[Report 1924] / TB Officer, Lancashire County Council.

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LANCASHIRE

COUNTY COUNCIL.

PREVENTION AND TREATMENT OF TUBERCULOSIS IN THE ADMINISTRATIVE COUNTY OF LANCASTER.

Report of the Central Tuberculosis Officer
of the Lancashire County Council
for the Year 1924.

PRESTON:
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COUNTY TUBERCULOSIS COMMITTEE (1925).

The Chairman of the County Council:

†Sir Henry F. Hibbert, Bart., J.P., D.L.

The Vice-Chairman of the County Council:

†H. Wade Deacon, Esq., C.B.E., J.P.

Chairman of Committee:

*P. J. Hibbert, Esq., J.P., D.L.

Vice-Chairman:

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* Members of Sanatorium and Hospital Sub-Committee.
† County Aldermen.

MEDICAL AND NURSING STAFF OF THE TUBERCULOSIS DEPARTMENT, 1925.

Central Tuberculosis Officer ;

G. Lissant Cox. M.A., M.D. (Camb.), M.R.C.S. (Eng.), L.R.C.P. (Lond.).

Consultant Tuberculosis Officers ;

George Jessel, M.A., M.D. (Oxon.), D.P.H. (Manchester). (†24th July, 1913.)

Charles W. Laird, B.A., M.D. (Dublin), D.P.H. (Liverpool). (†24th July, 1913.)

Burgess MacPhee, M.B., Ch.B. (Glas.), D.P.H. (Camb.). (†24th July, 1913.)

J. Logan Stewart, M.A., M.B., Ch.B. (Glas.), D.P.H. (Camb.). (†24th July, 1913.)

Alan D. Brunwin, M.A., M.D. (Camb.), D.P.H. (Aberdeen). (†23rd October, 1913.)

Assistant Tuberculosis Officers ;

George H. Leigh, M.D., Ch.B., D.P.H. (Manch.). (†15th April, 1914.)

Charles H. Lilley, M.B., Ch.B. (St. Andrew's), D.P.H. (Lond.). (†15th April. 1914.)

George Fletcher, M.A., M.D., Ch.B. (Glas.), D.P.H. (Camb.). (†15th April, 1914.)

Scott C. Adam, M.B., Ch.B. (Glas.), D.P.H. (Lond.). (†21st May, 1919.)

G. Barker Charnock, L.R.C.S., L.R.C.P. (Edin.), L.R.F.P.S. (Glas.), D.P.H. (Liverpool). (†21st May, 1919.)

Alexander B. Jamieson, M.B., Ch.B. (Edin.). (†22nd October, 1919.)

Cecil Berry, L.R.C.P., L.R.C.S. (Edin.), L.F.P.S. (Glas.), D.P.H. (R.C.S.I). (†16th June, 1920.)

John Cathcart, M.B., Ch.B. (Edin.), D.P.H. (R.C.P.S.I.). (†16th June, 1920.)

Medical Superintendent, High Carley Sanatorium and Oubas House Children's Sanatorium, and Consultant Tuberculosis Officer for Furness Sub-Area :

‡E. H. Allon Pask, M.D. (Lond.), L.R.C.P. (Lond.), M.R.C.S. (Eng.). (†24th July, 1913.)

Assistant Medical Superintendent, High Carley Sanatorium :

Henry J. Villiers, L.R.C.P.I. and L.R.C.S.I. (†17th December, 1919.)

† Date of Appointment.
‡ Appointed Medical Superintendent, 1916.

Medical Superintendent, Elswick Sanatorium, and Consultant Tuberculosis Officer for Fylde Sub-Area:

‡George Leggat, M.B., Ch.B., D.P.H. (Aberdeen). (†15th April, 1914.)

Visiting Medical Superintendent, Peel Hall Pulmonary Hospital:

George Jessel, M.A., M.D. (Oxon.), D.P.H. (Manchester).

Visiting Medical Superintendent, Chadderton Pulmonary Hospital:

James Wood, M.D., M.B., Ch.B., D.P.H., R.C.P.S.I. (†22nd October, 1919.)

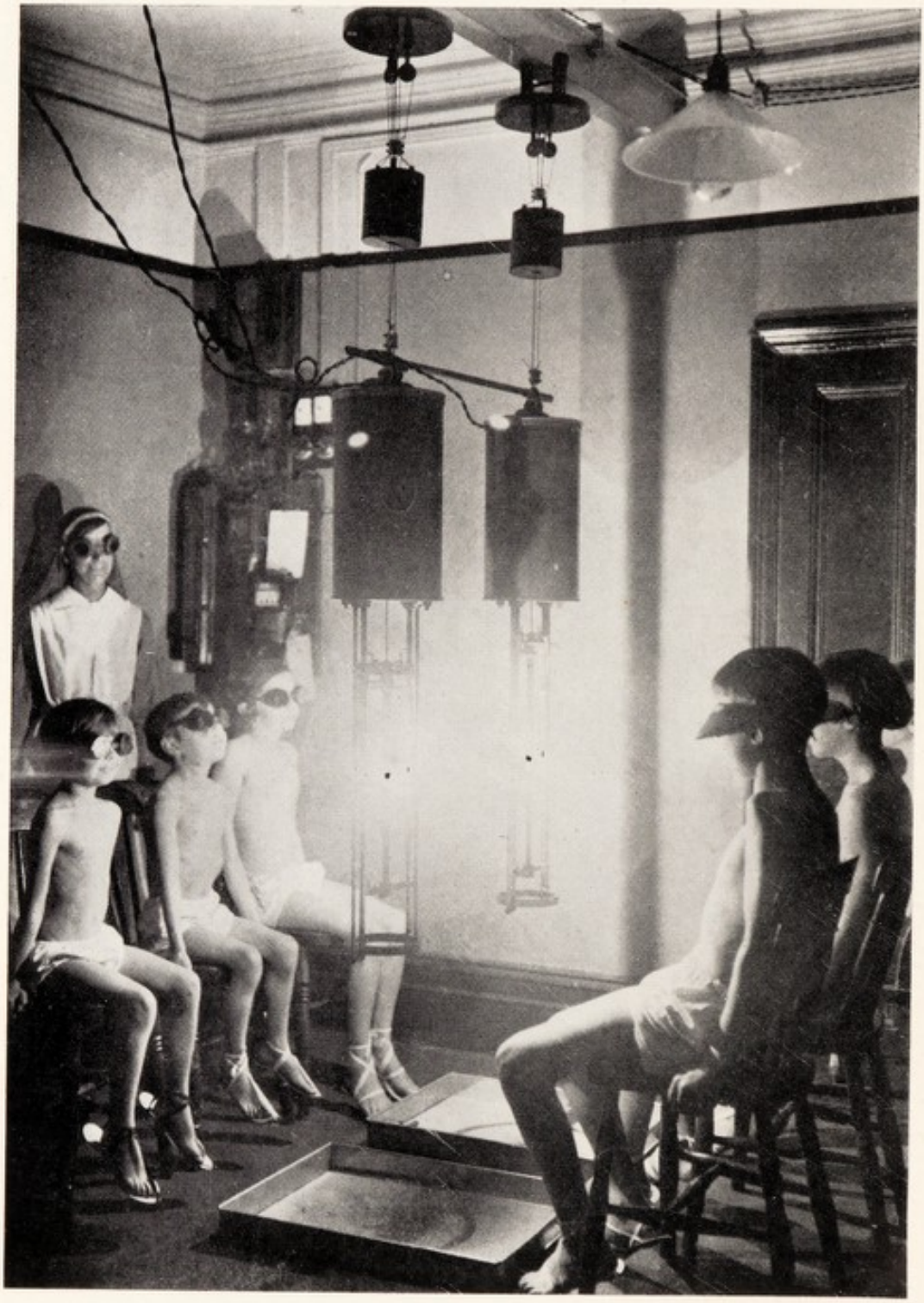
Visiting Physician, Luneside Pulmonary Hospital, Lancaster.

Alan D. Brunwin, M.A., M.D. (Camb.), D.P.H. (Aberdeen).

Tuberculosis Health Visitors:

		Commenced duties	
Nurse	M. A. Potter		1st June, 1914.
,,	R. Lambert*	,,	12th June, 1914.
,,	E. Walch	,,	15th June, 1914.
,,	H. Dewsnap*	,,	7th December, 1914.
,,	A. Munro*	,,	5th July, 1915.
,,	M. Duggan*	,,	30th August, 1915.
,,	R. Davison	,,	6th September, 1915.
,,	L. Walker*	,,	6th September, 1915.
,,	J. Skelcher	,,	26th April, 1916.
,,	A. Tweedy*	,,	17th January, 1917.
,,	I. Laing*	,,	20th May, 1918.
,,	E. Walters*	,,	1st October, 1918.
,,	I. F. Macdonald*	,,	2nd October, 1918.
,,	F. D. Abbott*	,,	1st July, 1919.
,,	C. Guilfoy*	,,	1st July, 1919.
,,	M. J. Wilson*	,,	1st July, 1919.
,,	A. Flynn*	,,	1st December, 1919.
,,	M. B. Jones	,,	1st December, 1919.
,,	L. F. Norwood	,,	5th January, 1920.
,,	E. Watterson	,,	19th July, 1920.
,,	E. A. Duston	,,	1st February, 1921.
,,	F. Milnes*	,,	1st March, 1921.
,,	H. M. Shakespeare*	,,	1st March, 1921.
,,	F. G. Smith	,,	1st November, 1921.
,,	E. Simmons*	,,	30th October, 1922.
,,	M. A. M. Clegg	,,	16th April, 1923.
,,	A. Dickinson	,,	5th September, 1923.
,,	A. Duncan	,,	1st April, 1924.
,,	T. Brothers*	,,	1st December, 1924.
,,	H. M. Alcock*	,,	20th February, 1925.

* Possesses a health visitor's or sanitary certificate.
† Date of Appointment.
‡ Appointed Medical Superintendent, 1919.



Artificial Light Treatment.

CHILDREN RECEIVING TREATMENT FOR NON-PULMONARY (SURGICAL) TUBERCULOSIS FROM TWO EIDINOW CARBON ARC LAMPS, AT THE COUNTY COUNCIL'S TUBERCULOSIS DISPENSARY, ASHTON-UNDER-LYNE. (*See Page* 40).

REPORT

OF THE

CENTRAL TUBERCULOSIS OFFICER

FOR THE YEAR 1924.

To the Chairman and Members of the
Lancashire County Council.

Ladies and Gentlemen,

I have the honour to submit the tenth Annual Report on the work of the Tuberculosis Department, and on the following pages (ix. to xiv.) give a summary of the principal features.

The decline of tuberculosis.

There was a further decline in 1924 in the deaths recorded from tuberculosis and the new cases notified. The death-rates per 1,000 of the population from both pulmonary tuberculosis (consumption) and non-pulmonary tuberculosis (disease of the bones, joints, glands, and brain) in the Administrative County are the *lowest so far recorded.* The number of new cases of tuberculosis reported (allowing for the fact that 1924 covered a period of 53 weeks) is a little less. The general decline experienced in the County is all the more satisfactory when the widespread unemployment and the housing conditions are taken into consideration, and in comparing the cases and deaths with past years it must not be overlooked that nowadays there is a much keener search for cases accompanied by much improved methods of diagnosis.

The population to be dealt with under the County scheme was estimated at the end of 1924 to be 1,782,800 (males 846,804, females 935,996).

It is a matter of interest that the mortality from tuberculosis in the County is invariably below that for England and Wales, and similarly of the deaths from all causes and all ages the proportion ascribed to pulmonary tuberculosis is considerably less in the County than in the country, the figures being 5·4 per cent., as against 6·9 per cent. Pulmonary tuberculosis attacks mainly "young adults," and its severity may be gauged from the fact that of the total deaths occurring in the County between ages 15 and 25 years no less than 31·2 per cent. were from pulmonary tuberculosis.

The actual figures of cases and deaths, and a chart, showing the fall in the tuberculosis death-rate since 1891, appear on pages 2 and 3. The statement below gives the case notifications and the deaths for 1924 compared with the average for the preceding ten years :—

	New Cases Notified.			Deaths.		
	Pulmonary.	Non-Pulmonary.	Total.	Pulmonary.	Non-Pulmonary.	Total.
1924.....	1,972	1,120	3,092	1,215	339	1,554
Average ten years 1914-1923..	2,332	1,025	3,357	1,463	443	1,906

Non-notification of fatal cases.

Further improvement has been made in reducing the number of omissions to notify cases of tuberculosis. Seven years ago 18 per cent. of the deaths from pulmonary tuberculosis occurred without the statutory notification having been made prior to death, but in 1924 the proportion had been reduced to 5 per cent. It is hoped with every confidence that this decline will continue during the next few years. Taking both pulmonary and non-pulmonary tuberculosis, the position in the Administrative County in regard to non-notification is about three times better than the average for the rest of England and Wales. I think there is no doubt that this better notification of cases in the County—which is due to the cordial co-operation between the family doctor, the local medical officer of health, and the tuberculosis medical staff—is assisting to reduce the number of new cases.

The efficiency of notification varies directly with the efficiency of the county council or county borough scheme dealing with tuberculosis. If there is really no comprehensive scheme ; if there are poor and newly-qualified part-time and badly paid tuberculosis officers ; if there are insufficient means for expert diagnosis and too few beds for treatment, then a high proportion of non-notified fatal cases will be the rule and not the exception.

Propaganda and education of the public.

In past reports I have drawn attention to the need for education of the public in the symptoms and common dangers of tuberculosis. One way to achieve this, which I have advocated, is to pay greater attention to the instruction of the older children at school in elementary hygiene and the laws of health. Sir George Newman, the Chief Medical Officer of the Ministry of Health, says "Education, continuous, direct and indirect, is necessary for all, in regard to personal hygiene and in regard to the health responsibilities of citizenship."

For many years the tuberculosis officers have engaged in propaganda work, giving lectures and addresses, and assisting local authorities at health weeks. The tuberculosis department now possesses its own films for exhibition, including a film specially taken illustrating the life of patients at the County Council's High Carley Sanatorium and the Oubas House Children's Sanatorium, Ulverston. A number of lantern slides and photographs of County sanatoria, hospitals, and dispensaries have also been acquired, the majority being made by a member of the tuberculosis clerical staff (Mr. M. H. Seddon).

X-rays.

This year I have introduced a new chapter (pages 7 to 11) dealing with the value of x-ray examinations in the diagnosis and treatment of tuberculosis, and have had inserted a number of photographs taken by the senior members of the medical staff, illustrating various phases of the work. During the past five years arrangements have been made for each of the consultant tuberculosis officers to have at one of the dispensaries in his area an x-ray apparatus for his own use, and much valuable work has been done with these installations. The number of x-ray examinations undertaken by the tuberculosis medical staff during 1924 was 4,205. There is no doubt whatever that the Council's action in providing x-ray plants has been fully justified by results.

Research work.

The tuberculosis medical staff have continued to engage in research work and in trials of new methods of treatment which are from time to time advanced as cures for tuberculosis (see pages 12 to 14). None of the new methods have shown that any one drug or preparation is beneficial in the treatment of tuberculosis, but in accordance with the policy of the Council, trials of any further methods which may be brought forward will be made, provided patients volunteer to co-operate. It has still not been possible to secure a supply of all or any of Mr. Spahlinger's sera and vaccines. I wish to point out that many patients are cured by the ordinary methods of treatment given under the County scheme. In 1924, there were 372 pulmonary and 290 non-pulmonary cases (total 662) written off the tuberculosis register as " cured." A pulmonary case is considered cured if without symptoms for five years, and a non-pulmonary case if without symptoms for three years.

After-histories of patients who received sanatorium or home treatment.

This year I am able to give the after-histories of 8,081 adult patients who received sanatorium treatment or home treatment for pulmonary tuberculosis. The patients who applied for treatment during the five years 1914-18 are given in one group as last year, and for the first time those patients who applied during 1919-23. The subject is dealt with on pages 80—84, where the patients who underwent sanatorium treatment are contrasted with those who did not have such treatment. For both five-year groups of patients the results are in favour of sanatorium treatment.

Housing conditions.

A census of the housing conditions of patients taken at the end of the year by the dispensary staff showed that the proportion of infectious or contagious pulmonary cases sharing a bed with one or more persons was 8·8 per cent., as against 10·1 last year, 13·1 in 1922, and 17·1 in 1921. This very considerable improvement is due mainly to the loan of bedsteads and mattresses from the stock purchased by the County Council to patients unable to provide these articles for themselves.

Care work.

There are now 18 voluntary care committees at work in the County, covering a population of nearly 800,000. The County Tuberculosis Committee have expressed their earnest appreciation of the important work carried out by these voluntary bodies. The Council's scheme to allow the care work for the remainder of the County to be done through the dispensary staff, pending the formation of voluntary committees, came into operation on the 1st October, 1924, and has proved most valuable in assisting necessitous patients.

Co-operation with sanitary authorities, medical practitioners, and health officials.

The co-operation with the 121 sanitary authorities within the Administrative County area and their medical officers of health and sanitary inspectors has been of a cordial and satisfactory character. The same applies to the general medical practitioners, as is amply illustrated by the fact that in 1924 78·6 per cent. of the new cases (excluding contacts) examined by the tuberculosis officers had been referred

to them by practitioners, pensions authorities, school medical officers, and other health officials for an opinion as to diagnosis or treatment, prior to particulars of notification being received by the tuberculosis staff.

New legislation relating to tuberculosis.

Since the last report, several important powers have been given to local authorities administering tuberculosis schemes, and below I give a brief statement of the purport of the principal additions :—

The Tuberculosis Order, 1925, which came into operation on the 1st September last, provides for the compulsory notification to the police by the owner or keeper of any cow or bovine animal suffering or appearing to be suffering from tuberculosis, particularly tuberculosis of the udder. Provision is made for the slaughter of any affected animal and the payment of compensation.

The Public Health (Prevention of Tuberculosis) Regulations, 1925, makes it an offence for any person who is aware that he is suffering from tuberculosis of the respiratory tract to engage in employment entailing the milking of cows or the handling of milk.

The Public Health Act, 1925, empowers a county council or local sanitary authority to secure, on an order from the magistrates, the compulsory removal to a hospital or institution of any person suffering from pulmonary tuberculosis in an infectious state with unsuitable housing accommodation.

This Act also authorises a county council to expend money on propaganda and educational work on questions relating to health or disease.

The provisions contained in the foregoing measures will secure definite improvement in the prevention and treatment of tuberculosis.

New County hospitals and dispensaries.

Since the last report, the work of adapting the premises at Rufford for about 50 patients has been proceeded with and the hospital will shortly be ready for occupation. In order to treat some cases of non-pulmonary tuberculosis, a plaster room and operating theatre are being provided. The whole cost of the alterations and additions will come out of the remains of the Sanatorium Benefit fund and a grant from the Ministry of Health. Further institutional accommodation for advanced

pulmonary cases will shortly be available at the Withnell Pulmonary Hospital (45 beds), in place of, and in addition to, the 20 beds now used at the Bull Hill Pulmonary Hospital, Darwen.

Premises at Fleetwood have been obtained for a dispensary for the Fylde area. This new dispensary will be opened in November, 1925. At Chorley and Farnworth the leases of the old dispensaries terminated, and new and better premises have been obtained in each locality.

Donations and gifts.

The Committee have acknowledged, with thanks, donations for the purchase of wireless sets for County institutions, and prizes for the patients at whist drives and competitions, together with gifts of books, periodicals, gramaphone records, and games.

Cost of tuberculosis scheme.

The cost of the County scheme dealing with tuberculosis, allowing for government grants, has required a County rate of slightly over 1½d. in the £ for the current financial year 1925-26.

It is a pleasure to refer once more to the continuous help received from my medical colleagues, the nursing staff, and clerical staff. The higher the efficiency of " team work," the greater will be the success of any reliable scheme dealing with the prevention and treatment of tuberculosis. In very many matters affecting the administration of the County scheme, and especially in preparing the annual report, I have had much help from my principal clerk, Mr. H. F. Hughes, and have, in addition, to thank the Public Health Department for furnishing certain statistics.

I am,

Your obedient Servant,

G. LISSANT COX,

Central Tuberculosis Officer

County Offices, Preston,

14th October, 1925.

INCIDENCE OF AND MORTALITY FROM TUBERCULOSIS.

The following is a summary of the principal features in relation to the tuberculosis incidence and mortality in the Administrative County during 1924 :—

1.—The number of deaths and the death-rate from both pulmonary tuberculosis (consumption) and non-pulmonary (surgical) tuberculosis in the Administrative County are the *lowest on record.*

2.—The continued decline experienced in the County is all the more satisfactory and even surprising when the widespread unemployment and housing conditions are considered. It does not seem likely that any dramatic reduction in the mortality will be experienced ; in fact, the deaths in the present year (1925) may be a little higher than in 1924. However, apart from a specific cure for tuberculosis being discovered, there is no doubt that concentration on the preventive side will result in a further fall despite occasional setbacks.

3.—The death-rate from pulmonary tuberculosis in the County has invariably been less than that for England and Wales, whilst on the average the non-pulmonary death-rate is also more favourable than for the whole of the country.

4.—In England and Wales in 1924, 69 out of every 1,000 deaths recorded were due to pulmonary tuberculosis, whereas the proportion in the County was so low as 54 out of every 1,000 deaths.

5.—Both pulmonary tuberculosis and non-pulmonary tuberculosis are much more prevalent among males than females.

6.—Deaths from pulmonary tuberculosis represented 31·2 per cent. of the total deaths from all causes in the County occurring between ages 15 to 25 during the five years 1920-24.

The following table shows the cases notified and the deaths registered during 1924 and the preceding eleven years in the Administrative County area :—

TABLE 1.

