that many farms of production in the rural areas are quite unsuitable for milk production. Many farms in the rural areas have an inadequate water supply. Shortage of the right type of labour and the adverse seasons of hay and corn harvests have contributed to the laxity now existing in respect of milk production.

Although there is no official standard of purity for undesignated milk we have considered any great departures from the Accredited Standard to be unsatisfactory. Pooling of milk supplies has been one cause of milk of uncertain age being sent to purveyors (often up to 20 hours old). Such milk cannot be satisfactory, it has too much waste and loss to the consumers, and indicates the need for adequate heat-treatment of all undesignated milk.

Tubercle Bacilli.—Twenty-four samples of milk were taken for Biological Test for the detection of Tubercle Bacilli. All the samples gave negative results. Twenty-one were undesignated and 3 were Accredited Milk.

Inspection of Meat and Other Foods.

During the year 1944 the total number of animals slaughtered was 25,175, including 885 emergencies.

This number is made up of 1,194 cows, 4,054 bovines, 13,436 sheep, 647 pigs, 5,844 calves.

The total weight of food condemned and destroyed was 61 tons 19 cwt. 4 stones of which 32 tons 7 cwt. 1 stone 5 lbs. were on account of tuberculosis. All the above was surrendered voluntarily.

In addition to the above, 7 tons 18 cwt. 6 stones of Food were examined by the Officers of this department and referred to the Ministry of Food, Salvage Department.

A. E. WADE,

Senior Sanitary Inspector.

The results of the experiments conducted by the author, and the observations made during the course of the investigation, are as follows:—

1. The rate of diffusion of a gas through a membrane is directly proportional to the area of the membrane, and inversely proportional to the thickness of the membrane.

2. The rate of diffusion of a gas through a membrane is directly proportional to the square root of the molecular weight of the gas.

3. The rate of diffusion of a gas through a membrane is directly proportional to the partial pressure of the gas on the side of the membrane from which it diffuses.

4. The rate of diffusion of a gas through a membrane is directly proportional to the temperature of the gas.

5. The rate of diffusion of a gas through a membrane is directly proportional to the solubility of the gas in the membrane.

6. The rate of diffusion of a gas through a membrane is directly proportional to the coefficient of permeability of the membrane.