Year.	Cases Notified.			Deaths.			Death-rate per 1,000 of population.		
	Pulmonary Tuberculosis	Non-Pulmonary Tuberculosis	Total.	Pulmonary Tuberculosis	Non-Pulmonary Tuberculosis	Total.	Pulmonary Tuberculosis	Non-Pulmonary Tuberculosis	Tuberculosis (all forms)
1913	2,700	1,592	4,292	1,441	527	1,968	0·82	0·30	1·12
1914	2,820	1,140	3,960	1,523	572	2,095	0·87	0·32	1·19
1915	2,872	1,128	4,000	1,614	555	2,169	0·96	0·34	1·30
1916	2,689	1,180	3,869	1,685	471	2,156	1·04	0·29	1·33
1917	2,375	1,062	3,437	1,584	466	2,050	1·00	0·30	1·30
1918	2,534	885	3,419	1,652	435	2,087	1·07	0·28	1·35
1919	2,105	847	2,952	1,339	358	1,697	0·80	0·22	1·02
1920	2,084	968	3,052	1,323	396	1,719	0·76	0·23	0·99
1921	2,044	899	2,943	1,301	376	1,677	0·73	0·21	0·95
1922	1,863	956	2,819*	1,362	389	1,751	0·77	0·22	0·99
1923	1,937	1,188	3,125*	1,250	412	1,662	0·70	0·23	0·93
1924	**1,972**	**1,120**	**3,092***	**1,215**	**339**	**1,554**	**0·68**	**0·19**	**0·87**

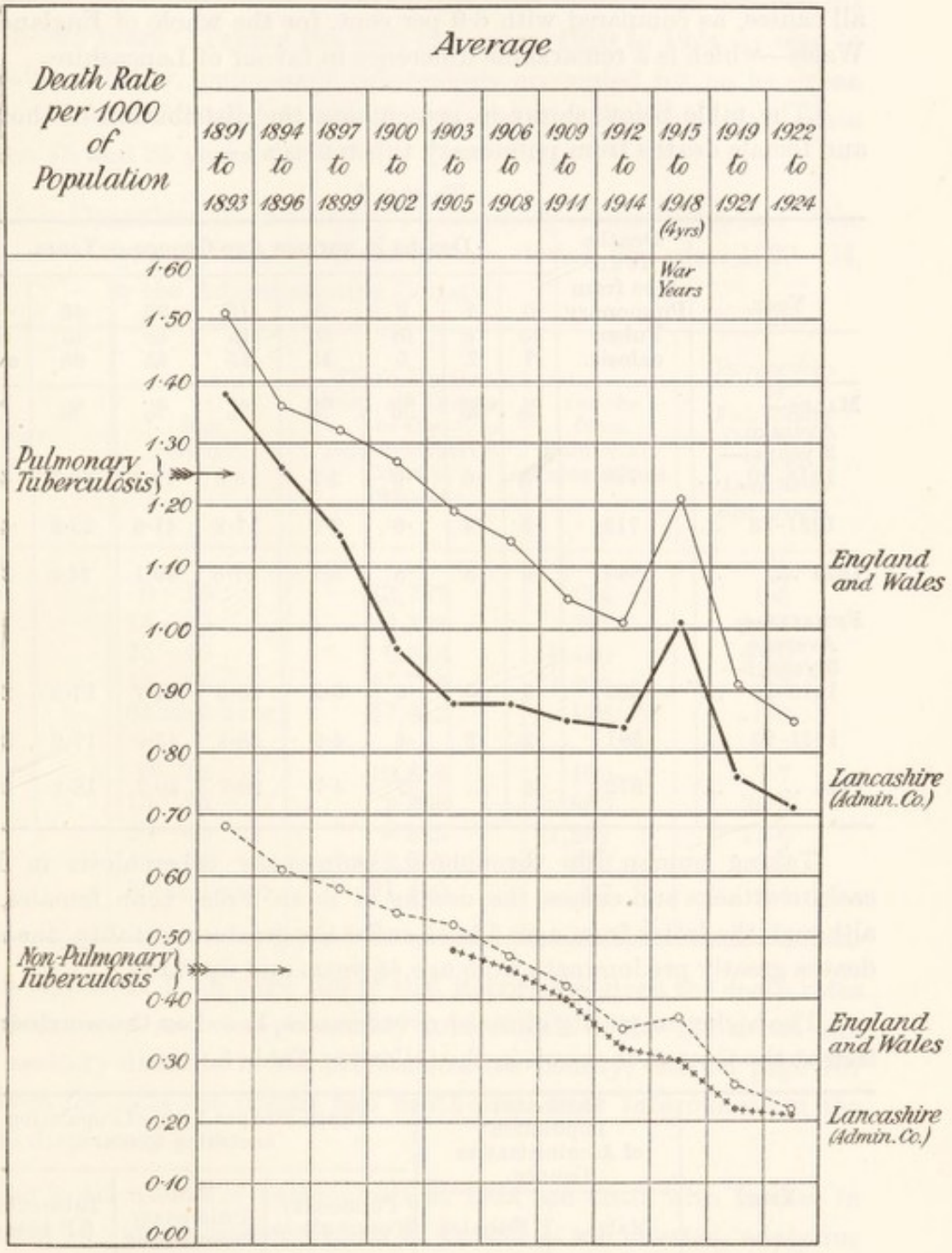
* Corrected figure after deducting the following cases notified in error by practitioners and found to be non-tuberculous :—1922 : 14 pulmonary, 12 non-pulmonary ; 1923 : 33 pulmonary, 31 non-pulmonary ; and 1924 : 57 pulmonary, 38 non-pulmonary.

N.B.—The notifications in 1924 cover a period of 53 weeks, and in 1913, 48 weeks.

The chart opposite shows in a more graphic form the fall experienced in the death-rates from pulmonary and non-pulmonary tuberculosis in the County compared with that in England and Wales.

In making comparisons with past years of the cases and deaths it must not be overlooked that nowadays there is a much keener search for cases, and there are in use improved methods of diagnosis. In the earlier years it is known that many cases—about 400 per annum—were not notified at all by the medical practitioners, the existence of the disease coming to official knowledge only at the death of the patient.

TUBERCULOSIS DEATH-RATES, 1891-1924.



The main points to observe from the chart are :—(*a*) The County pulmonary death-rate invariably keeps below that for England and Wales ; (*b*) the County pulmonary rate is less than half of what it was 34 years ago ; (*c*) the abnormal rise during the four war years which have been taken together purposely for striking an average ; (*d*) the County non-pulmonary rate is down to almost one-third of the first recorded rate in 1901.

In 1924, for the Administrative County, the deaths from pulmonary tuberculosis at all ages represented 5·4 per cent. of the total deaths from all causes, as compared with 6·9 per cent. for the whole of England and Wales—which is a remarkable difference in favour of Lancashire.

The table below shows in percentages the distribution of the male and female deaths from pulmonary tuberculosis :—

TABLE 2.

Year.	Deaths at all ages from Pulmonary Tuberculosis.	Deaths in various Age Groups.—Years.							
		0 to 1	1 to 2	2 to 5	5 to 15	15 to 25	25 to 45	45 to 65	65 and over.
MALES—		%	%	%	%	%	%	%	%
Average 3 years :—									
1918–20 ...	749	·5	·6	·9	3·2	15·6	42·2	32·7	4·3
1921–23 ...	713	·3	·4	·6	2·0	17·2	41·6	33·9	4·0
1924	643	·3	·5	·8	3·1	17·6	40·1	34·5	3·1
FEMALES—									
Average 3 years :—									
1918–20 ...	689	·3	·6	·8	6·2	26·5	44·7	17·9	2·9
1921–23 ...	591	·3	·3	·8	4·9	28·8	43·9	17·6	3·2
1924	572	·5	...	·9	4·7	32·7	40·2	18·3	2·6

Taking human life throughout, pulmonary tuberculosis in Lancashire attacks and causes the deaths of more males than females, for although the latter from ages 5 to 45 suffer the greater mortality, the male deaths greatly predominate from age 45 years and upwards.

The higher mortality of males over females, based on the sex distribution at the Census, is shown in the following Table 3 :—

Year.	Estimated Population* of Administrative County.		Death-rate per 1,000 of Population according to sex.					
			Pulmonary Tuberculosis.		Non-Pulmonary Tuberculosis.		Tuberculosis (all forms).	
	Males.	Females.	M.	F.	M.	F.	M.	F.
1920	829,438	916,800	0·88	*0·65*	0·24	*0·21*	1·13	*0·86*
1921	829,438	916,800	0·82	*0·67*	0·24	*0·18*	1·07	*0·86*
1922	838,837	927,190	0·89	*0·65*	0·24	*0·19*	1·14	*0·84*
1923	841,987	930,671	0·83	*0·58*	0·27	*0·19*	1·11	*0·78*
1924	846,804	935,996	0·76	*0·61*	0·21	*0·17*	0·97	*0·78*

* 1920 and 1921, Census population.

Compared with the deaths from all causes, we do not generally realise how big is the proportion of deaths from tuberculosis between the ages 15—25 years. Taking the past five years, 1920 to 1924, as seen in the Table 4 below, pulmonary tuberculosis accounted for no less than 31·2 per cent. of the total deaths of males and females which took place between 15 and 25 years.

Table 4.—Proportion of Deaths from Pulmonary Tuberculosis to Deaths from All Causes in age groups, during five years 1920—24, in the Administrative County.

Sex.	Age Groups.	Total Deaths from all Causes in the Administrative County, 1920-24.	Deaths from Pulmonary Tuberculosis.	Proportion of Pulmonary Deaths to Total Deaths in age group.
				%
Males ...	0—15	13,787	134	0·9
	15—25	2,338	597	25·5
	25—45	6,548	1,440	21·9
	45—65	15,726	1,205	7·7
	65 and over	17,642	136	0·8
Females ...	0—15	10,814	190	1·7
	15—25	2,368	863	36·4
	25—45	6,825	1,267	18·6
	45—65	13,717	532	3·9
	65 and over	21,409	87	0·4

In Appendix I. on page 106 of this Report are given the death-rates from pulmonary and non-pulmonary tuberculosis in the 121 urban and rural sanitary districts in the Administrative County, and on page 107 are given for 1924 the deaths and death-rates from tuberculosis in the several dispensary areas.

The notifications of tuberculosis in 1924 are dealt with further in Appendix II., where folding Tables B, C, and D are inserted, analysing them as regards the parts of the body affected, age, and sex.

Cancellation of Notifications made in error.

Following on a suggestion made in August, 1922, by the Chief Medical Officer of the Ministry of Health, in any case notified as tuberculosis and found, as the result of observation and examination by the tuberculosis officer, to have been wrongly notified, steps are taken, with the previous consent of the practitioner concerned, to have the notification cancelled in the County and District records.

Changes in Nomenclature.

The Registrar-General, in his Report for 1921, substituted the words "*Tuberculosis of the Respiratory System*" for the term "*Pulmonary Tuberculosis.*" Also deaths from acute "miliary" tuberculosis, which were formerly included under "pulmonary" tuberculosis, are now, by international agreement, classified under "other forms" of tuberculosis, and the mortality tables for England and Wales in the Report of the Ministry of Health have been altered accordingly, but it is not possible for the County statistics to be similarly altered for the years prior to 1921. The change only makes a very slight difference—almost negligible—in the statistics.

For convenience of reference the better known terms "pulmonary tuberculosis" and "non-pulmonary tuberculosis" have been retained in this Report in preference to the corresponding new nomenclatures "Tuberculosis of the Respiratory System" and "Other Forms of Tuberculosis."

Commencing on 1st January, 1925, mediastinal glands will be classifiable as pulmonary tuberculosis instead of non-pulmonary, in accordance with Circular 549 issued by the Ministry of Health on the 22nd December, 1924.

THE VALUE OF X-RAY EXAMINATIONS IN THE DIAGNOSIS AND TREATMENT OF TUBERCULOSIS.

The introduction of x-rays to aid in the diagnosis of tuberculosis is a comparatively new method, and still more recent is their use by the tuberculosis officer himself, instead of a general radiologist. In 1918 the County Council decided to allow x-ray work to be undertaken, and as a temporary measure, before suitable apparatus was obtained for the dispensary areas, patients were sent to private radiologists. The first x-ray apparatus was installed at the Ashton-under-Lyne dispensary in November, 1920, and in the following three years one dispensary in each area was equipped with a set to be used by the tuberculosis officer. As x-ray work has been carried out for some time almost entirely by the tuberculosis medical staff, it will no doubt be of interest to give an account of the work done and the benefit derived by the tuberculosis officers in having x-rays at their disposal.

The following table shows the number of x-ray examinations made at County dispensaries and by private radiologists during the years 1919 to 1924 :—

TABLE 5.

	1919.	1920.	1921.	1922.	1923.	1924.
X-ray Examinations—						
(1) At County dispensaries ...	...	28	657	787	2352	4205
(2) By private radiologist	102	163	222	192	82	24

There is no doubt that the x-ray installations have been of very great assistance to the tuberculosis officers (who are now skilled radiologists), as the rest of this chapter will demonstrate. Very important, too, is the financial saving. To have sent anything like the number of patients who were x-rayed in 1924 to Manchester or some other centre, under the old arrangement, would have cost about seven times the present expenditure, no account being taken of much heavier railway fares and greater inconvenience to the patients. Most important of all, some patients have not been sent to institutions who otherwise would have gone but for these better facilities for diagnosis. As the cost of institutional treatment is high, a few of such patients save in maintenance a sum equal to the cost of the apparatus.

For the rest of this chapter, I am greatly indebted to Dr. J. Logan Stewart, consultant tuberculosis officer for dispensary area 3, who has devoted much time to the study and practice of x-ray work. Using a certain number of his own photographs and some taken by other senior members of the staff, he has written what follows on the value of x-ray examinations in the diagnosis and treatment of tuberculosis.

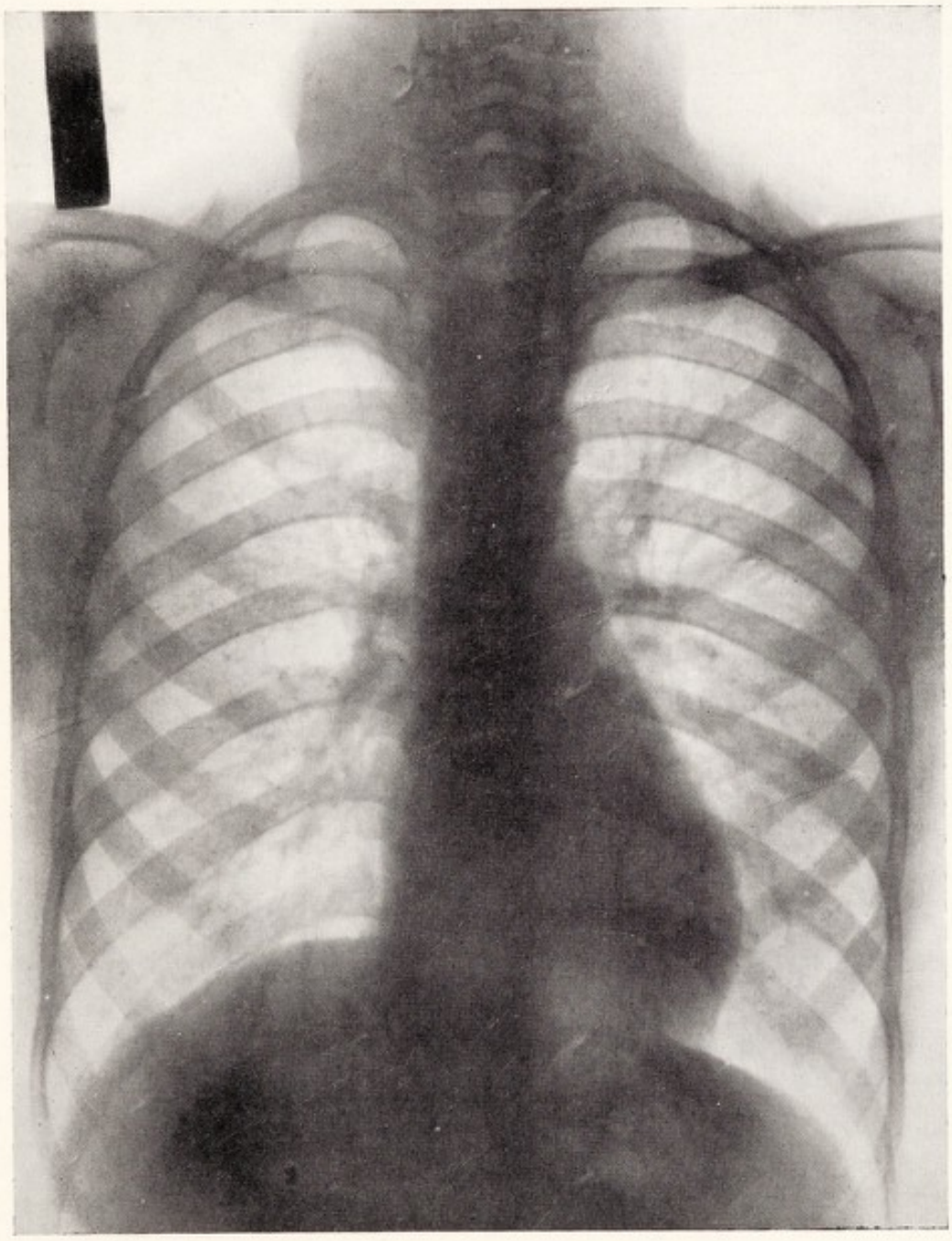
The advantages of an x-ray apparatus at the dispensary and of the tuberculosis officer being his own radiographer are many. (1) He is able to make screen examinations and take skiagrams himself as often as is necessary. (2) The patients can be x-rayed at the same time as the clinical examination is made, thus often saving unnecessary journeys and expense. (3) The tuberculosis officer being in a position to follow his patients from beginning to end of their illness, is able to build up a knowledge of x-ray appearances and to correct and modify his opinions in the light of the development of the cases, aided it may be from time to time by post-mortem examinations.

It is not, of course, implied that x-ray examination should take the place of other methods. The tuberculosis officer will arrive at a final opinion on a case with all the evidence before him—history, symptoms, physical signs, sputum result, and x-ray examination. The x-ray report, often invaluable and often decisive, is only one part of the evidence which he will use.

It should be emphasised that x-ray examination must be used as a routine method. If only a few exceptional cases are selected for examination, its full value will not be realised, because it is often where one finds nothing by other methods that x-rays reveal something entirely unsuspected.

It is useful in the detection of very early disease, which is the most important part of a tuberculosis officer's work. There is no method at present known which will infallibly discover the very beginnings of disease in the lungs. A skiagram may show no evidence of a tuberculous lesion, but this does not indicate with certainty that a patient has not tuberculosis. The lesion present may be so small that it does not disclose itself in the skiagram. But it is true, nevertheless, that there are many early cases where a well-taken skiagram will furnish definite evidence of the existence of disease, which has not been detected by the other methods. In my experience, it is a rare thing for a lesion to be found by the ordinary clinical methods and not be demonstrable by x-ray examination.

Skiagram No. 1.

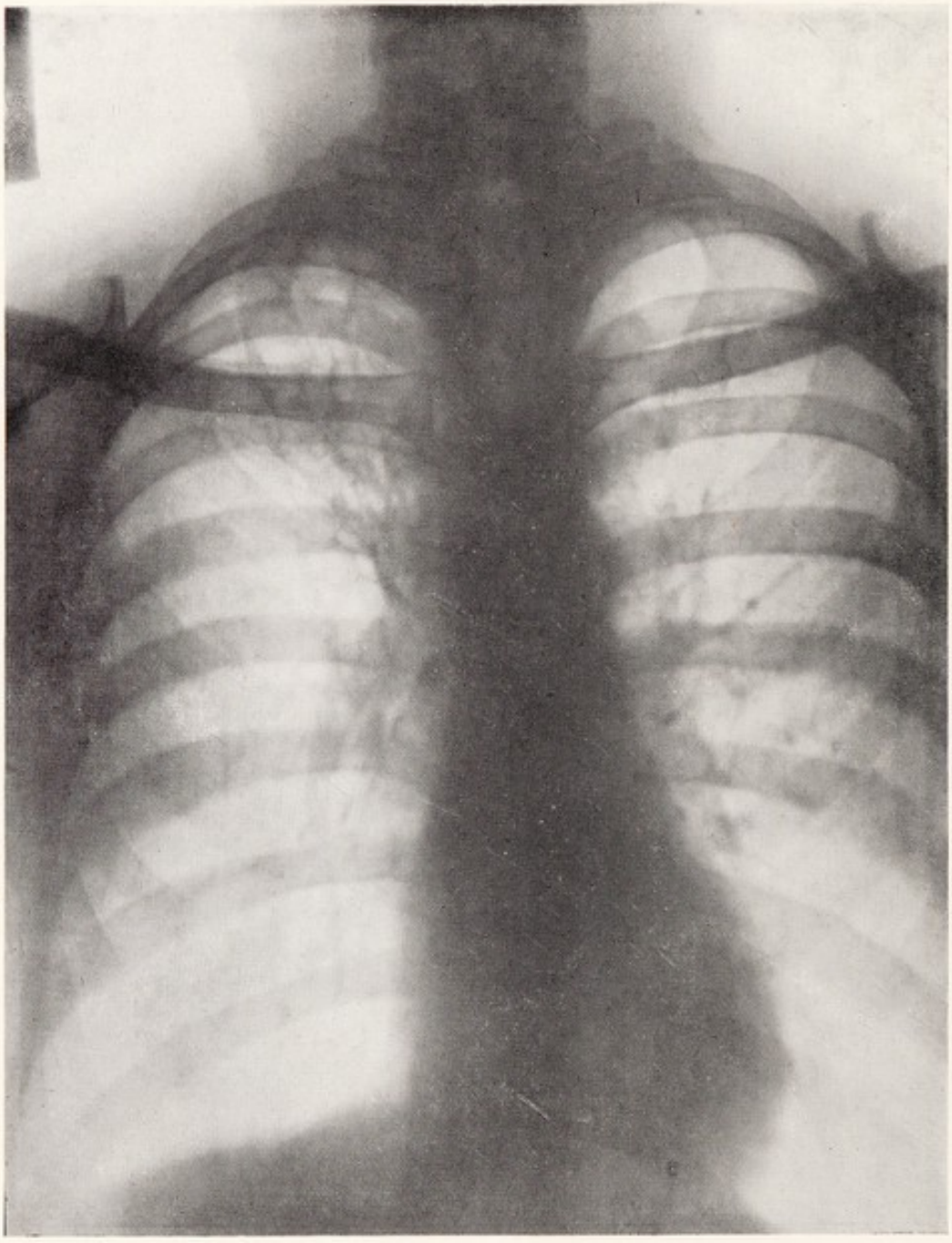


RIGHT SIDE. LEFT SIDE.

SKIAGRAM OF A CHEST OF A HEALTHY PERSON SHOWING NO INDICATIONS OF DISEASE IN THE LUNGS.

(Taken at County Dispensary, Ashton-under-Lyne).

Skiagram No. 2.

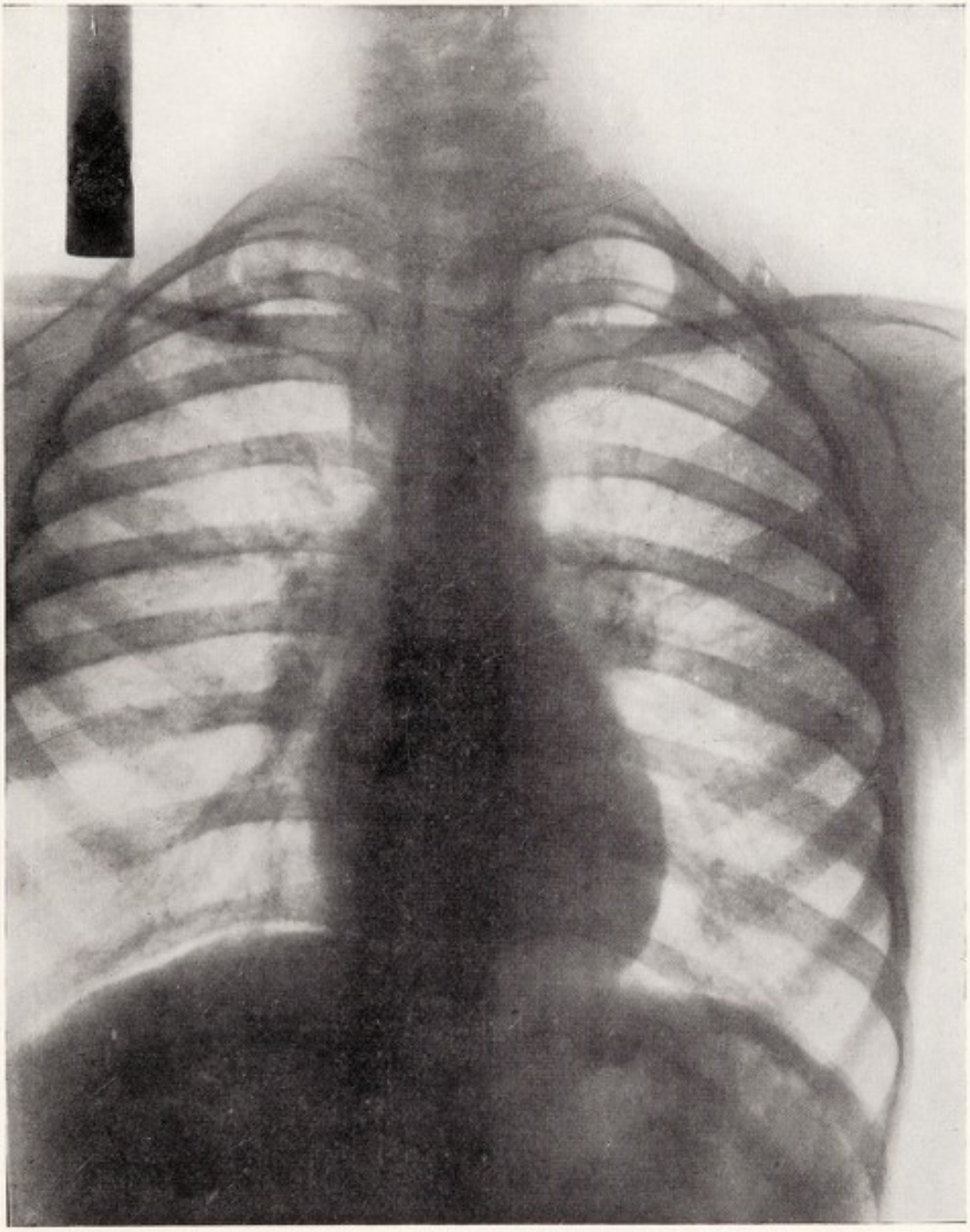


RIGHT SIDE. LEFT SIDE.

EARLY TUBERCULOSIS OF RIGHT APEX (DARK SHADOWS CROSS UPPER PART OF LUNG ON RIGHT SIDE). DISEASE ALSO COMMENCING TO EXTEND FROM LEFT ROOT.

(Taken at County Dispensary, Ashton-under-Lyne).

Skiagram No. 3.

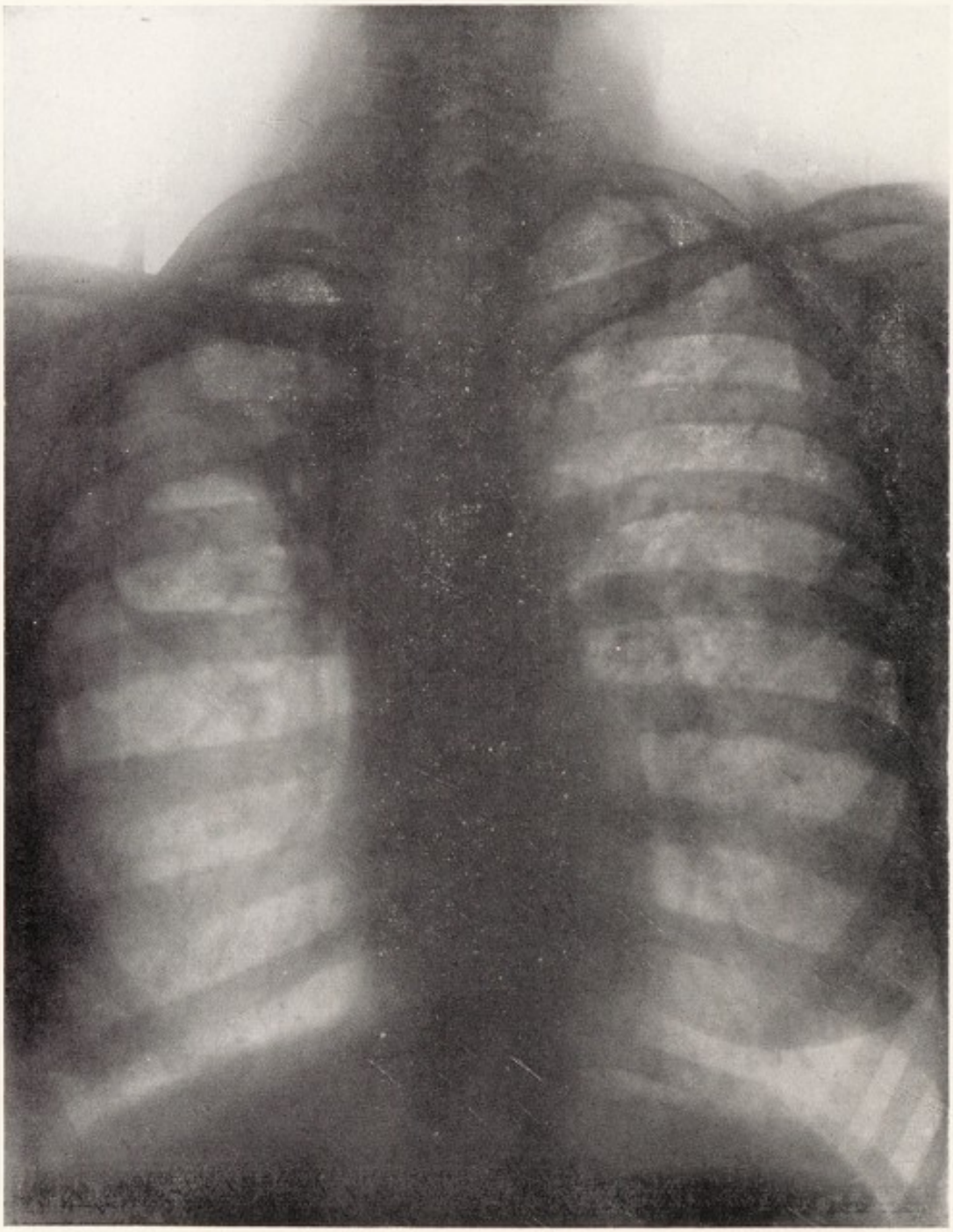


RIGHT SIDE. LEFT SIDE.

EARLY TUBERCULOSIS OF BOTH APICES, WITH SOME ENLARGEMENT OF THE BRONCHIAL GLANDS.

(Taken at County Dispensary, Ashton-under-Lyne).

Skiagram No. 4.

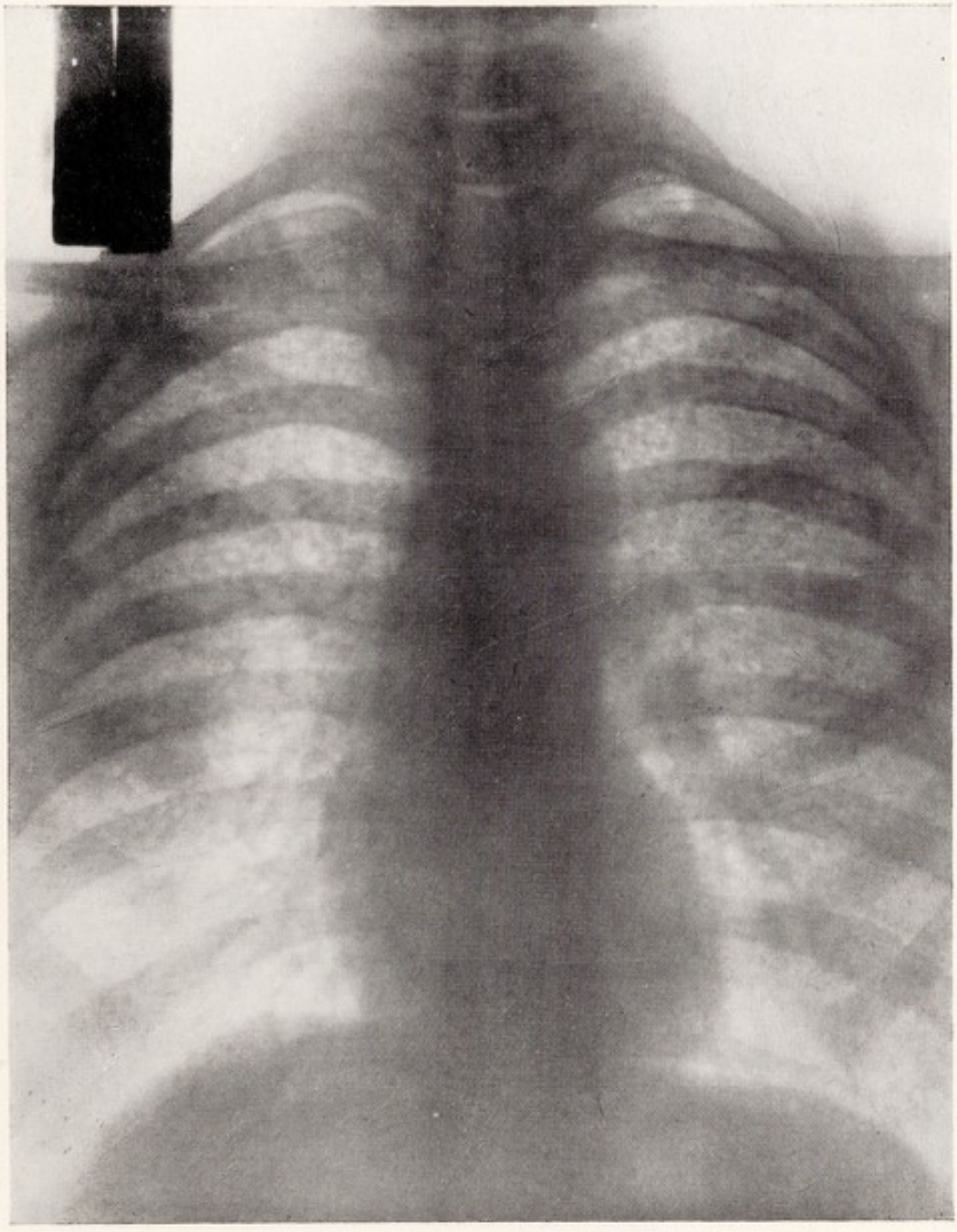


RIGHT SIDE. LEFT SIDE.

A CASE OF ADVANCED TUBERCULOSIS. EXTENSIVE SIGNS OF DISEASE IN BOTH LUNGS. LARGE CAVITY CONTAINING SOME FLUID IN RIGHT LUNG.

(Taken at County Dispensary, Ashton-under-Lyne).

Skiagram No. 5.

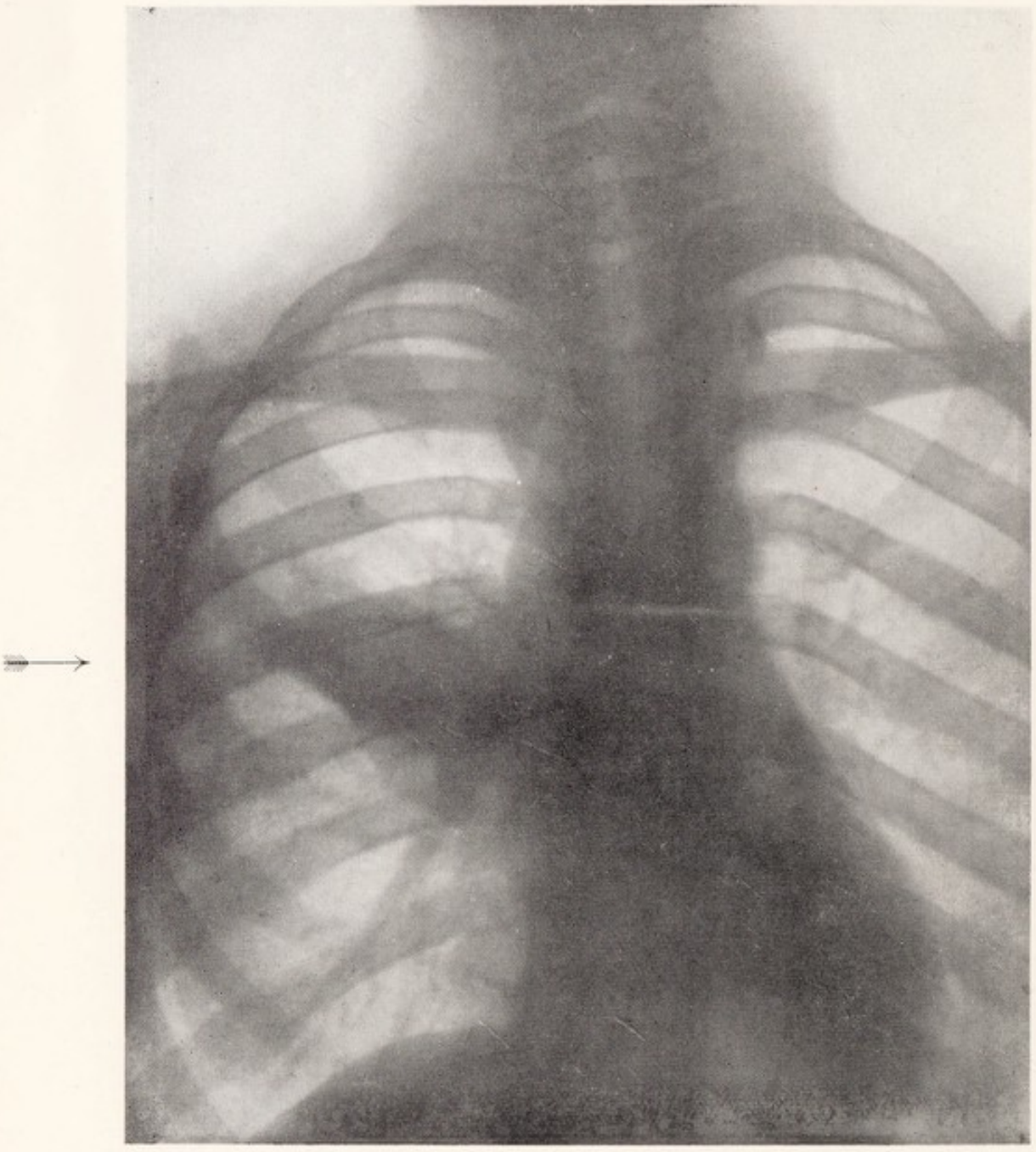


RIGHT SIDE. LEFT SIDE.

TUBERCULOSIS OF BOTH LUNGS. INFECTION BY THE BLOOD STREAM.
(SHOWN BY UNIFORM MOTTLING SPREAD OVER THE LUNGS).

(Taken at County Dispensary, Ashton-under-Lyne).

Skiagram No. 6.

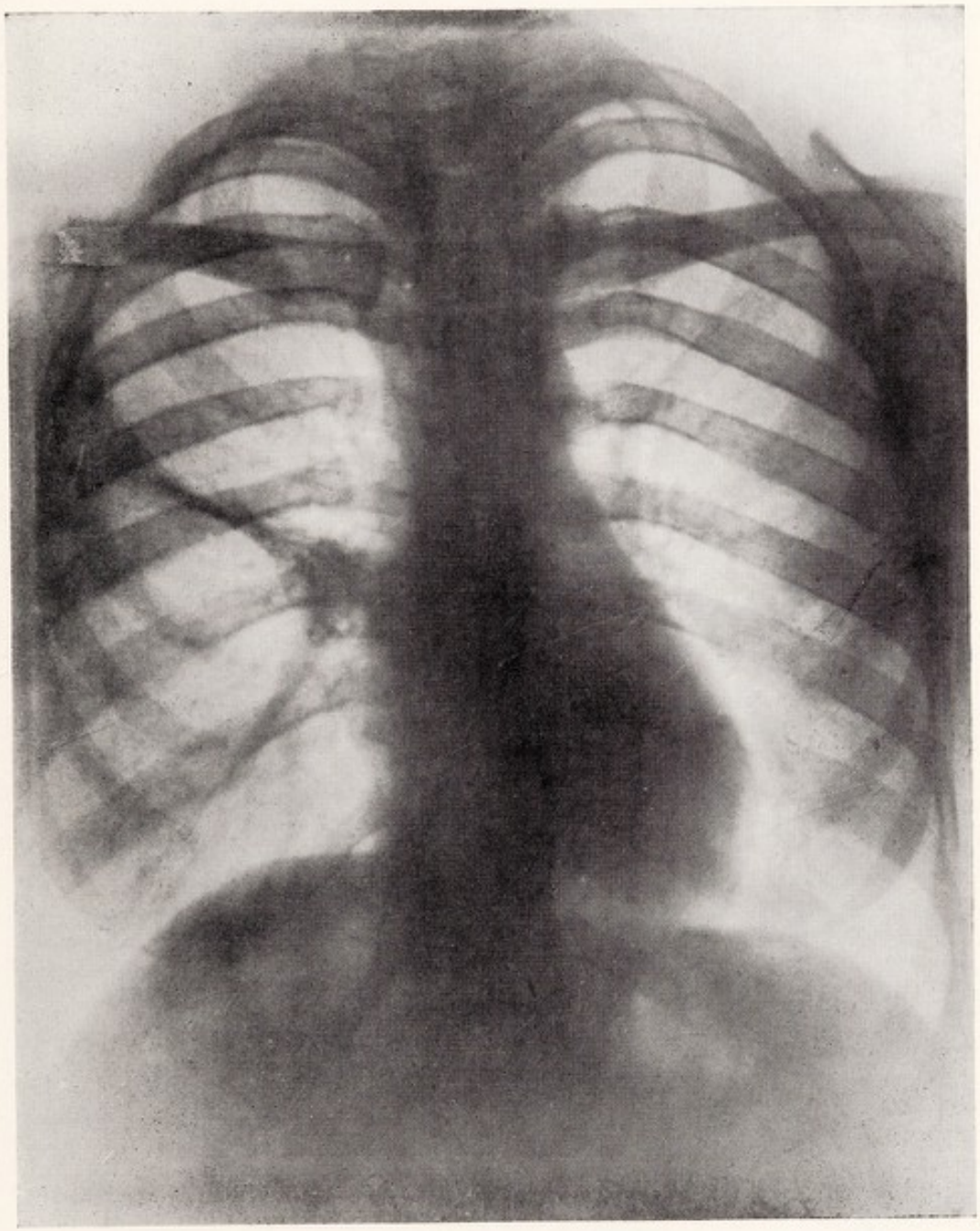


RIGHT SIDE. LEFT SIDE.

INTER-LOBAR PLEURISY OCCURRING IN A CONTACT (DARK PATCH, RIGHT SIDE).
(PATIENT EXAMINED AT DISPENSARY BECAUSE HER SISTER HAD DIED OF TUBERCULOSIS.)

(Taken at County Dispensary, Ashton-under-Lyne).

Skiagram No. 7.

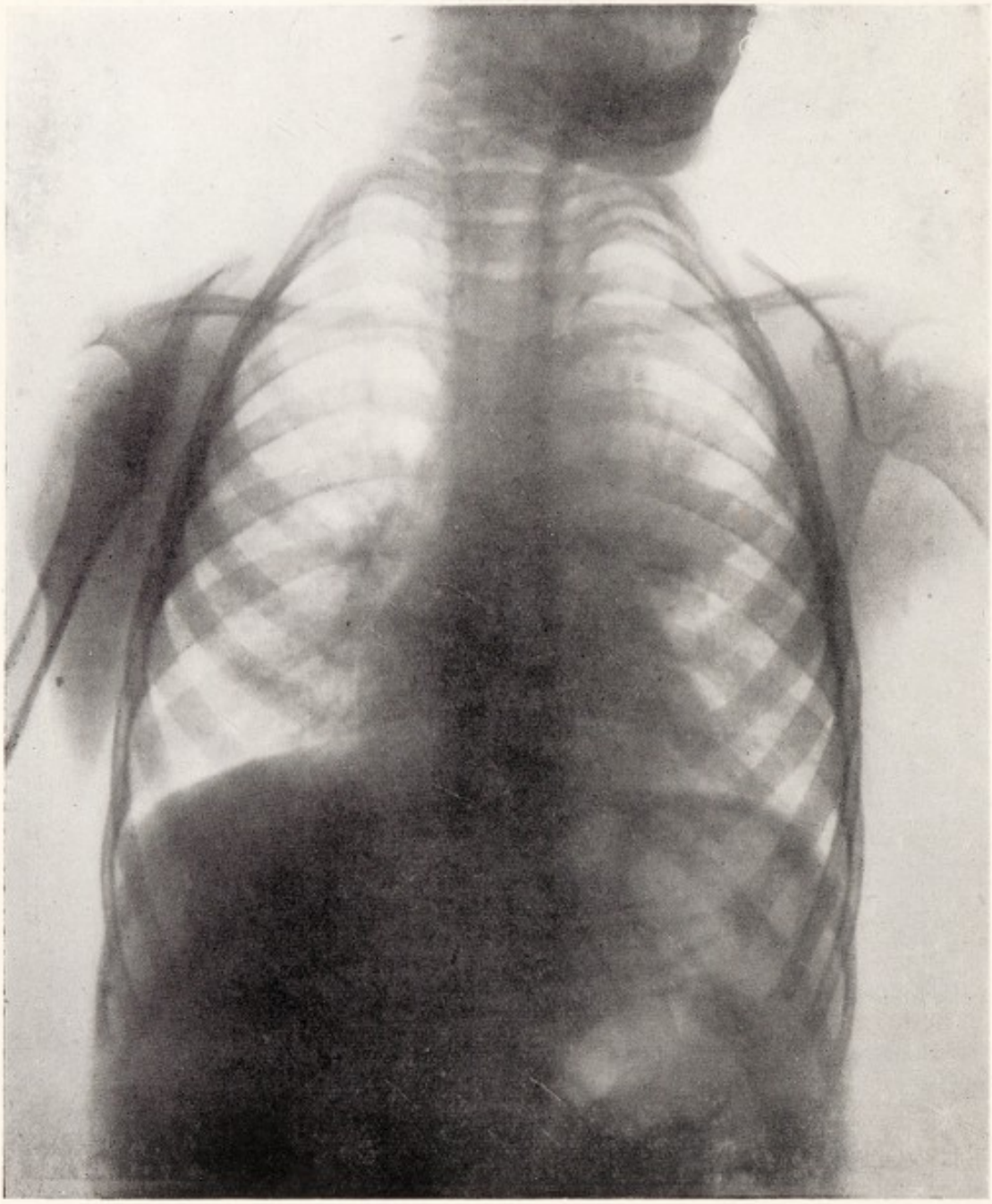


RIGHT SIDE. LEFT SIDE.

THE SAME CASE AS NO. 6 OF INTER-LOBAR PLEURISY AFTER TREATMENT IN A SANATORIUM, SHOWING HEALING OF THE DISEASE. (SCLEROSIS OF THE INTER-LOBE.)

(Taken at County Dispensary, Ashton-under-Lyne).

Skiagram No. 8.



RIGHT SIDE. LEFT SIDE.

CASE OF HILUS TUBERCULOSIS IN A CHILD. EXTENSION OF DISEASE FROM ROOT OF LUNG TO LUNG TISSUE.
(NOTE DARK SHADOW EXTENDING OUTWARDS ON LEFT SIDE).

(Taken at County Dispensary, Ashton-under-Lyne).

Its value in early diagnosis has been demonstrated especially in the examination of contacts, where a lesion has been detected on many occasions when the patient had no definite physical signs, and, indeed, was unaware of being ill at all.

The situation of the disease in the chest very often decides whether the ordinary methods of examination will be sufficient to disclose its presence. A central lesion, *e.g.*, interlobar pleurisy, interlobar empyema, enlargement of the bronchial and mediastinal glands, will often yield no definite physical signs to enable a diagnosis to be made. In such cases the x-ray evidence is often decisive. An example of this type of case is shown in skiagram No. 6, a case of interlobar pleurisy, and again in skiagram No. 8, where the disease in a child has, in all probability, originated at the root of the lung and has extended outwards.

Where infection has taken place by the blood stream, and the deposits in the lungs are very small and uniformly distributed throughout both lungs, there may be no definite physical signs to help one, but the disease may show itself in the skiagram. An example of this is seen in skiagram No. 5, where the x-ray examination enabled both diagnosis and prognosis to be made with confidence.

X-ray examination may also reveal a complication which remains undetected by the ordinary methods. The primary condition may have been diagnosed, but the complication may not be gross enough to bring about any change in the physical signs on the surface of the chest. An example of this is shown in skiagram No. 9, where the physical signs were those of an ordinary pleurisy with effusion, and both the patient's doctor and the tuberculosls officer were unaware after most careful examination that the lung had partly collapsed, and that a spontaneous pneumothorax had developed in addition to the pleurisy with effusion.

Even when the diagnosis of pulmonary tuberculosis has been made by the ordinary methods, a skiagram of the chest will still be useful in most cases, because it will give a more accurate idea of the extent of the disease than physical signs alone. This is generally admitted, and is especially true where the disease affects both lungs. The physical signs may indicate disease on one side only, whereas the skiagram shows clearly that the other lung is also affected, very often to a considerable extent. In skiagram No. 4 the signs of disease were definite on the right side of the chest, where there is a large cavity and fibrosis of the upper half of the lung, but although there are signs of extensive disease

on the left side, the physical signs on that side were very slight. The reason why physical signs are often inadequate in these cases is that there is no normal side of the chest available to yield a normal percussion note for comparison, and the auscultatory signs on one side may not differ from the normal to any appreciable extent, in spite of the presence of disease.

A skiagram is often useful in demonstrating changes which take place during the treatment of a case. Physical signs may be definite at the commencement of a case before the patient goes to a sanatorium, but after a prolonged period of sanatorium treatment and a great improvement in the general condition of the patient, the physical signs may yield very little information as to what has taken place in the chest. An example is given in skiagram No. 7, which shows what has happened after sanatorium treatment in the case of interlobar pleurisy illustrated in skiagram No. 6.

X-ray examination is of great value in cases which are undergoing the now widely-used treatment of artificial pneumothorax. The extent to which the lung has collapsed can be demonstrated with any degree of accuracy only by x-ray examination. An example of artificial pneumothorax is shown in skiagram No. 10 (by Dr. C. W. Laird, area 5).

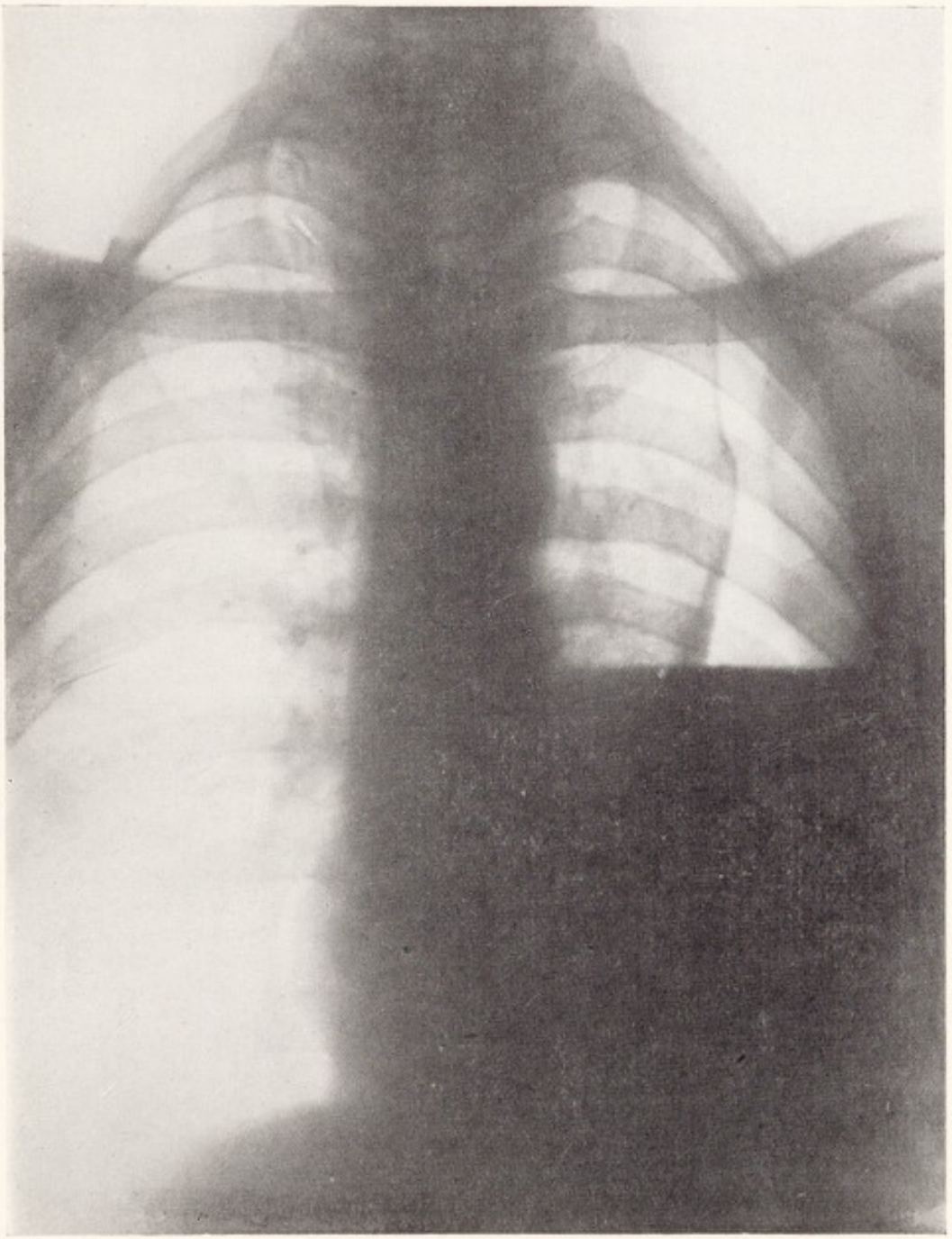
X-ray examination has also been found invaluable in revealing non-tuberculous conditions of the chest in patients who have been sent to the dispensary, either after notification as pulmonary tuberculosis or as being under suspicion of having the disease. Examples of this are shown in skiagrams Nos. 11, 12 and 13.

Skiagram No. 11, illustrating a case of multiple hydatid cysts, had been notified as pulmonary tuberculosis, mainly on account of certain symptoms. The physical signs yielded no indication of the actual condition of the case.

Case No. 12 was referred to the tuberculosis officer for diagnosis as a possible case of pulmonary tuberculosis, but x-ray examination disclosed the presence of a large tumour in the upper part of the right thorax, which from the after-history and observation of the case was diagnosed as a simple growth (by Dr. B. MacPhee, area 2).

Skiagram No. 13 illustrates a case which was sent to the dispensary as a doubtful case of pulmonary tuberculosis, where the skiagram revealed the presence of a large aneurism of the aorta. None of the classical signs of aneurism of the aorta were present in this case, and it was not until the x-ray examination had been made that the presence of an aneurism was established.

Skiagram No. 9.

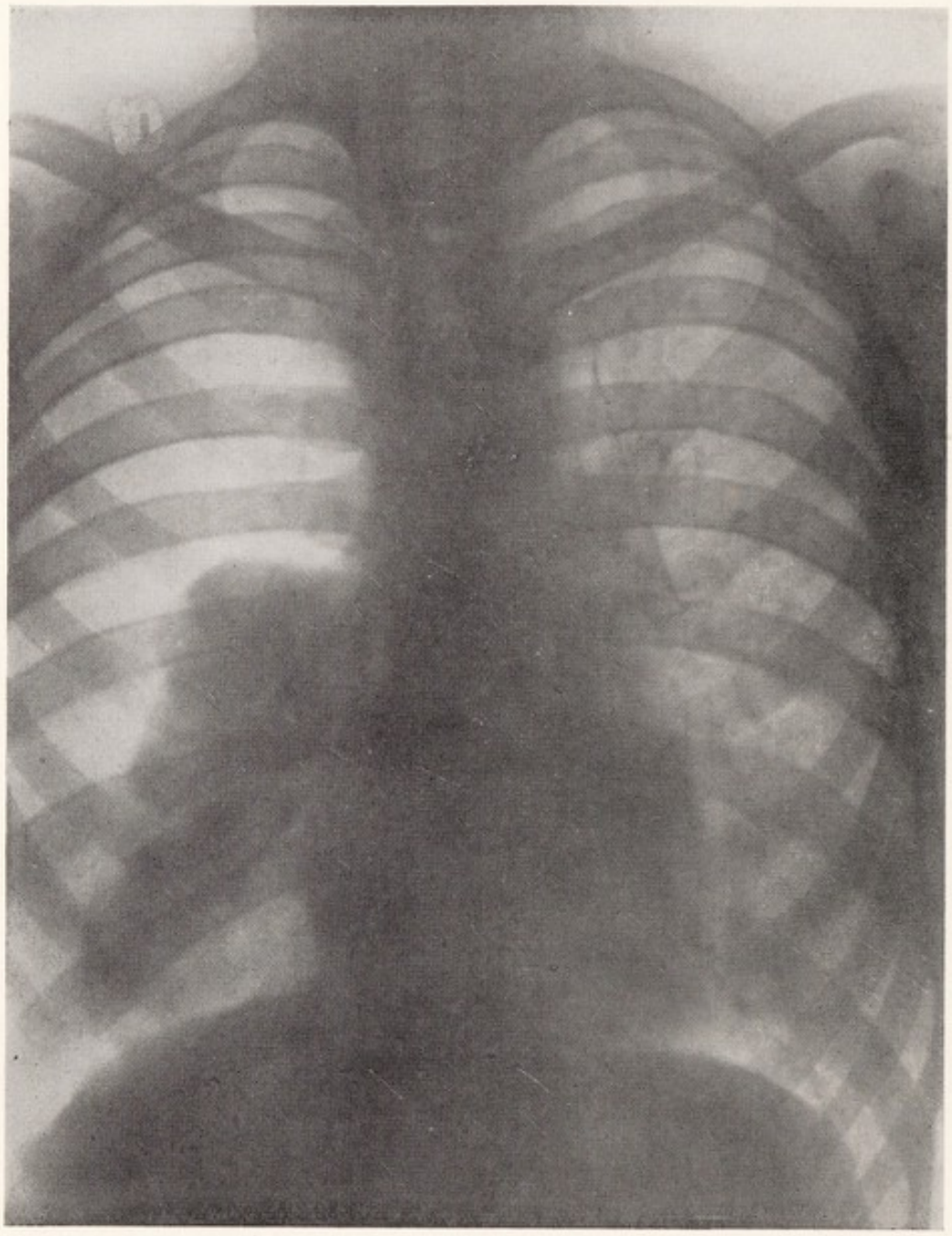


RIGHT SIDE. LEFT SIDE.

CASE OF HYDRO-PNEUMO-THORAX. SEROUS FLUID PRESENT IN THE LEFT PLEURAL CAVITY, WITH HORIZONTAL UPPER LEVEL, ABOVE WHICH THE SEMI-COLLAPSED LUNG AND AIR CAN BE SEEN.

(Taken at County Dispensary, Ashton-under-Lyne).

Skiagram No. 10.

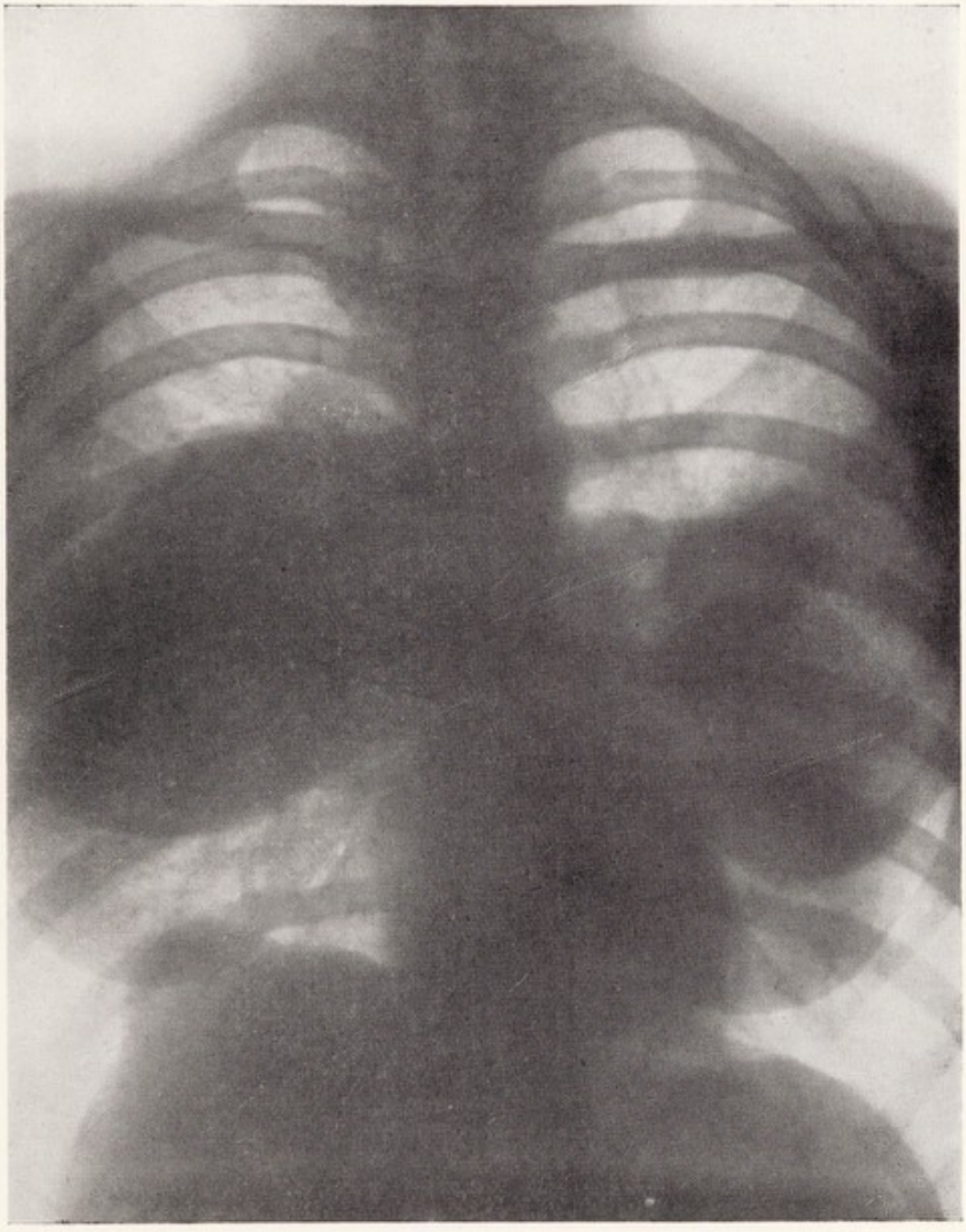


RIGHT SIDE. LEFT SIDE.

ARTIFICIAL PNEUMOTHORAX. THE RIGHT LUNG HAS BEEN COLLAPSED BY THE INJECTION OF GAS INTO THE PLEURAL CAVITY (COLLAPSED LUNG SHOWN BY DARK MASS ON RIGHT SIDE).

(Taken at County Dispensary, Seaforth).

Skiagram No. 11.

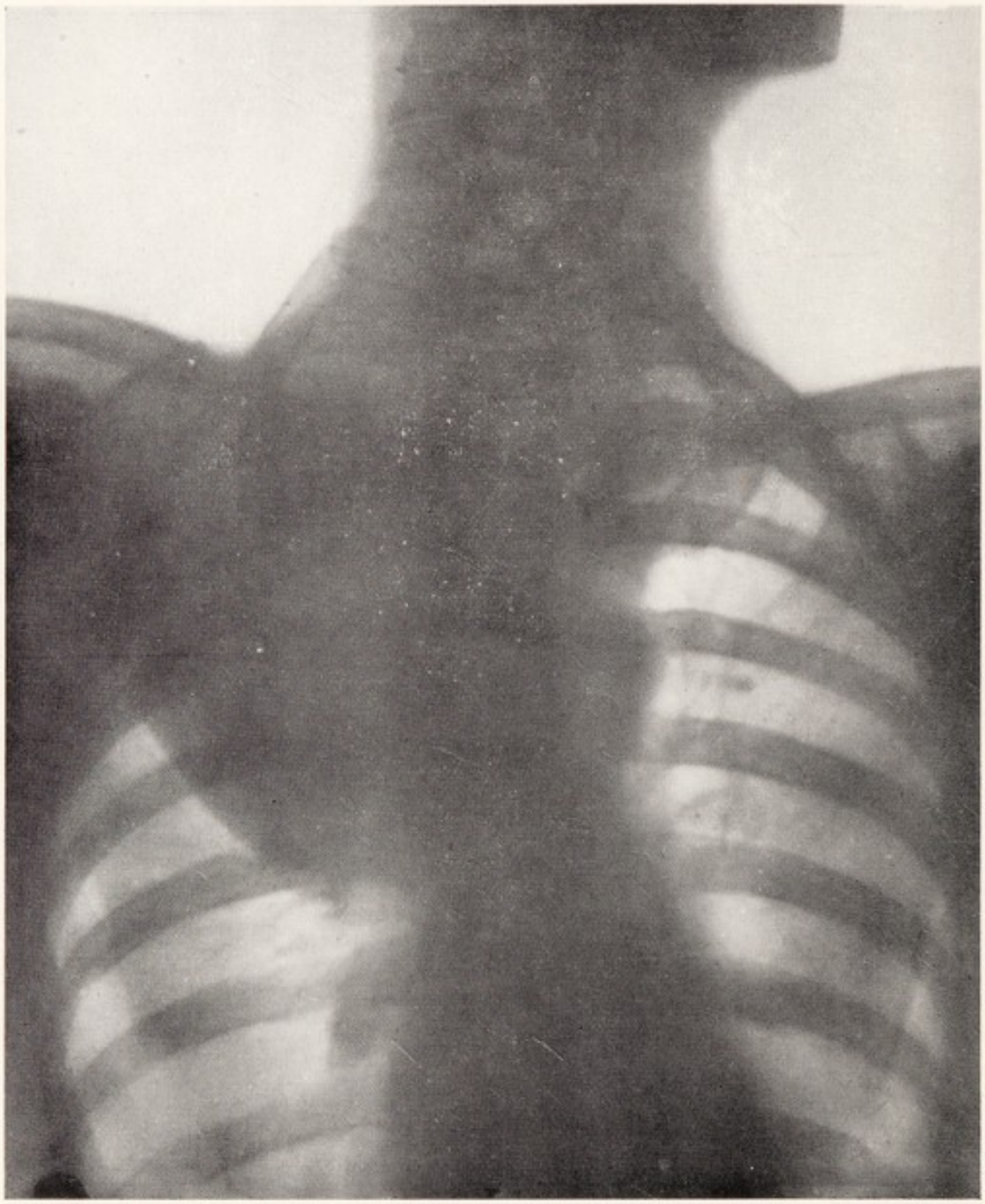


RIGHT SIDE. LEFT SIDE.

PROBABLY HYDATID
MULTIPLE HYDATID CYSTS OF LUNGS AND LIVER (ROUND, DARK SHADOWS REPRESENT CYSTS).

(Taken at County Dispensary, Ashton-under-Lyne).

Skiagram No. 12.

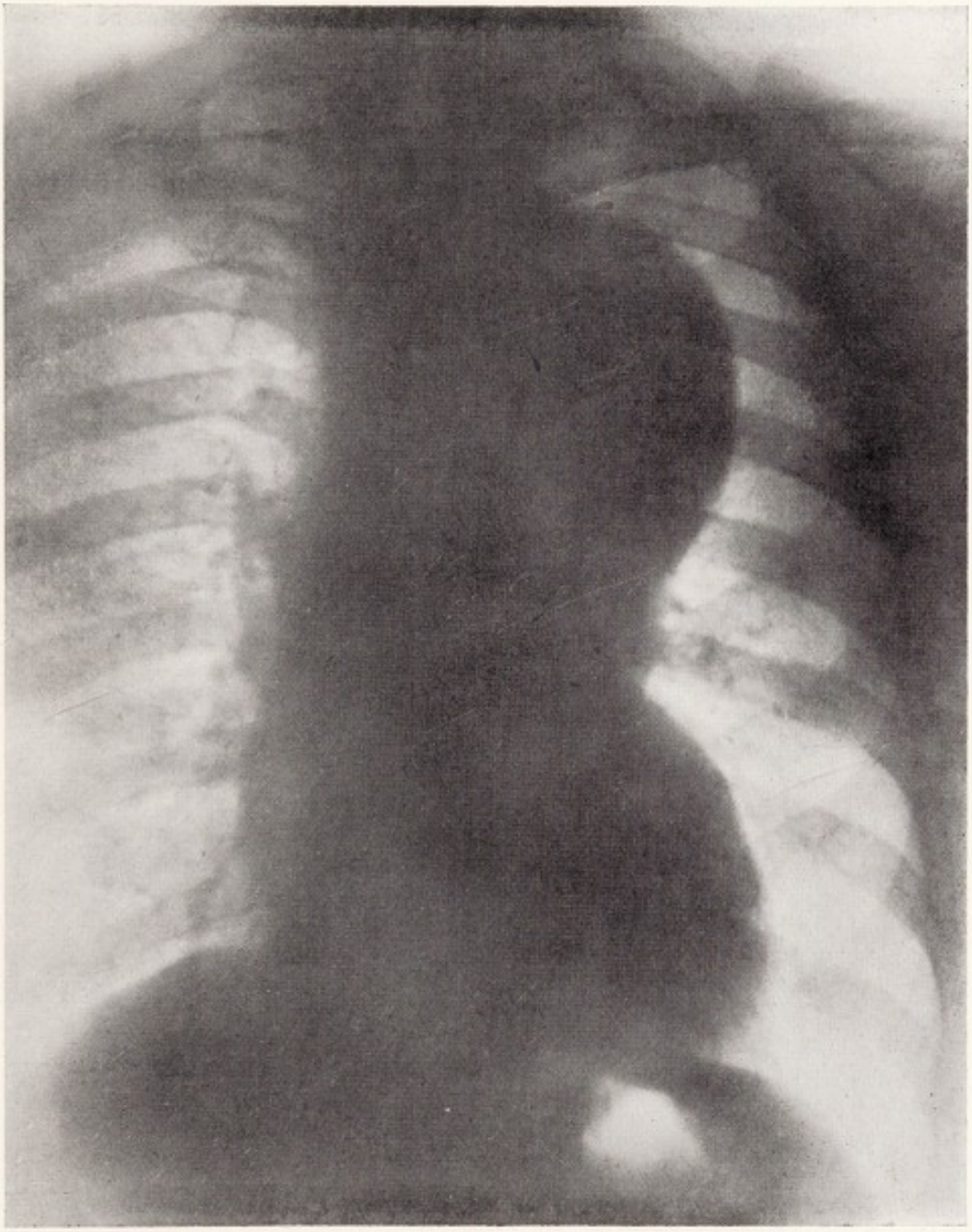


RIGHT SIDE. LEFT SIDE.

LARGE TUMOUR IN UPPER PART OF RIGHT THORAX. A NON-MALIGNANT GROWTH (SEE REFERENCE TO THIS CASE ON PAGE 10).

(Taken at County Dispensary, Darwen).

Skiagram No. 13.

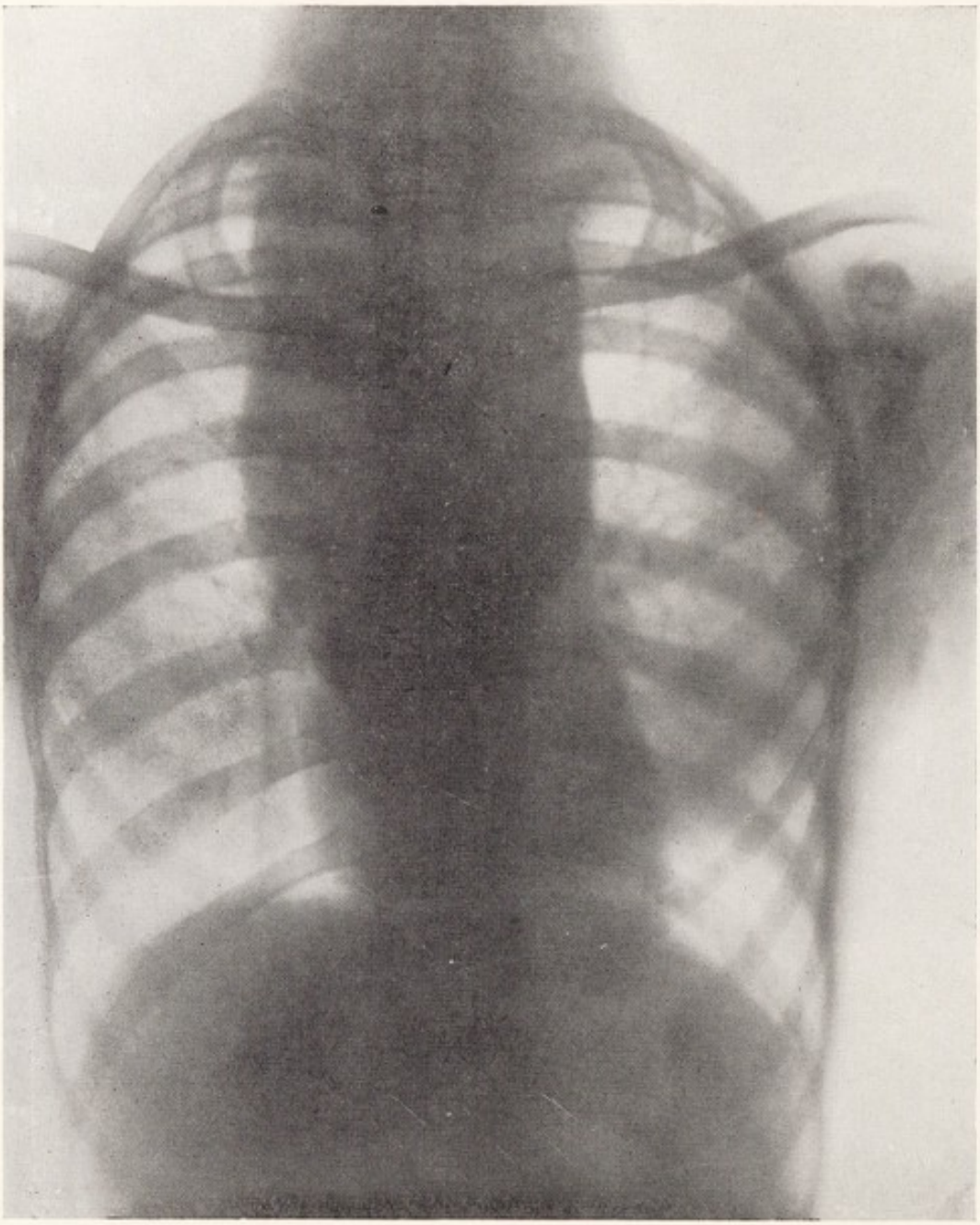


RIGHT SIDE. LEFT SIDE.

ANEURISM OF THE AORTA. THERE IS ALSO ENLARGEMENT OF THE LEFT SIDE OF THE HEART (SEE REFERENCE TO THIS CASE ON PAGE 10).

(Taken at County Dispensary, Ashton-under-Lyne).

Skiagram No. 14.

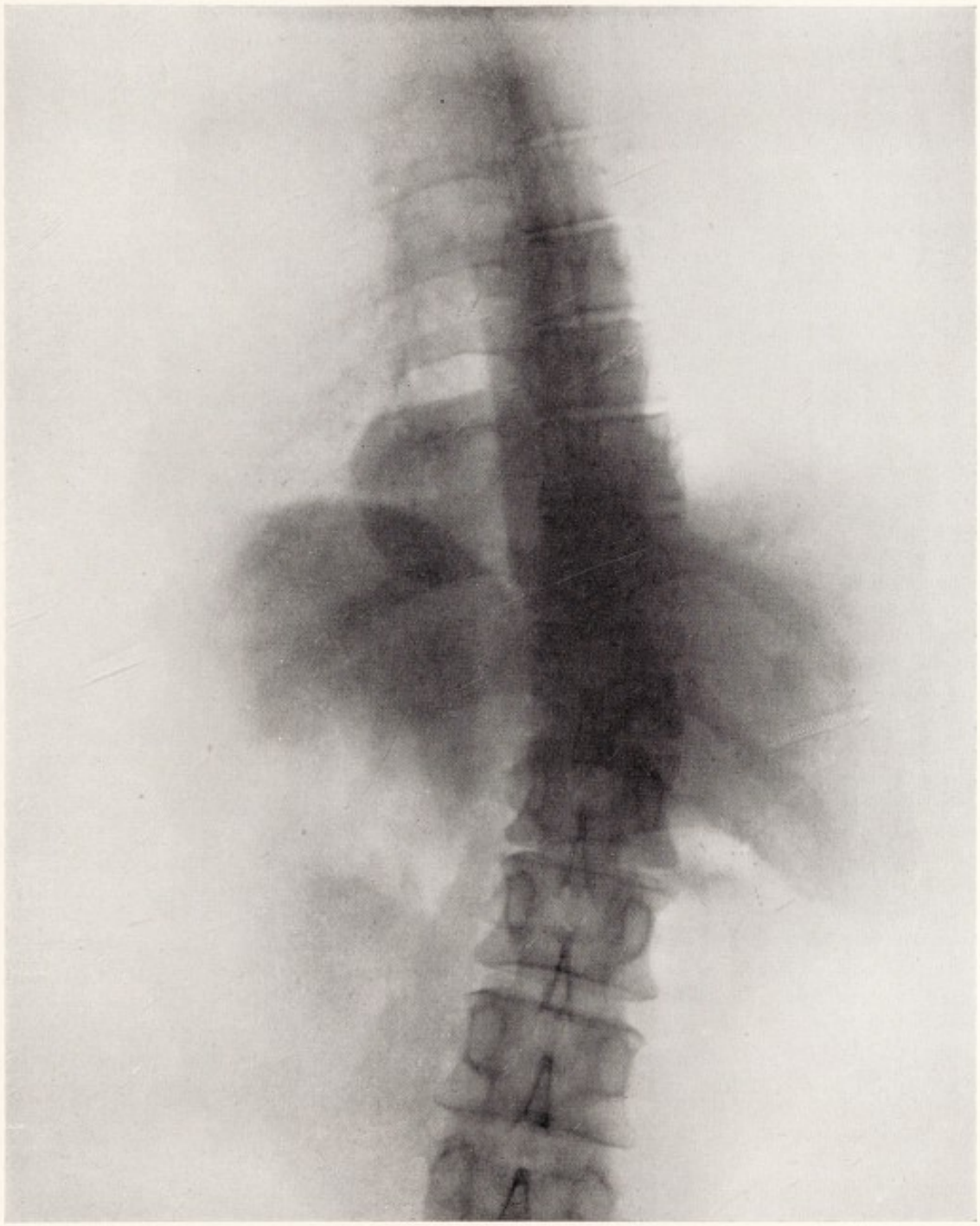


RIGHT SIDE. LEFT SIDE.

LARGE ABSCESS TRACKING DOWN INTO THORAX, ARISING FROM TUBERCULOUS DISEASE OF THE CERVICAL SPINE (ABSCESS SHOWS UP AS WIDE DARK SHADOW IN CENTRE OF UPPER PART OF PHOTOGRAPH).

(Taken at County Dispensary, Ashton-under-Lyne).

Skiagram No. 15.



LEFT SIDE. RIGHT SIDE.

TUMOUR ON POSTERIOR NERVE ROOT OF 9TH DORSAL SPINAL NERVE.
FOUND POST-MORTEM TO BE A FIBROMA.

(Taken at County Dispensary, Ashton-under-Lyne).

Skiagram No. 16.

HYPERTROPHIC PULMONARY OSTEO-ARTHROPATHY OCCURRING IN A CASE OF SARCOMA OF THE LUNG. THICKENING OF THE BONES OF THE FORE-ARM AND HAND, DUE TO THE FORMATION OF A THIN SUBTERIOSTEAL LAYER OF BONE. THE WRIST JOINT IS ALSO SWOLLEN (SEE REFERENCE TO CASE ON PAGE 11).

(Taken at County Dispensary, Darwen).

In regard to tuberculosis of the bones and joints, there is no need to emphasise the necessity for x-ray examination, as it is accepted as indispensable in these cases in order to ascertain the exact nature of the lesions. In this section of the work also, x-ray examination has proved its usefulness by enabling the tuberculosis officer to exclude non-tuberculous conditions, and thus incidentally save the expense to the County of having to treat them as doubtful cases of tuberculosis.

Skiagram No. 15 is an example of this. The patient was referred from an infirmary as a case of surgical tuberculosis to be accepted by the County for in-patient treatment. The skiagram, however, showed no evidence of spinal disease, and the appearance suggested a growth of some kind. This patient died from other causes, and a post-mortem was obtained. The condition was found to be a tumour on the posterior nerve root of one of the spinal nerves, which, after pathological examination, proved to be a fibroma.

Skiagram No. 14 shows a very large abscess tracking down into the thorax from a tuberculous lesion of the cervical spine. The abscess in this case was not suspected until revealed by the skiagram.

Skiagram No. 16 is included because of its clinical interest. The case was one of sarcoma of the thigh. The thigh had been amputated, and lung symptoms developing afterwards, the case was referred to the tuberculosis officer as possibly one of pulmonary tuberculosis. The diagnosis, however, was ultimately established as sarcoma of the lung, and the patient was found to have developed the rare condition of pulmonary osteo-arthropathy, which is illustrated in the skiagram (taken by Dr. B. MacPhee, area 2).

RESEARCH WORK AND NEW METHODS OF TREATMENT.

The tuberculosis medical staff, in addition to their ordinary duties, are always engaged in some research work and in trials of new methods of treatment advanced from time to time as cures for tuberculosis. This is in accordance with the policy of the County Council to try such new forms of treatment, provided, of course, that there are one or more patients prepared voluntarily to co-operate in the experimental work. The County Council, in May, 1925, voted a sum of £100 for research work during the financial year.

The following are some of the subjects into which the whole or one or other of the medical staff have carried, or are carrying out, original research :—

(*a*) The fate of young children of tuberculous households (at the request of the Joint Tuberculosis Council of England and Wales).

(*b*) The fate of young children of tuberculous families (for Professor Calmette, the Deputy Director of the Pasteur Institute, Paris).

(*c*) The value of sanatorium treatment as compared with home treatment.

(*d*) The circumstances attending non-notification and late notification of cases of tuberculosis.

(*e*) The prevailing type of tuberculosis in the Administrative County as compared with what occurred 20 to 30 years ago, in connection with Dr. Brownlee's report to the Medical Research Council, entitled " Investigation into the Epidemiology of Phthisis."

(*f*) The effects of the isolation of tuberculous patients on the number of positive cases in selected areas.

(*g*) The distribution of pulmonary tuberculosis in Lancashire in different localities and in different industries, with particular reference to cotton weaving, cotton spinning, and coal mining.

Whilst this research has taken up some of the time of the staff, it nevertheless has the effect of stimulating initiative, thought and study,

and it also makes known our experience on particular matters in the Administrative County—which has the largest population of any unified scheme in England—and assists in the discovery of peculiarities, weaknesses, as well as means for the improvement of tuberculosis schemes and statistics.

With regard to new methods of treatment it has generally been found advisable to try these at County sanatoria and pulmonary hospitals where the patients are under the constant supervision, care, and control of the medical superintendent and his staff.

Below is a list of the principal new methods of treatment which have been tried or investigated by the tuberculosis medical staff during the past few years :—

(*a*) Alipoid T.B.E. or " defatted " tuberculin (prepared according to the formula prescribed by Prof. Dreyer).—This method was tried at five County sanatoria and hospitals ; the majority of the patients remained unaffected by the treatment, and it soon appeared that the new tuberculin had not produced the favourable results expected. The manufacturers provided the tuberculin free of charge for this test.

(*b*) Dr. Paget's insufflator, by means of which dried tuberculin is drawn into the nostrils.—Several of the patients who received this treatment showed a little improvement, but in no case had it apparently any marked effect on the course of the disease.

(*c*) Pneumosan—a complicated organic preparation.—Many of the patients showed an improvement, which, however, was not maintained. The substance seemed to act as a tonic on the patients' general health, but it appeared to have little or no direct effect on the disease.

(*d*) Endocrine substances, which are derivatives of various glands (such as the thyroid and pituitary).—These appeared to have no influence on the disease.

(*e*) " Yadil," a proprietary drug, which was extensively advertised in the press.—The trial was made at two of the County pulmonary hospitals, and the drug was found to have no effect on the patients' health in comparison with other patients who did not have the preparation.

(*f*) Mr. Stevens' Drug (Umckaloabo) which has been on the market for many years.—An investigation did not substantiate the claims made as to its curative properties.

(*g*) A preparation placed on the market through the agency of a weekly periodical.—Insufficient time has elapsed for a definite result, and it is, therefore, still under trial.

(*h*) Prof. Gabrilovitch's remedy for tuberculosis known as "la Phagolysine."—A supply of the medicament was provided free of charge by the manufacturers for the purposes of this trial. The preparation had no effect on the disease.

(*i*) Sodium Morrhuate.—This drug was tried on 17 patients at a pulmonary hospital; but from the investigation carried out there would appear to be no evidence that sub-cutaneous injections of this preparation have any material influence upon the course of tuberculosis in its chronic or advanced stages.

With regard to Mr. Spahlinger's method of treatment, no supply of the particular vaccines and sera has yet become available for purposes of trial, although this may be possible in the future.

Although the results of the trials of the various new methods of treatment do not show that any one drug or preparation is beneficial in the treatment of tuberculosis, the time spent by the staff has not by any means been wasted, as it is only by actual trial of the suggested remedies that a first-hand conclusion can be formed of their value.

For several of the preparations tried the most exaggerated claims had been made by the promoters. In the case of one drug, for which a very high percentage of cures was claimed, it was possible to investigate the history of 12 County patients who had undertaken the treatment. Of the 12, four were known to have died from tuberculosis, four had suffered from non-pulmonary tuberculosis of a type which usually becomes cured by the ordinary methods of treatment (which, in fact, these patients had received under the County scheme), three had never been diagnosed by a medical practitioner as suffering from tuberculosis, and the remaining patient had been discharged from a sanatorium with the disease quiescent prior to commencing the particular advertised treatment.

It should not be overlooked that by the ordinary methods of treatment some 662 patients (372 pulmonary and 290 non-pulmonary) diagnosed and notified as suffering from tuberculosis were, during 1924, written off the register of tuberculosis cases as "cured." A pulmonary case is considered cured if without symptoms for five years, and a non-pulmonary case if without symptoms for three years.

THE NOTIFICATION OF TUBERCULOSIS CASES.

Under the Public Health (Tuberculosis) Regulations of 1912, it is the statutory duty of every medical practitioner to notify within 48 hours to the local medical officer of health any case of tuberculosis occurring in his practice. The medical officer of health is charged with the duty of keeping a register of all cases of tuberculosis reported in his sanitary district, and the Ministry of Health, by further Regulations issued in December, 1924, call for greater accuracy in the country generally in the keeping of these registers. Commencing on the 1st January, 1925, every medical officer of health is required as soon as practicable after the end of each quarter to furnish to the County Medical Officer of Health a return containing the following information divided as between males and females, and pulmonary and non-pulmonary :—

(*a*) The number of cases of tuberculosis on his register at the commencement of the quarter ;

(*b*) The number of cases notified to him under the Regulations of 1912 for the first time during the quarter ;

(*c*) The number of cases removed from the register during the quarter (giving the name and address of each such case, and the reason for such removal) ; and

(*d*) The number of cases remaining on the register at the end of the quarter.

The new Regulations will go far to ensure that the local registers of tuberculous persons are kept correctly, and the County staff has been glad to assist medical officers of health in revising their registers to start the new procedure. The position in Lancashire has, I think, been better than in many other parts of the country, because for several years medical officers of health have been notified by me of (*a*) changes of address, (*b*) deaths from tuberculosis, by means of copies of the registrars' weekly returns, (*c*) deaths of notified tuberculous cases from causes other than tuberculosis, (*d*) cases which have become cured, and (*e*) cases which have been notified by practitioners in error. In addition to the above, the attention of medical officers of health has been drawn to deaths recorded as due to tuberculosis and which have not been notified during life.

Sir George Newman, the Chief Medical Officer of the Ministry of Health, in his annual report for 1924, dealing with the carrying out of

the Tuberculosis Regulations, complains that in England and Wales so many as 8,434 new cases of tuberculosis which had never been notified came to the knowledge of the local medical officers of health from sources other than formal notifications, *i.e.*, mainly from death returns. Based on this figure one would expect, in proportion to population, about 388 non-notified cases in the Administrative County last year. Actually, however, the number was 129, or one-third. This good result is due to cordial co-operation between all medical practitioners involved, and shows that there are fewer unknown cases or unknown sources of infection in Lancashire remaining outside the measures for the control of the disease. There is no doubt at all in my mind that this better notification of cases in the County is helping greatly to reduce the number of new cases.

The blame for defective carrying out of the Tuberculosis Regulations throughout the country has been laid on the smaller local sanitary authorities. I do not think the blame can be fairly laid on the shoulders of the small local authorities, for in Lancashire we have no less than 121 of them, 22 with medical officers giving their whole-time to public health work, and 99 with part-time officers. During recent years I have directed special attention to the notification of cases of tuberculosis, and have engaged in correspondence with medical practitioners, medical officers of health, and medical superintendents over many individual cases. The success which has been achieved in securing the notification of so large a proportion of cases would not have been practicable without the cordial co-operation of the local medical officers of health.

In the Administrative County, the decline in the extent of non-notification of pulmonary cases is shown in the following statement :—

	1918	1919	1920	1921	1922	1923	**1924**
Proportion of non-notified fatal cases of pulmonary tuberculosis to total pulmonary deaths	18%	16%	13%	10%	8%	6·8%	5·2%

The actual numbers of deaths from both pulmonary and non-pulmonary tuberculosis since 1918, not previously notified under the Regulations, are as follow :—

	1918	1919	1920	1921	1922	1923	**1924**
Pulmonary Tuberculosis (Consumption)	303	221	177	135	105	85	64
Non-Pulmonary Tuberculosis ...	137	104	122	96	83	74	65
Total	440	325	299	231	188	159	129

The deaths in 1924 of cases not previously notified under the Regulations are further analysed in Table 6 below :—

TABLE 6.

	Cause of Death.			Total.
	Pulmonary. Primary.	Pulmonary. Secondary	Non-Pulmonary	
No. of deaths of persons at private addresses	39	4	44	87
No. in County Mental Hospitals of persons belonging to County area	3	...	...	3
No. in Union Institutions of persons belonging to County area	15	...	9	24
No. in other public institutions of persons belonging to County area	3	...	12	15
	60	4	65	129
	64			

During 1924, 112 pulmonary and 63 non-pulmonary deaths occurred outside the County area of persons usually residing in the Administrative County. Of these, 102 pulmonary and 62 non-pulmonary occurred in public institutions. In 53 instances no case notification could be traced. These are not included in Table 6.

Since 1920 special investigations have been made into every individual death recorded from tuberculosis which had not been previously notified as a case under the Regulations, and the results of the investigations in 1924—which confirmed the findings of previous years—showed that 27 per cent. of the deaths at private addresses related to fulminating cases of pulmonary tuberculosis in adults and acute cases of meningitis in children with no doctor in attendance at all, or only for a matter of a few days prior to death. Again, in 43 per cent., notification was not made owing to a misunderstanding of the Tuberculosis Regulations or to the belief that the case had already been notified by another practitioner.

The efficiency of notification varies directly with the efficiency of the county council or county borough scheme dealing with tuberculosis. If there is no really comprehensive scheme ; if there are poor and newly qualified part-time and badly paid tuberculosis officers ; if there are insufficient means for expert diagnosis, and too few beds for treatment ; then a high proportion of non-notified fatal cases will be the rule and not the exception.

Deaths within Three Months of Notification.

In 1924, 384 deaths occurred of persons belonging to the Administrative County within three months of the date of their notification as a case of tuberculosis. Further particulars of these deaths are given in the table contained in Appendix II.

Particulars were obtained of these persons—I have not published the full results of the investigation in this report for reasons of space—and as in previous years it was found that about 40 per cent. of the pulmonary cases neglected to see a doctor, or did not recognise the oncoming symptoms of pulmonary tuberculosis, until the disease had established a firm hold. The only feasible remedy for this is to educate the public further as to the common symptoms of the disease and dangers of delay.

APPLICATIONS FOR TREATMENT.

Table 7 below shows the number of "new" persons (2,259) who applied for treatment during the year 1924 :—

	Number of Applications received during 1924.	Number Received Treatment.			
		Pulmonary Cases.	Pulmonary and Non-Pulmonary.	Non-Pulmonary Cases.	Diagnosis not Confirmed.
Men	894	670	28	177	19
Women ...	785	552	28	190	15
Boys	286	64	8	206	8
Girls	294	80	8	196	10
TOTAL ...	2259	1366	72	769	52

N.B.—In this table a person who received treatment within the period appears once only, even though he has received treatment in more than one form.

Applications received in previous years were :—1923, 2,266 ; 1922, 2,099 ; 1921, 2,264 ; 1920, 2,434 ; 1919, 2,168 ; 1918, 2,309 ; and average for 1914-17, 1,790.

During 1924, there were 3,092 cases notified under the Public Health (Tuberculosis) Regulations as suffering from tuberculosis (all forms) ; whereas the number of persons who applied for treatment to the County Council was 2,259, equal to 73 per cent. of the notifications.

This figure represents only approximately the percentage of notified cases applying for treatment, as, to be strictly accurate, minor adjustments are required for doubtful cases, removals, and cases where the diagnosis was not confirmed. The cases notified in 1923 who applied for treatment in 1924 may be taken as roughly equivalent to the several 1924 notifications applying in 1925. With regard to the balance (approximately 27 per cent.) of the notifications where the patients did not apply to the County Council for treatment, the principal reasons for this were : patients suffering from meningitis or other fatal forms of the disease ; patients removed out of County area ; cases in which the diganosis was not confirmed and no treatment required ; and patients who, for some reason or other, did not wish to avail themselves of the benefits under the County scheme.

STAGE OF DISEASE OF ADULT PATIENTS SUFFERING FROM PULMONARY TUBERCULOSIS.

During 1924, applications for treatment were received from 1,278 new adult patients (*i.e.*, 15 years and over), and these were reported by the tuberculosis officers to be in the undermentioned stages of the disease on the first examination :—

Early, or first stage	358,	or 28·0 per cent.
Intermediate, or second stage ...	580,	or 45·4 per cent.
Advanced, or third stage	310,	or 24·3 per cent.
Diagnosis doubtful	30,	or 2·3 per cent.
	1,278	100·0

In regard to the " doubtful " cases, it has been the practice to review the diagnosis at the end of the particular year of application, and if by then the case has been definitely established to be tuberculosis, it is classified under the appropriate stage. Thus, in 1924, on the first examination by the tuberculosis officer, there were 76 patients in whom the disease was " doubtful," but as the result of subsequent examinations 46 were definitely diagnosed and disposed of to the various stages (stage I. 26, stage II. 19, and stage III. 1), leaving 30 still " doubtful " at the end of the year.

The stage of the disease on the patient first coming under the tuberculosis scheme has an important bearing on the prospects of successful treatment, and the table below has been prepared to show the position in regard to adults applying for treatment during the past ten years :—

TABLE 8.—*Stage of disease of new adult patients applying for treatment.*

Pulmonary Tuberculosis.	Year of Application.									
	1915.	1916.	1917.	1918.	1919.	1920.	1921.	1922.	1923.	**1924.**
	%	%	%	%	%	%	%	%	%	%
†Stage I. ...	31·1	38·0	42·9	41·3	40·5	31·9	31·4	26·4	23·5	28·0
†Stage II. ...	34·5	36·8	35·7	38·5	37·3	42·4	40·7	40·2	47·7	45·4
†Stage III. ...	32·9	23·8	19·4	17·1	17·9	21·6	24·2	28·7	26·3	24·3
Doubtful ...	1·4	1·4	2·0	3·1	4·3	4·1	3·7	4·7	2·5	2·3
Total ...	100	100	100	100	100	100	100	100	100	100

† Classified according to the system of Turban-Gerhardt.

Compared with 1923, there has been a slight improvement in the percentage of early (Stage I.) cases, and also in the proportion of advanced (Stage III.) cases. Even so, 69·7 per cent. of the new cases were either in the intermediate or advanced stages of the disease when they applied to the County Council for treatment, and this in spite of the fact that no less than 78·6 per cent. of all new cases (excluding contacts) were seen by the tuberculosis officer in consultation with the family doctor *before* notification of the case.

It is only too well known that, throughout the country generally, tuberculosis officers do not get their new cases early enough, for many patients through ignorance, and no doubt economic reasons, neglect to consult a doctor when in the early stage, and so lessen their chance of recovery. In the Administrative County we have for several years made special investigations into the reasons underlying such disastrous delay on the part of the patients, and the subject is fully analysed in the remainder of this chapter.

Taking the advanced or third stage cases, which numbered 310, or 24·3 per cent. of the new patients in 1924, we find that these cases were referred or became known to the tuberculosis officers through the following sources :—

(*a*) Prior to notification of case :—		
Cases examined at request of patient's own doctor ...	183	
Cases examined at request of Pensions authorities ...	2	
Case examined at request of Hospital authorities ...	1	
Cases detected by tuberculosis officer during examination of contacts	5	
Cases transferred from other local authorities	3	
	—	194
(*b*) By notification of case under Public Health (Tuberculosis) Regulations, 1912		116
		310

The following table shows in concise form the period these advanced cases had been ill (based on their statements to the tuberculosis officer), and also the period they had been under their own doctor measured from the date of examination by the tuberculosis officer or the date of notification of the case, whichever is the earlier :—

TABLE 9—*Advanced adult new patients in 1924—Duration of illness and period under doctor.*

Duration of Patients' Illness at date of notification or T.O.'s examination.	Sex.	Number of Patients	Sputum.		No doctor.	Period under Medical Attendant at date of T.O.'s examination or at notification. Months.								
			Pos.	Neg. or None.		Under 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6	6 to 9	9 to 12	12 and over.
Under 1 month ...	M.	10	4	6	...	10	...	...	...	...	...	...	...	...
	F.	9	7	2	1	8	...	...	...	...	...	...	...	...
1 to 2 months ...	M.	11	11	...	...	7	4	...	...	...	...	...	...	...
	F.	23	19	4	...	16	7	...	...	...	...	...	...	...
2 to 3 months ...	M.	14	13	1	...	7	3	4	...	...	...	...	...	...
	F.	17	16	1	...	9	2	6	...	...	...	...	...	...
3 to 4 months ...	M.	13	9	4	...	4	3	2	4	...	...	...	...	...
	F.	24	22	2	...	12	1	4	7	...	...	...	...	...
4 to 6 months ...	M.	19	17	2	...	9	2	...	1	3	4	...	...	...
	F.	30	24	6	1	14	6	1	2	4	2	...	...	...
6 to 9 months ...	M.	5	5	...	...	3	...	...	...	...	...	2	...	...
	F.	17	14	3	...	8	2	...	1	1	...	5	...	...
9 to 12 months ...	M.	9	8	1	...	6	...	1	...	...	...	1	1	...
	F.	8	7	1	...	4	3	1	...	...	...	...	...	...
12 months and over	M.	53	44	9	5	27	6	3	1	...	...	...	1	10
	F.	48	40	8	4	30	5	1	...	1	2	...	1	4
TOTAL ...	M.	134	111	23	5	73	18	10	6	3	4	3	2	10
	F.	176	149	27	6	101	26	13	10	6	4	5	1	4
Percentage to total advanced cases	M.	...	83·0	17·0	3·7	54·5	13·4	7·5	4·5	2·2	3·0	2·2	1·5	7·5
						71·6								
	F.	...	84·7	15·3	3·4	57·4	14·8	7·4	5·7	3·4	2·3	2·8	0·5	2·3
						75·6								
Males and females	...	...	84·0	16·0	3·5	56·1	14·2	7·4	5·2	2·9	2·6	2·6	1·0	4·5
						73·8								

The problem of patients delaying their application for treatment until in the late or advanced stage of the disease is closely related to the subjects of " late notification " and " non-notification " already referred to in an earlier chapter (see pages 15 to 18) and dealt with exhaustively in previous annual reports. The conclusions given below correspond with those arrived at in investigations which have been made into late notification (patients dying within three months of notification) and

non-notification (patients dying without the case having been previously notified).

1.—That altogether 73·8 per cent. of the advanced cases either had no doctor or had only been attending their doctor for less than two months when first examined by the tuberculosis officer or notified.

2.—After making allowance for a percentage of fulminating cases (" galloping consumption "), a large proportion—nearly three-fourths—of patients had been feeling ill for one month or more before consulting a doctor.

3.—The reason for late notification and patients delaying their application until in an advanced stage of the disease is chiefly the disinclination or unwillingness of the patients to report themselves to their doctor when feeling ill. This is due mainly to the insidious onset of the disease, the discomfort being only slight at first.

4.—There does not appear to be evidence in any large number of cases of unreasonable delay in patients being referred by their doctor to the tuberculosis officer.

5.—The initiative to seek treatment when ill rests with the patient himself, and the only feasible remedy lies in the education of the public as to symptoms and common dangers of tuberculosis and the need for securing prompt treatment. This cannot be too strongly or too often emphasised.

While it is easy to talk of enlightening the public, there are many difficulties in reaching the people who most require such education. On the tuberculosis officer rests chiefly the duty of stimulating public interest, but an increasing number of sanitary authorities and voluntary care committees are assisting in propaganda work. Better results would, I think, accrue if a bolder effort were made in the teaching of hygiene to the older children at school and the syllabus expanded to permit this.

The tuberculosis medical staff have to depend very largely on the general practitioners throughout the County for bringing forward tuberculous patients, and it is satisfactory to note that, as reported on page 31, 78·6 per cent. of new cases are sent *before notification* to the tuberculosis officers for an opinion as to diagnosis. Too much importance is still laid by some doctors on sputum examinations alone, and often too long a time is allowed to elapse in order that the sputum may be tested, or steps are not taken to report the case until it is returned as " positive."

Even when treatment is begun in the early stages of the disease (*i.e.*, I. and I.S.), the experience in this County shows that treatment after a positive sputum makes a fatal result two or three times more likely than when the sputum is negative or absent.

CARE WORK.

Tuberculosis is usually a chronic disease, and its most prevalent form, consumption, attacks chiefly adults in the prime of life. These facts are the basis on which rests the need for and the great value derived from what is termed care work—or after-care work. Care work may be also described as something additional to routine methods adopted by a local authority in its tuberculosis scheme for the prevention and treatment of this infectious disease. Under the Lancashire scheme dealing with tuberculosis, persons who apply for treatment are examined by the tuberculosis officer, either at their homes or the dispensary, and as and when required are supplied with paper handkerchiefs and sputum flasks, to prevent the spread of infection; dressings if suffering from "open" surgical tuberculosis; special nourishment, usually in the form of milk; thermometers and appliances such as splints, crutches, supports and surgical boots; and the loan of bedsteads and mattresses, if necessary, to enable patients in an infectious state to have a bedroom to themselves. This may be described as the *preventive* side of home treatment, and is, of course, additional and supplementary to the medical treatment of patients by their own doctors.

If insured, patients who are in full benefit ordinarily receive: (*a*) as sickness benefit 15s. per week for men and 12s. for women for 26 weeks; followed by (*b*) disablement benefit of 7s. 6d. per week for men and women, until eligible for State pension.

The Voluntary Care Committees.

But, in addition to all the above, there were at the end of 1924 18 voluntary Care Committees, recognised by the County Council, at work, the whole covering an estimated population of 794,090 out of an estimated County population of 1,782,800.

Particulars of the populations served, the number of patients assisted, and the amounts expended during 1924 are as follow:—

TABLE 10.—*Summary of Work done by Voluntary Care Committees.*

Name of Committee.	Estimated Population Served 1924.	Number of Individual Patients Assisted during 1924.	Expenditure during 1924.
			£ s. d.
Ashton-under-Lyne & District ...	69,778	84	390 9 8
Bacup and Rawtenstall	50,490	26	37 10 0
Chorley	73,299	28	216 2 4
Earlestown, Newton and District	22,223	22	47 5 0
Eccles Guild of Help	46,020	8	35 17 2
Egerton, Eagley and District ...	5,759	3	8 10 3
Farnworth and District	69,719	36	53 17 11
Golborne	7,598	25	59 9 0
Horwich	16,060	20	194 11 9
*Huyton-with-Roby District ...	5,315	...	...
Lancaster and District	77,947	13	60 6 2
Leigh and District	91,254	111	151 13 3
Prescot and District	18,633	15	62 19 4
Prestwich	19,450	3	5 10 0
Radcliffe, Whitefield and District Relief Fund	35,011	19	†81 17 10
Stretford Guild of Help	48,670	15	29 18 5
Westhoughton	16,600	14	44 10 1
Wigan County District	120,264	59	93 7 9
TOTAL	794,090	501	£1,573 15 11

* Formed 11th November, 1924.

† Relates to year ended 31st March, 1925.

The following are in general the objects for which the voluntary Care Committees may be said to stand :—

(1) To assist in the purchase of clothing which patients need when they go to sanatorium or hospital.

(2) To provide food and clothes for poor patients who are receiving treatment at home.

(3) To give assistance (in kind) to dependants, so as to enable patients for whom institutional treatment has been recommended to take advantage of the opportunities provided under the County scheme.

(4) To assist patients, who are sufficiently recovered, to obtain suitable employment.

(5) To give suitable advice and encouragement to patients and their friends, and generally to assist the dispensary staff in the enlightenment of the public both as to the laws of health and the facilities for treatment.

The income of the Committees is derived from voluntary sources by means of house-to-house collections, periodical contributions from factories and workshops, proceeds of concerts, whist drives, socials, flower days, football matches, &c., grants from trade unions, employers' associations, boards of guardians, and other bodies. The County Council has continued to vote sums of money to the Care Committees, which

have been divided proportionately according to the actual amount expended by each Committee in assisting patients or their dependants. Last year these grants equalled 33·3 per cent. of the Committees' expenditure. In addition, the County Council defray the cost of printing, stationery, postages, carriage, and clerical assistance, so that the whole income of any Care Committee is available for the relief of patients.

The Committees are composed in the main of representatives of local authorities, trade unions, guilds of help, and other persons interested in the welfare of tuberculous patients. The tuberculosis officer acts as medical adviser, and in the majority of cases the tuberculosis health visitor as hon. secretary or one of the hon. secretaries of the Committee. No assistance is, therefore, given except under the personal supervision of the tuberculosis officer, and on this account no overlapping with other agencies is likely to occur.

These voluntary Care Committees are doing, and have done, very valuable work in providing clothing, grants in kind to completely disabled cases or dependants, either to replace or supplement the sickness benefit when it is insufficient to keep the patient or his family from being a charge on the poor rate. A further most important result is a knowledge gained by the members of these Care Committees and others in the locality of the real nature, extent and aims of the County scheme dealing with the prevention and treatment of tuberculosis.

It has been stated that the most important work by far which can be performed by a Care Committee is the finding of work for patients who return from institutional treatment. While this certainly is one of their objects, and while posts for patients are from time to time found through the Committees, my experience is that the employment which these Care Committees do actually find for patients bears little or no relation to the special work which most patients have undertaken at training centres or vocational colonies.

The annual reports and balance sheets of the various Committees are considered by the County Tuberculosis Committee of the County Council, who have on several occasions expressed their earnest appreciation of the valuable voluntary work carried out.

Reference has so far only been made to the 18 voluntary Care Committees approved by the County Council, but there are in existence many charitable and other organisations to which the tuberculosis officers are able to refer necessitous cases. Particularly, mention should be made of the relief schemes for ex-service men throughout the County provided by : (*a*) the Joint Council of the Order of St. John of Jerusalem

and the British Red Cross Society, which deals mainly with tuberculous pensioners, and (*b*) the Council of Management of the United Services Fund, which mainly looks after the interests of those tuberculous men who are *not* in receipt of war pensions. Active and efficient co-operation exists between the representatives of both the organisations named and the tuberculosis staff.

The Ministry of Health, in a circular issued in December, 1923, laid down a scheme for co-operation between the managers of the various employment exchanges of the Ministry of Labour and the tuberculosis officers with regard to the employment in suitable occupations of male patients on discharge from sanatoria or hospitals. The tuberculosis officer, with his knowledge of a patient's condition, employment (if any) and circumstances, plus the report of the medical superintendent on the man's progress at the sanatorium, is charged with the duty of reporting to the employment exchange any need for a change of occupation or for the provision of suitable employment. The County tuberculosis officers make a practice of conferring with the patient himself before making their recommendation. However, with the present large amount of unemployment in the country, there has not been much chance for the scheme to show good results.

Care work through Dispensary Organisation.

The population covered by the voluntary Care Committees is 794,090, which leaves a balance of nearly 1,000,000 persons to be dealt with by other means, pending the formation of new voluntary Committees. The County Council decided to extend the care scheme on and from the 1st October, 1924, so that the whole of the Administrative County would be covered. In the areas without Care Committees the tuberculosis dispensary staff were appointed to carry out the work.

With regard to finance, the Council decided to take as a basis the amount voted to the voluntary Committees and in proportion to population to grant a similar sum for the relief of patients in the remainder of the County area. Thus the Council's expenditure on care work is evenly distributed throughout the County, the districts where there are voluntary Committees at work having the advantage of the additional funds obtained by them from outside sources.

Grants to necessitious patients or their dependants are made on the recommendation of the consultant tuberculosis officers, with the following general objects :—

(*a*) To assist in the purchase of clothing which patients need when they go to a sanatorium or hospital.

(*b*) To provide food and clothes for the necessitous patients who are receiving treatment at home, and for those who have returned from an institution with no chance of resuming work.

(*c*) To give assistance (in kind) to dependants, so as to enable patients, for whom institutional treatment has been recommended, to take advantage of the opportunities provided under the County scheme.

(*d*) All assistance, wherever possible, to be given by orders on tradesmen.

From 1st October, when the extended scheme commenced, to 31st December, 1924, assistance was afforded through the dispensary staff to 42 individual patients, the amount expended being £81 5s. The assistance was mainly in the provision of milk, groceries, and clothing.

Thus, a complete and comprehensive care scheme is now in working order for the whole Administrative County.

THE DISPENSARY ORGANISATION.

The efficiency of a tuberculosis scheme depends directly on the kind of dispensary organisation set up, and while much prominence is easily given to work done at hospitals and sanatoria, the dispensary organisation is undoubtedly of primary importance because the whole basis of the work here is towards early diagnosis and prevention rather than cure. The dispensary tuberculosis officer and his staff have to carry out the most delicate duties, working in the closest co-operation with the medical practitioners and local health officials, diagnosing with due sense of responsibility cases referred to them, advising the appropriate form of treatment, investigating tactfully and at first-hand the home conditions, and effectively supervising the home treatment of patients.

A tuberculosis dispensary should be the centre of activity, for a town or district, in regard to measures for the prevention of the disease, the expert examination and diagnosis of cases, together with the supervision, special treatment, and care of all known tuberculous persons. The tuberculosis officer himself should be a first-rate clinician, of mature judgment and experience, of high professional standing, possessing expert and up-to-date knowledge of tuberculosis in its varied phases, and looked upon as a consultant by the doctors in general practice; he must have tact, discrimination, and administrative ability.

For dispensary purposes, the Administrative County is now divided into five large areas, average population 337,647, and two sub-areas. The latter are country districts surrounding the High Carley and Elswick Sanatoria, and administered by the medical superintendent acting as a consultant dispensary officer. Each large area is under the charge of a consultant tuberculosis officer, and to help the consultants, there are eight assistant tuberculosis officers and 30 tuberculosis health visitors. In each dispensary area there is a chief dispensary at which is co-ordinated the whole of the work required in that particular area, and, in addition, branch dispensaries have been provided.

The civilian (*i.e.*, excluding serving sailors and soldiers) population to be dealt with under the County Council scheme was estimated on December 31st, 1924, to be 1,782,800, resident in 121 sanitary districts; the total estimated population of the County area was 1,784,000.

The complete County scheme provides for 26 dispensaries, namely, 5 chief and 21 branch. At the end of 1924, 5 chief and 18 branch dispensaries were in use, and during 1925 premises purchased at Fleetwood will be brought into use as a dispensary for the Fylde Sub-Area. The

establishment of the remaining dispensaries has been postponed owing to the difficulty in obtaining suitable premises.

Table A, inserted, shows the dispensary areas with the population, present staff, the names of all the dispensaries at present in use, and the days and times on which they are open.

Ordinary symptomatic treatment is not undertaken at a dispensary if the patient has a doctor and is at the time receiving satisfactory treatment. It is the duty of the tuberculosis officer and his staff to deal more particularly with the diagnosis of patients and with special forms of treatment, and to exercise general supervision over home treatment, acting in co-operation with the insurance practitioner or family doctor. They also devote special attention to general hygienic and preventative measures, in conjunction with the doctor and the local sanitary authority. The number of cases granted actual treatment at the dispensary has always been quite small—between five and six per cent.

Those patients with active disease are examined at frequent intervals and placed for short periods (of not more than three months) on dispensary treatment or supervision, and granted other forms of treatment as found advisable. Quiescent cases are, however, kept on dispensary supervision so long as they remain well, and they are reviewed annually until written off as cured.

Co-operation with Local Sanitary Authorities.

The co-operation with the local sanitary authority and its officials—a matter of the utmost importance in a County—has continued to be of a cordial character, resulting in an increased efficiency of the County scheme, and also preventing overlapping.

The tuberculosis health visitors prepare reports on the environmental conditions of the new cases notified, and such reports are considered by the tuberculosis officer, and a duplicate is sent at once to the local medical officer of health, whose attention is drawn to any sanitary defect or defects which may exist. Each patient receives from the nurse instructions, both written and verbal, as to the general hygienic measures required, and (when not otherwise supplied by the sanitary authority) is given paper handkerchiefs and bags, or sputum flasks, and instructed in the proper method of collecting and destroying the sputum. The patient is also instructed by the nurse how to take his or her temperature, and a thermometer is lent to any patient who, in the opinion of the tuberculosis officer, requires one. Arrangements are also made for the attendance of the patient and contacts at the dispensary.

TABLE A.

List of Dispensaries and the Tuberculosis Officers for the Dispenary Areas.

Table A.—List of Tuberculosis Dispensaries in use in October, 1925, and the Tuberculosis Officers for the Dispensary Areas.

Dispensary Area No.	SANITARY DISTRICTS.			Estimated Civilian Population 31/12/24.	MEDICAL STAFF October, 1925.	NURSING STAFF.	DISPENSARIES.	Days and Hours of DISPENSARY SESSIONS (Distinct from Home Visiting, attending Sanatoria, Hospitals and Care Committees, etc.).
1	Adlington Blackrod Carnforth Chorley (B.) Chorley (R.) Croston Fulwood Garstang (R.), Part of, consisting of parishes of— Barnacre-with-Bonds Bilsborrow Bleasdale Cabus	Garstang (R.) *continued* Catterall Claughton Cleveley Forton Garstang Holleth Kirkland Myerscough Nateby Nether Wyresdale Winmarleigh	Heysham Horwich Lancaster (B.) Lancaster (R.) Leyland Longridge Lunesdale (R.) Lytham St. Annes (B.) Morecambe (B.) Preston (R.) Walton-le-Dale Withnell	245,807	Dr. A. D. Brunwin, Tuberculosis Dispensary. 8 Middle Street, Lancaster. Assistant Tuberculosis Officer— Dr. G. H. Leigh	Nurse L. Walker Nurse T. Brothers Nurse F. D. Abbott Nurse J. Skelcher	CHIEF—Lancaster, 8 Middle Street (Tel. No. 568). (X-Ray Apparatus) BRANCH—Chorley, 59 Gillibrand Street (Tel. No. 263) BRANCH—Preston, 22 Bolton Street (Tel. No. 1111)	Monday, 12 noon. Thursday morning by appointment. 1st Monday evening in month by appointment. Monday by appointment. Thursday, 11 a.m. 2nd Tuesday evening in month by appointment. Wednesday, 11 a.m. Monday evening before 2nd Tuesday in month by appointment.
	FURNESS SUB-AREA—							
	Dalton-in-Furness Grange-over-Sands	Ulverston	Ulverston (R.)	41,859	Dr. E. H. A. Pask, High Carley Sanatorium, near Ulverston (Tel. No. 110 Ulverston).	Nurse E. A. Duston	BRANCH—Ulverston, Virginia House (Tel. No. 145). (X Ray Apparatus at High Carley Sanatorium).	Tuesday, 10 a.m. Thursday, 10 a.m.
	FYLDE SUB-AREA—							
	Fleetwood Fylde (R.) Garstang (R.), Part of, consisting of parishes of— Great Eccleston Hambleton	Inskip-with-Sowerby Out Rawcliffe Pilling Stalmine-with-Stainall Upper Rawcliffe	Kirkham Poulton-le-Fylde Preesall Thornton	52,702	Dr. G. Leggat, Elswick Sanatorium, near Kirkham (Tel. No. 22 Great Eccleston).	Nurse A. Tweedy	BRANCH—Fleetwood, 23 Poulton Road (Tel. No. 282).	Tuesday, 10 a.m.
2	Accrington (B.) Bacup (B.) Barrowford Blackburn (R.) Brierfield Burnley (R.) Church	Clayton-le-Moors Clitheroe (B.) Clitheroe (R.) Colne (B.) Darwen (B.) Great Harwood Haslingden (B.)	Nelson (B.) Oswaldtwistle Padiham Rawtenstall (B.) Rishton Trawden Turton	359,269	Dr. B. MacPhee, Tuberculosis Dispensary, 39 Avenue Parade, Accrington. Assistant Tuberculosis Officer—Dr. S. C. Adam	Nurse L. F. Norwood Nurse E. Watterson Nurse M. Duggan Nurse A. Munro Nurse H. M. Alcock Nurse R. Lambert	CHIEF—Accrington, 39 Avenue Parade (Tel. No. 2443). BRANCH—Darwen, 20 Railway Road (Tel. No. 408). (X-Ray Apparatus) BRANCH—Nelson, 64, Carr Road (Tel. No. 507). BRANCH—Stacksteads, Knott Hill House (Tel. No. 201 Bacup).	Tuesday, 10 a.m. and 2 p.m. Wednesday, 2 p.m. 2nd Wednesday of month, 6 p.m Friday, 10 a.m. Tuesday, 2 p.m. Friday, 2 p.m. 1st Friday of month, 6 p.m. Thursday, 2 p.m. 1st Thursday of month, 6 p.m.
3	Ashton-under-Lyne (B.) Audenshaw Bury (R.) Chadderton Crompton Denton Droylsden Failsworth Heywood (B.)	Hurst Lees Limehurst (R.) Littleborough Middleton (B.) Milnrow Mossley (B.) Norden	Prestwich Radcliffe Ramsbottom Royton Tottington Wardle Whitefield Whitworth	376,015	Dr. J. L. Stewart, Tuberculosis Dispensary, Boston House, Warrington Street, Ashton-under-Lyne. Assistant Tuberculosis Officers— Dr. G. Fletcher Dr. C. Berry	Nurse H. Dewsnap Nurse R. Davison Nurse M. A. Potter Nurse C. Guilfoy Nurse I. F. MacDonald Nurse A. Flynn	CHIEF—Ashton-under-Lyne, Boston House, Warrington Street (Tel. No. 775). (X-Ray Apparatus). BRANCH—Bury, The Wylde (Tel. No. 654). BRANCH—Middleton, 71 Manchester Old Road. BRANCH—Mossley, Park Lodge. BRANCH—Oldham, 25 Barker Street (Tel. No. 1671). BRANCH—Rochdale, 168 Drake Street (Tel. No. 392).	Tuesday, 3 p.m. and 6-30 p.m. Friday, 9-30 a.m. Monday, 10-30 a.m. for X-Ray examinations. Monday, 2-30 p.m. Wednesday, 2-30 p.m. 3rd Wednesday of month, 6-30 p.m. Friday, 3 p.m. 2nd Friday of month, 6-30 p.m. Tuesday, 11 a.m. Monday, 3 p.m. 2nd Monday of month, 6-30 p.m. Wednesday, 10 a.m. Thursday, 10 a.m. 2nd Thursday of month, 7 p.m.
4	Abram Ashton in-Makerfield Aspull Atherton Barton-upon-Irwell (R.) Billinge Eccles (B.) Farnworth Hindley	Ince-in-Makerfield Irlam Kearsley Leigh (B.) Leigh (R.) Little Hulton Little Lever Orrell Standish-with-Langtree	Stretford Swinton and Pendlebury Tyldesley-with-Shakerley Upholland Urmston Westhoughton Wigan (R.) Worsley	456,659	Dr. G. Jessel, TuberculosisDispensary, 13 Church Street, Leigh. Assistant Tuberculosis Officers— Dr. G. B. Charnock Dr. A. B. Jamieson Dr. J. Cathcart	Nurse H. M. Shakespeare Nurse M. A. M. Clegg Nurse M. B. Jones Nurse F. G. Smith Nurse A. Dickinson Nurse E. Simmons Nurse E. Walters Nurse F. Milnes	CHIEF—Leigh, 13 Church Street (Tel. No. 258). BRANCH—Eccles, 28 and 30 Gilda Brook Road (Tel. No. 533). (X-Ray Apparatus). BRANCH—Farnworth, 19-23 Darley Street (Tel. No. 63). BRANCH—Pendlebury, 121 Station Road (Tel. No. 295 Eccles). BRANCH—Stretford, 14 Dorset Street (Tel. No. 110 Trafford Park). BRANCH—Wigan, 14 Rodney Street (Tel. No. 549).	Wednesday, 9-30 a.m. Friday, 9-30 a.m. 2nd Thursday of month, 6-30 p.m. Tuesday, 2-0 p.m.; 3-0 p.m. for X-Ray examinations. Friday, 9-30 a.m. 1st Wednesday of month, 6-30 p.m. Tuesday, 9-30 a.m. Friday, 2 p.m. 3rd Thursday of month, 6-30 p.m. Monday, 2 p.m. Wednesday, 9-30 a.m. Last Thursday of month, 6-30 p.m. Tuesday, 9-30 a.m. Thursday, 9-30 a.m. Last Monday of month, 6-30 p.m. Monday, 9-30 a.m. Thursday, 9-30 a.m. 4th Thursday of month, 6-30 p.m.
5	Formby Golborne Great Crosby Haydock Huyton-with-Roby Lathom and Burscough Litherland	Little Crosby Newton-in-Makerfield Ormskirk Prescot Rainford Sefton (R.)	Skelmersdale Warrington (R.) Waterloo-with-Seaforth West Lancashire (R.) Whiston (R.) Widnes (B.)	250,489	Dr. C. W. Laird, Tuberculosis Dispensary, 7 Claremont Road, Seaforth. Assistant Tuberculosis Officer— Dr. C. H. Lilley	Nurse A. Duncan Nurse I. Laing Nurse E. Walch Nurse M. J. Wilson	CHIEF—Seaforth, 7 Claremont Road (Tel. No. 688 Waterloo). (X-Ray Apparatus). BRANCH—St. Helens, 18 Claughton Street. BRANCH—Widnes, Brendan House, Widnes Road (Tel. No. 156).	Monday, 3 to 4-30 p.m. Thursday, 10-30 a.m. for X-Ray examinations. Friday, 10 to 11-30 a.m 3rd Thursday of month, 6 p.m. Tuesday, 3 to 4-30 p.m. Last Tuesday of month, 6 to 7 p.m. Monday, 10 to 11-30 a.m. Friday, 2-30 to 4-30 p.m. 1st Wednesday of month, 6 to 7 p.m.
				1,782,800				

Full co-operation is maintained between the tuberculosis department and the various local medical officers of health in regard to changes which may occur in the names of patients entered in their register of tuberculous persons. These changes fall mainly under the following headings :—

(1) Cancellation of notifications made by practitioners in error ;

(2) Cases of pulmonary or non-pulmonary tuberculosis reported by tuberculosis officers as cured ;

(3) Changes of address of patients ;

(4) Deaths of patients—a copy of the registrar's return of deaths from tuberculosis is sent weekly by the tuberculosis department to the medical officer of health.

Co-operation with General Practitioners, Pensions Authorities, School Clinics, Hospitals, and Health Officials.

Next to actual prevention of tuberculosis, treatment of patients in the early stages of the disease is accepted as the chief aim. To make this effective, very close and excellent co-operation has been established between the tuberculosis medical staff and the general practitioners and various bodies and officials who medically treat or otherwise come in contact with sick persons, many of whom may be suffering, or suspected to be suffering, from tuberculosis in the early—or even late—stages. It is by this means, and before notification of the case, that the majority of early cases are brought to the notice of the tuberculosis officer, and are thus enabled to avail themselves of the special treatment afforded under the County Council scheme. Every endeavour is made, and with success, to secure effective co-operation with the following :—General practitioners, school medical officers, medical officers of clinics, pensions officials, and medical staffs of hospitals and infirmaries (including out-patient departments). *The extent of such co-operation is indicated by the fact that in 1924, out of 4,580 new cases (contacts excluded) examined by the tuberculosis officers, 3,600, or 78·6 per cent., had been referred to the dispensaries from the sources above stated before particulars of notification had been received by the tuberculosis officer. The proportion in 1923 was 76·6 per cent.*

Information as to the County tuberculosis scheme has been supplied to all medical practitioners, and new doctors commencing or taking over practices in the Administrative County are communicated with by the tuberculosis officer and made acquainted with the address of the nearest dispensary and the special facilities for the treatment of tuberculosis.

ADMISSION OF PATIENTS TO, AND DISCHARGE FROM, INSTITUTIONS.

The admission and discharge of every patient suffering from pulmonary tuberculosis who received residential treatment is reported as soon as possible by the central tuberculosis officer to the medical attendant, to the medical officer of health of the district in which the patient resides, and to the tuberculosis officer. The medical officer is thus enabled to make arrangements for the disinfection of the house when necessary.

SUMMARY OF WORK DONE THROUGH THE DISPENSARY ORGANISATION IN 1924.

It will be observed from the table on page 35 that 6,237 persons (including contacts) were examined at their homes or at the dispensaries by the tuberculosis officers for purposes of diagnosis, as compared with 5,949 in 1923. Visits by the tuberculosis officers to the homes of tuberculous persons numbered 7,431 (against 6,403 last year), and attendances of patients at the dispensaries numbered 27,357. On the whole there was a considerable increase in the work done by the dispensary staff, particularly in regard to X-Ray examinations, sputum examinations, tuberculosis officers' visits to patients' homes, and nurses' visits.

Special attention was paid during the year to reviewing the cases on the register, and the following were written off and will not again be visited or examined :—pulmonary cases found to be cured (*i.e.*, disease arrested for five or more years and no symptoms of disease now present), 370 ; non-pulmonary cases found to be cured (*i.e.*, disease arrested for three or more years and no symptoms of disease now present), 290 ; cases notified in error by practitioners and notifications cancelled, 159 ; cases (not notified) found to be non-tuberculous, 72.

Evening Sessions at Dispensaries.

As in previous years, the evening sessions have been regularly held at most of the dispensaries for the convenience of patients who are at work during the day.

Tuberculosis Officers' Visits to Sanatoria and Hospitals.

Periodical visits (mostly monthly) are now paid by one or other of the consultant tuberculosis officers to the majority of the pulmonary hospitals, non-County sanatoria, and special hospitals treating County patients. These visits are of mutual help, inasmuch as they keep in touch the medical superintendent and the tuberculosis officer, who are able to confer on the patients' future treatment, the home circumstances, the provisions of the County scheme, and so on.

Total Number of Cases under Supervision.

Table 11 shows the total number of persons (whether applicants for treatment or not) who were suffering or had suffered from tuberculosis, and who were under the supervision of the dispensary staff at the end of 1924. As a matter of interest, the number of cases per 1,000 of the population has also been calculated for each area :—

TABLE 11—*All Tuberculous Cases.*

Dispensary Area.	Estimated Civilian Population, 31/12/24.	Number of Cases under Supervision on 31/12/24.					Number of Cases of Tuberculosis under supervision per 1,000 of Population.
		Pulmonary Tuberculosis.		Non-Pulmonary Tuberculosis.		Total number of Cases.	
		Under 15 years of age.	15 years and over.	Under 15 years of age.	15 years and over.		
No. 1	245,807	139	744	297	327	1507	6·13
No. 2	359,269	38	807	188	350	1383	3·84
No. 3	376,015	97	1052	285	413	1847	4·91
No. 4	456,659	178	1476	411	619	2684	5·87
No. 5	250,489	205	947	379	256	1787	7·13
Furness Sub-Area	41,859	187	298	22	30	537	12·82
Fylde Sub-Area	52,702	33	140	49	45	267	5·06
Total for Administrative County	1,782,800	877	5464	1631	2040	10012	5·61
		6,341		3,671			

TABLE 12—*Applicants for Treatment only.*

Number of Cases (Applicants only) under some form of treatment on the 31st December, 1924:—

		Dispensary Area.							
		1	2	3	4	5	Furness Sub.	Fylde Sub.	Total.
(a) Under 15 years.									
Fit for School ...	M.	65	46	117	190	162	34	22	636
	F.	60	54	114	214	133	37	17	629
Not fit for School	M.	26	26	42	45	71	17	13	240
	F.	22	16	44	35	77	10	9	213
In Institution on 31/12/24 ...	M.	14	10	16	20	19	7	5	91
	F.	17	7	29	16	22	8	6	105
(b) 15 years and over.									
Fit for Work ...	M.	237	391	501	691	401	65	57	2,343
	F.	224	266	505	698	307	90	57	2,147
Not fit for Work...	M.	81	131	180	187	117	36	21	753
	F.	60	105	104	149	80	30	18	546
In Institution on 31/12/24 ...	M.	38	58	77	79	55	9	8	324
	F.	20	47	66	56	35	11	11	246
TOTAL—Males		461	662	933	1,212	825	168	126	4,387
Females ...		403	495	862	1,168	654	186	118	3,886
GRAND TOTAL		864	1,157	1,795	2,380	1,479	354	244	8,273

Summary of Dispensary work done by Tuberculosis Officers in 1924, showing comparison with 1922 and 1923.

	1922.	1923.	1924.
I.—Visits to Patients at their Homes—			
(*a*) Number of new persons examined for diagnosis or expert opinion, including new contacts	2,167	2,005	2,211
(*b*) Revisits—			
(1) Respecting continued home treatment and dispensary supervision	4,031	3,791	4,377
(2) For other purposes, *i.e.*, Admissions to institutions, after discharge from institutions, re-examination of contacts, &c. ...	654	607	843
Total	6,852	6,403	7,431
II.—Dispensary Attendances—			
(*a*) Number of new persons examined for diagnosis or expert opinion, including new contacts	3,515	3,944	4,026
(*b*) Attendances of " old " cases, including re-examination of contacts	21,117	22,203	23,331
(*c*) *Number of patients receiving Tuberculin	—	*2*	—
(*d*) *Number of attendances for Tuberculin	—	*31*	—
Total	24,632	26,147	27,357
III.—X-Ray Examinations—			
(*a*) Number of examinations made at County Dispensaries	787	2,352	4,205
(*b*) Number of examinations made at Manchester	192	82	24
IV.—Number of Examinations of Sputum at County Dispensaries	4,610	5,586	6,490
V.—Treatment Recommended—			
(1) Institutional (Sanatoria and Hospitals)	2,230	2,471	2,441
(2) Dispensary and Dispensary Supervision	18,603	17,711	17,302
(3) Provision of Surgical Appliances ...	166	144	119
(4) Loan of Shelters	26	30	32
(5) Diagnosis not confirmed—			
(*a*) Notified cases	367	233	159
(*b*) Non-notified cases ...		108	72
(6) Refused further treatment	63	46	50
(7) No action required	8	—	—
(8) Pulmonary cases written off Register as cured	—	—	372
(9) Non-Pulmonary cases written off Register as cured	47	269	290
VI.—Number of Care Committees attended by—			
(*a*) Tuberculosis Officers	82	98	124
(*b*) Tuberculosis Health Visitors			136
VII.—Number of Lectures and Addresses given on Tuberculosis	1	13	15

	1922.	1923.	1924.
VIII.—Number of Visits by Tuberculosis Officers to Sanatoria, Pulmonary and Special Hospitals	† ...	110 ...	126
IX.—Number of Special Visits by Tuberculosis Officers (*i.e.*, Interviews with Medical Officers of Health, General Hospital Officials, &c.)	† ...	† ...	110
X.—Number of Visits paid by Dispensary Nurses	59,696 ...	56,915 ...	58,248

* Numbers included in II (*a*) or (*b*). † Record not kept of visits.

Housing.

The following table shows the housing conditions of all patients who have applied to the County Council for treatment and who were under treatment or supervision at the end of 1924. Whilst every effort is made to secure that infectious cases occupy a separate room, or at least a separate bed, no useful purpose is served by making the same insistence in regard to patients with the disease quiescent or arrested. The non-pulmonary cases are given separately, and only a very small number indeed may be considered infectious.

Table 13.—*Housing Statistics of County Patients.*

		Patients Occupying Separate Bedroom.	Patients Occupying Separate Bed, but not Separate Bedroom.	Not Separate Bed.
Total number of Pulmonary cases *considered infectious or contagious.*	Under 15 years	10	12	2
	15 and over ...	1198	426	157
Total number of Pulmonary cases *not* considered infectious or contagious.	Under 15 years	100	226	280
	15 and over ...	1044	517	1348
Total number of Non-Pulmonary cases.	Under 15 years	121	484	679
	15 and over ...	487	373	809
Total ...	Under 15 years	231	722	961
	15 and over ...	2729	1316	2314
				8273

Examination of House Contacts.

By the systematic examinations of house contacts*, particularly among those of patients with positive sputum, many early or unsuspected cases of tuberculosis are detected. Owing to indifference or unwillingness, considerable difficulty (which, however, is gradually being overcome)

* A house contact has been defined as a person who has been staying in the home of a known living tuberculous case, or one who has lived in a house where a death from tuberculosis has occurred not more than six months from the date of examination.

is experienced in persuading contacts to come to the dispensary for examination, or even to submit themselves for examination at all, and it, therefore, follows that the tuberculosis officer has to see a large proportion of them at their homes.

TABLE 14.—*Contacts examined during 1924.*

	Diagnosed as Tuberculous.		Diagnosed as Suspects and kept under Observation.		Non-Tuberculous.	Total.	
	Pulmonary.	Non-pulmonary.	Pulmonary.	Non-pulmonary.			
First Examination at Home ...	13	4	63	24	670	774	1675
at Dispensary ...	41	18	185	18	639	901	
Re-examinations at Home ...	...	...	18	10	221	249	
at Dispensary ...	18	3	106	16	202	345	
Total	72	25	372	68	1732	2269	
	97		440				

In the Administrative County, at the end of 1924, the number of known cases of tuberculosis under the supervision of the dispensary staff was found to be 5·61 per 1,000 of the population.

Out of the 1,675 new contacts examined during the year, 97 were ultimately diagnosed as definite cases of tuberculosis—pulmonary 72 and non-pulmonary 25. These cases are equal to 57·9 per 1,000 of contacts examined.

It may be stated that of the 72 pulmonary cases, 26 per cent. were found with a positive sputum, so that there can be no doubt whatever of the diagnosis in these cases.

PROVISION OF BEDSTEADS, MATTRESSES, AND NURSING REQUISITES.

In each County dispensary area a small stock of bedsteads, mattresses (but not bedding), and nursing requisites belonging to the County Council is available for loan to necessitous patients undergoing home treatment. These articles were obtained principally with a view of securing the isolation of infective cases where, owing to the lack of bedsteads and the inability of relatives to provide them, such patients were compelled to sleep in beds with one or more persons. There are

also a number of patients who are confined to bed, and in consequence require the use of certain bedside appliances or nursing requisites, in which case these are supplied if the relatives have not sufficient resources to enable them to procure the articles.

The table following shows the number of these articles owned by the County Council, and also the number of patients who have been granted the use of the articles :—

TABLE 15.

Articles.	Quantity owned by County Council, 31/12/24.	Number of patients to whom articles have been loaned during 1924.	Articles in possession of patients on 31/12/24.
Bedsteads	180	64	145
Mattresses	179	62	150
Mattress Covers	131	36	107
Air Cushions	139	215	89
Air Pillows	2	5	...
Bath Chairs	3	2	3
Bed Pans	105	85	54
Bed Rests	60	75	28
Bed Slippers	72	39	21
Extension Apparatus ...	1	1	1
Fracture Boards	2	...	...
Ground Sheets...	48	24	25
Hot Water Bottles, Rubber ...	6	...	...
Ice Bags	1	1	1
Rest Chairs	1	1	1
Rubber Sheeting	18 yds.	2	...
Spinal Boxes	15	3	...
Spinal Carriages	10	8	6
Urinals	106	58	41
Water Beds	16	15	7

The bedsteads, mattresses, &c., are held at the disposal of the consultant tuberculosis officers, and proper receipts are obtained from patients for articles loaned to them.

The action of the County Council in sanctioning the purchase of these articles has proved of valuable assistance in securing the better accommodation at home of persons with pulmonary tuberculosis considered to be infectious or contagious, especially in view of the present-day overcrowding which is general throughout the country, due to the house shortage.

X-Ray Work.

X-Ray installations for use by the tuberculosis officers for the examination of patients in order to assist in the diagnosis of doubtful and difficult cases of tuberculosis—both pulmonary and non-pulmonary forms—have been provided as follow by the County Council in each dispensary area, except Area 2, where a special arrangement exists :—

Area 1.—Lancaster (Chief) Dispensary.

Area 2.—Darwen (Branch) Dispensary (by arrangement with local Radiological Society).

Area 3.—Ashton-under-Lyne (Chief) Dispensary.

Area 4.—Eccles (Branch) Dispensary.

Area 5.—Seaforth (Chief) Dispensary.

Furness.—High Carley Sanatorium, for the Dispensary Sub-Area and Sanatorium patients.

Fylde.—The Council have approved plans for the provision of a building and X-Ray apparatus at the Elswick Sanatorium ; the installation will also be available for dispensary patients.

In addition, arrangements exist with the Honorary Radiologists of the Manchester Royal Infirmary whereby occasional patients may be sent to their private surgery for X-Ray examination.

The policy of placing an apparatus in each dispensary area for use by the tuberculosis officer himself is, from experience, found to be the best method, because the tuberculosis officer, with his knowledge of the patient's history and clinical signs, is most fitted to make a correct interpretation of the skiagrams. Cases are from time to time discovered by the tuberculosis officers which, but for the help afforded by X-Ray examinations, would have been sent to an institution for the treatment of non-pulmonary tuberculosis. A few of such cases are alone sufficient to pay for the original cost of an X-Ray apparatus. The various installations are also of use in the control of artificial pneumothorax treatment commenced during a patient's stay at a sanatorium or hospital.

The following X-Ray work was done during 1924 : (*a*) at County dispensaries and High Carley Sanatorium, 3,287 skiagrams, 918 screen examinations ; and (*b*) at Manchester, 24 skiagrams ; making a total of 4,229 examinations. The totals for previous years were : 1923, 2,434 ; 1922, 979 ; 1921, 879 ; and for 1920, 191.

Attention may be drawn here to the special chapter and photographs (pages 7 to 11) in this report on the diagnostic value of X-Rays.

Artificial Light Treatment.

In recent years considerable progress has been made in the treatment of lupus, as well as glandular and bone and joint tuberculosis—commonly called non-pulmonary tuberculosis—by means of artificial light. Early in 1925 the County Council considered the desirability of taking steps to commence artificial light treatment at the County dispensaries (and possibly at the sanatoria and hospitals). Many factors require to be taken into consideration, including the accessibility ot, and the accommodation at, the dispensaries, particularly the size of the rooms, the supply of the necessary electric current, the number of County cases likely to benefit by the treatment, the necessary staff, the number of hours per day during which treatment could be given, and the frequency of attendances by patients. In May, 1925, the Council decided to set up for the present a small installation at the Lancaster chief dispensary and another at the Ashton-under-Lyne chief dispensary. Two of the consultant tuberculosis officers (Drs. Brunwin and Stewart) were granted leave of absence to enable them to attend and study the technique of artificial light treatment under Sir Henry Gauvain at the new light department established at the Lord Mayor Treloar Cripples' Hospital, Alton, Hampshire, and also to confer with Professor Leonard Hill, F.R.S., and other eminent authorities on the subject. The two tuberculosis officers mentioned will be responsible for the installations at Lancaster and Ashton-under-Lyne respectively, and this will enable them to continue their study of light treatment and arrive at first-hand knowledge of the proportion of County cases which would benefit by such treatment, and also furnish evidence of the particular lamp or lamps which afford the best results.

A photograph of children receiving artificial light treatment at the Ashton-under-Lyne dispensary is inserted as a frontispiece to this report.

Examination of Sputum.

As an aid to diagnosis, arrangements are in existence for the examination, free of cost, of specimens of sputum sent by medical attendants. At each chief dispensary a small laboratory is installed for this work; whilst, in addition, an arrangement exists with the Director of the Public Health Laboratory, Manchester, for the examination of specimens.

The following statement shows the results of the examinations made in 1924, compared with the previous year :—

	At Dispensary Laboratories.		At Public Health Laboratory, Manchester.	
	1923.	1924.	1923.	1924.
Positive (*i.e.*, tubercle bacilli present) ...	1,360	1,469	387	374
Negative (*i.e.*, tubercle bacilli not found)...	4,226	5,021	480	500
Total	5,586	6,490	867	874

Provision of Special Nourishment.

The provision of special nourishment is, in suitable cases, of great value to a patient in helping him to recover from the disease. A large proportion of cases have been allowed special nourishment pending removal to an institution, and these grants have undoubtedly enabled patients to commence their institutional treatment in a more favourable state than they would have been without it. The effect may, on the whole, be said to have shortened the period of institutional treatment for many patients.

Conditions governing Grants.

Special nourishment is granted to tuberculous persons on the following conditions, which have been approved by the Ministry of Health :—

(1) That special nourishment be in no case ordered for a period of more than three months, and if in any case a continuance of the treatment is considered from a medical point of view desirable, the Central Tuberculosis Officer to report the case specially to the County Tuberculosis Committee.

(2) That special nourishment be granted to persons who are waiting for admission to sanatoria or hospitals, or have returned therefrom, when it is thought to be medically essential as part of the cure of the disease.

(3) That special nourishment may be allowed to cases not included in the foregoing, provided that particulars of the cases are laid before the Tuberculosis Committee for consideration.

(4) That each grant of special nourishment will only be allowed by the Tuberculosis Committee subject to the patient carrying out, in a satisfactory way, the medical treatment and such general hygienic measures as may be advised by the medical practitioner and tuberculosis officer.

(5) That special nourishment be limited to orders for new milk and cream, unless on special report other nourishment be found desirable.

(6) That the limit of expenditure be 7/- per week, unless an amount in excess of this sum is specially recommended on medical grounds by the Central Tuberculosis Officer and sanctioned by the Tuberculosis Committee.

Patients granted Special Nourishment.

During the year, 1,371 grants of special nourishment for varying periods were made to 688 individual patients—representing a slight increase on last year.

Tuberculin.

No patient was recommended for tuberculin treatment during the year.

Special Surgical Appliances.

During 1924 the following surgical appliances were supplied to patients, on the recommendation of the tuberculosis officers :—

Angular splint, 6 ; back splint, 1 ; Thomas' knee splint, 6 ; Thomas' hip splint, 14 ; Thomas' caliper splint, 6 ; Thomas' walking splint, 2 ; elbow splint, 1 ; arm splint, 1 ; spinal jacket, 1 ; spinal support, 13 ; spinal frame, 2 ; abduction frame, 2 ; crutches, 15 pairs ; patten, 20 ; surgical boot, 8 ; artificial limb, 2 ; Taylor's brace, 1 ; urinal, 4 ; throat spray, 5 ; steel brace, 1 ; knee cage, 1 ; special collar, 1.

Sleeping Shelters.

The number of shelters purchased by the Lancashire County Council is 81. Some of these have been transferred to institutions, and there are now 60 in use by patients at their homes. I have to thank medical officers of health and sanitary inspectors throughout the County for much valuable help in connection with the removal, disinfection, and re-erection of shelters used by County patients.

The loan of sleeping shelters is made to suitable cases on the recommendation of the tuberculosis officer, after careful consideration of the following points : (1) the condition of the patient and his ability to use the shelter properly ; (2) the position of the shelter ; (3) the home conditions of the patient ; and (4) the means of communication with the nearest inhabited building in case of a sudden relapse.

The number of persons in 1924 who were allowed the use of the shelters was 82.

Doubtful Cases of Tuberculosis.

A number of cases are referred to the tuberculosis officers by medical attendants, sanitary officials, Pensions authorities, &c., where the diagnosis of tuberculosis is doubtful. These cases are kept under supervision for a short time, and, if necessary, sent to a residential institution for a period of observation until the diagnosis of tuberculosis can be definitely settled one way or the other.

REPORTS FROM DISPENSARY AREAS.

In this chapter there is given in respect of each dispensary area a summary of the work done by the dispensary staff, the housing conditions of patients, and a report of the consultant tuberculosis officer.

Area No. 1.

Lancaster, Chorley, Preston Rural, and Lytham St. Annes Districts.

(Estimated population, 245,807.)

Consultant Tuberculosis Officer ... ... Dr. A. D. Brunwin.

Assistant Tuberculosis Officer ... ... Dr. G. H. Leigh.

Number of tuberculous cases under supervision on 31st December, 1924 ...	1507
(Of these, 864 were patients who had applied for treatment.)	
Visits to patients at their Homes—	
(*a*) Number of new persons examined for diagnosis or expert opinion, including new contacts	260
(*b*) Revisits—	
(1) Respecting continued home treatment and dispensary supervision	1107
(2) For other purposes, *i.e.*, admissions to institutions, after discharge from institutions, re-examination of contacts, &c.	104
Total	1471

Dispensary Attendances—	New persons examined, including new contacts.	Attendances of old cases and contacts.
Lancaster (Chief), 8, Middle Street. [Opened January, 1915]	141	904
Chorley (Branch), 59, Gillibrand Street. [Opened on 22nd June, 1914, at 5, High Street, and removed to 59, Gillibrand Street, 1st September, 1925]	109	501
Preston (Branch), 22, Bolton Street. [Opened July, 1917]	75	293
Total	325	1698

Number of Care Committees attended by—		
(*a*) Tuberculosis officers		21
(*b*) Tuberculosis health visitors		36
Number of visits by tuberculosis officers to sanatoria, pulmonary and special hospitals		26
Number of special visits by tuberculosis officers (*i.e.*, interviews with medical officers of health, general hospital officials, &c.)		5
Total number of nurses' visits to cases—		
(*a*) New cases	313	6260
(*b*) Old cases	5947	
Number of sanitary defects reported to the local medical officers of health		5
Number of sanitary defects which after notification were remedied ...		5
Number of disinfections carried out by sanitary authorities		223
Number of cases referred by medical practitioners, Pensions authorities, &c., to tuberculosis officer for an opinion as to diagnosis or treatment		428

Housing Statistics of Patients (applicants) in Area No. 1.

		Patients Occupying Separate Bedroom.	Patients Occupying Separate Bed but not Separate Bedroom.	Not Separate Bed.
Total number of Pulmonary cases *considered infectious or contagious.*	Under 15 years	...	1	...
	15 and over ...	134	27	11
Total number of Pulmonary cases *not* considered infectious or contagious.	Under 15 years	10	13	45
	15 and over ...	128	32	161
Total number of Non-Pulmonary cases.	Under 15 years	16	32	87
	15 and over ...	62	19	86
TOTAL		350	124	390

Dr. Brunwin sends the following report on work done in this area :—

The increasing demand from practitioners for an opinion as regards diagnosis is a welcome feature, and the fact that we are now asked to report on a large percentage of suspicious cases which prove to be non-tuberculous is evidence that the general practitioner is becoming more anxious to get help for his tuberculous patients at an early stage. Every effort is made to come to a definite decision as to the diagnosis of all persons as soon as possible, and X-Ray examinations are particularly helpful for this work.

The regulation allowing certain cases to be removed from the register as "cured" is very welcome, and many patients have been dealt with under this heading to their great satisfaction and with some relief to the medical, nursing and clerical staff from mere routine work. The fact that patients suffering from tuberculosis can be "cured" from an official standpoint has a good moral effect, and enhances the prestige of the department.

Special efforts have been made to obtain as far as possible the isolation of patients considered to be infectious, and although the number of infectious pulmonary cases is slightly higher than at the end of the previous year, the number of these cases not occupying a separate bed is less.

The formation of the County Care Fund to be administered by the consultant tuberculosis officer in districts where a voluntary care committee has not been formed has been found very useful; for rural districts it appears to be an almost ideal system, and capable of being easily worked.

Brief mention may be made here of the important step taken by the County Council in May last to provide on an experimental scale an artificial light installation at the chief dispensary, and it is hoped to commence artificial light treatment in August, 1925.

Area No. 2.

Accrington, Bacup, Burnley Rural, Darwen, Nelson, and Rawtenstall Districts.

(Estimated population, 359, 269.)

Consultant Tuberculosis Officer ... Dr. B. MacPhee.

Assistant Tuberculosis Officer ... Dr. S. C. Adam.

Number of tuberculous cases under supervision on 31st December, 1924 ... (Of these, 1157 were patients who had applied for treatment.)	1383
Visits to patients at their Homes—	
(*a*) Number of new persons examined for diagnosis or expert opinion, including new contacts	330
(*b*) Revisits—	
(1) Respecting continued home treatment and dispensary supervision	394
(2) For other purposes, *i.e.*, admissions to institutions, after discharge from institutions, re-examination of contacts, &c.	82
Total	806

Dispensary Attendances—	New persons examined, including new contacts.	Attendances of old cases and contacts.
Accrington (Chief), 39, Avenue Parade. [Opened April, 1915]	268	788
Darwen (Branch), 20, Railway Road. [Opened 19th May, 1916]	92	280
Nelson (Branch), 64, Carr Road. [Opened January, 1915]	225	412
Stacksteads (Branch), Knott Hill House. [Opened 18th May, 1916]	123	384
Total	708	1864

Number of Care Committees attended by—		
(*a*) Tuberculosis officers		1
(*b*) Tuberculosis health visitors		1
Number of Lectures or Addresses given		5
Number of visits by tuberculosis officers to sanatoria, pulmonary and special hospitals		24
Number of special visits by tuberculosis officers (*i.e.*, interviews with medical officers of health, general hospital officials, &c.)		19
Total number of nurses' visits to cases—		
(*a*) New cases	433	9689
(*b*) Old cases	9256	
Number of sanitary defects reported to the local medical officers of health		70
Number of sanitary defects which after notification were remedied ...		65
Number of disinfections carried out by sanitary authorities—		
Rooms 376, Articles 816		1192
Number of cases referred by medical practitioners, Pensions authorities, &c., to tuberculosis officer for an opinion as to diagnosis or treatment		791

Housing Statistics of Patients (applicants) in Area No. 2.

		Patients Occupying Separate Bedroom.	Patients Occupying Separate Bed, but not Separate Bedroom.	Not Separate Bed.
Total number of Pulmonary cases *considered infectious or contagious.*	Under 15 years	1	1	1
	15 and over ...	257	93	31
Total number of Pulmonary cases *not* considered infectious or contagious.	Under 15 years	2	8	6
	15 and over ...	122	51	132
Total number of Non-Pulmonary cases.	Under 15 years	12	57	71
	15 and over ...	105	93	114
TOTAL		499	303	355

Dr. MacPhee reports :—

The X-Ray work for Area No. 2 is carried out at the dispensary (20, Railway Road, Darwen), and during the year 457 skiagrams were taken.

Examinations of sputum are carried out at the laboratory at the Accrington Dispensary. During the year 1,377 specimens were examined with the following results: Positive 231, negative 1,146.

Periodical visits have been paid by myself or Dr. Adam to the Bull Hill and Burnley Pulmonary Hospitals, in order to confer with the medical superintendent as to the treatment of County patients resident there. Arrangements were also made to visit quarterly the East Lancashire Sanatorium at Barrowmore Hall, near Chester. One visit was made at the end of the last quarter in 1924.

As in the previous year, monthly visits were paid to the Moorlands Infirmary, Rawtenstall, and, in consultation with the medical superintendent, Dr. J. B. Stewart, all suspicious pulmonary cases were examined, and also non-pulmonary cases of tuberculosis. At this Infirmary, 31 cases were examined for diagnosis. Of that number, five were found to be suffering from pulmonary tuberculosis and one from non-pulmonary tuberculosis. Other cases and suspects were kept under observation during the year.

I feel sure it would be helpful if arrangements could be made with the authorities of other Poor Law institutions for the tuber-

culosis officer to visit from time to time, in order to examine chest cases and tuberculous suspects in consultation with the medical officer of the institution. New cases are sometimes discovered, and the " casual " who has no fixed place of abode is more easily kept under observation.

The care committees in the Bacup and Rawtenstall areas and in the Bromley Cross district have carried on their excellent work as usual.

Area No. 3.

Ashton-under-Lyne, Bury Rural, Chadderton, Crompton, Littleborough, Middleton, Mossley, &c., Districts.

(Estimated population, 376,015)

Consultant Tuberculosis Officer ... Dr. J. L. Stewart.

Assistant Tuberculosis Officers ... Dr. G. Fletcher and Dr. C. Berry.

Number of tuberculous cases under supervision on 31st December, 1924 ... (Of these, 1795 were patients who had applied for treatment.)	1,847
Visits to patients at their Homes—	
(*a*) Number of new persons examined for diagnosis or expert opinion, including new contacts	221
(*b*) Revisits—	
(1) Respecting continued home treatment and dispensary supervision	220
(2) For other purposes, *i.e.*, admissions to institutions, after discharge from institutions, re-examination of contacts &c.	171
Total	612

	New persons examined, including new contacts.	Attendances of old cases and contacts.
Dispensary Attendances—		
Ashton-under-Lyne (Chief), Boston House, Warrington Street. [Opened September, 1914]	433	2,377
Bury (Branch), The Wylde. [Opened November, 1914]	231	1,094
Middleton (Branch), 71, Manchester Old Road. [Opened 19th May, 1915]	58	420
Mossley (Branch), Park Lodge. [Opened November, 1914]	24	177
Oldham (Branch), 25, Barker Street. [Opened 15th February, 1915]	310	1,507
Rochdale (Branch), 168, Drake Street. [Opened at 134, Drake Street, in March, 1915 and removed to 168, Drake Street on 9th May, 1924]	75	370
Total	1,131	5,945

Number of Care Committees attended by—		
(*a*) Tuberculosis officers		12
(*b*) Tuberculosis health visitors		11
Number of Lectures or Addresses given		2
Number of visits by tuberculosis officers to sanatoria, pulmonary and special hospitals		47
Number of special visits by tuberculosis officers (*i.e.*, interviews with medical officers of health, general hospital officials, &c.		10
Total number of nurses' visits to cases—		
(*a*) New cases	727	12,283
(*b*) Old cases	11,556	
Number of sanitary defects reported to the local medical officers of health		197
Number of sanitary defects which after notification were remedied ...		94
Number of disinfections carried out by sanitary authorities		487
Number of cases referred by medical practitioners, Pensions authorities, &c., to tuberculosis officer for an opinion as to diagnosis or treatment		800

Housing Statistics of Patients (applicants) in Area No. 3.

		Patients. Occupying Separate Bedroom.	Patients Occupying Separate Bed, but not Separate Bedroom.	Not Separate Bed.
Total number of Pulmonary cases *considered infectious or contagious.*	Under 15 years	...	2	...
	15 and over ...	251	139	46
Total number of Pulmonary cases *not* considered infectious or contagious.	Under 15 years	11	38	42
	15 and over ...	188	131	275
Total number of Non-Pulmonary cases.	Under 15 years	17	103	149
	15 and over ...	82	89	232
TOTAL		549	502	744

Dr. Stewart reports :—

The care committee for Ashton-under-Lyne and district has completed an eighth year's work, and during the twelve months 84 cases were assisted by the Committee in various ways, the total expenditure amounting to £390 9s. 8d. During the current year the Care Committee have presented to the County Council an Eidinow carbon arc lamp for the artificial light installation.

In the Radcliffe district, 19 patients were assisted during the financial year by the Radcliffe, Whitefield and District Relief Committee for Consumptives, the total expenditure amounting to £81 17s. 10d.

The bacteriological work for the area is carried out at the laboratory of the chief dispensary at Ashton-under-Lyne. During the year 1,717 specimens of sputum and 41 specimens of urine

were examined with the following results: sputum, positive 384, negative 1,333; total 1,717; urine, positive 18, negative 23. These figures include re-examinations.

The X-Ray work for the area has also been done at the chief dispensary. During the year 1,497 skiagrams were taken.

Visits for the purpose of conferring with the medical superintendents as to County patients in residence have been made each month to the following pulmonary hospitals and sanatoria: Wolstenholme Hall, Norden; Marland, Rochdale; Westhulme, Oldham; Aitken Sanatorium, Holcombe Brook.

The Liverpool Open-Air Hospital for Children, Leasowe, was visited every quarter.

During the year, 31 patients were discharged from Bury Observation Hospital, and the results on discharge are analysed as follows: diagnosis not confirmed 15, diagnosis confirmed and transferred to dispensary supervision 11, diagnosis confirmed and transferred to sanatoria 5. Of the cases where a diagnosis of tuberculosis was made, nine were pulmonary and seven non-pulmonary (six adenitis and one abdominal). The age of the patients varied from 5 to 12 years, and the average period of residence was two and a half months.

Brief mention may be made here of the important step taken by the County Council in May last to provide on an experimental scale an artificial light installation at the chief dispensary, and artificial light treatment was begun in August, 1925.

Area No. 4.

Leigh, Eccles, Farnworth, Stretford, Swinton, and Wigan Rural Districts.

(Estimated population, 456,659.)

Consultant Tuberculosis Officer	...	Dr. G. Jessel
Assistant Tuberculosis Officers	...	Dr. G. B. Charnock
		Dr. A. B. Jamieson
		Dr. J. Cathcart

Number of tuberculous cases under supervision on 31st December, 1924...	2,684
(Of these, 2,380 were patients who had applied for treatment.)	
Visits to patients at their Homes—	
(*a*) Number of new persons examined for diagnosis or expert opinion, including new contacts	935
(*b*) Revisits—	
(1) Respecting continued home treatment and dispensary supervision	1,577
(2) For other purposes, *i.e.*, admissions to institutions, after discharge from institutions, re-examination of contacts, &c	319
Total	2,831

Dispensary Attendances—	New persons examined, including new contacts.	Attendances of old cases and contacts
Leigh (Chief), 13, Church Street. [Opened November, 1914]	257	2,177
Eccles (Branch), 28 and 30, Gilda Brook Road. [Opened 4th August, 1915]	134	802
Farnworth (Branch), 19-23, Darley Street. [Opened at 12, Bolton Road in January, 1917; removed to 19-23, Darley Street on 5th November, 1924]	195	1183
Pendlebury (Branch), 121, Station Road. [Opened at 40, Chorley Road, Swinton, in October, 1914; removed to 121, Station Road, Pendlebury, 30th May, 1924] ...	126	929
Stretford (Branch), 14, Dorset Street [Opened November, 1916]	163	928
Wigan (Branch), 14, Rodney Street. [Opened 26th November, 1913]	206	1,396
Total	1,081	7,415

Number of Care Committees attended by—		
(*a*) Tuberculosis officers		69
(*b*) Tuberculosis health visitors		69
Number of Lectures or Addresses given...		6
Number of visits by tuberculosis officers to sanatoria, pulmonary and special hospitals		13
Number of special visits by tuberculosis officers (*i.e.*, interviews with medical officers of health, general hospital officials, &c.)		30
Total number of nurses' visits to cases—		
(*a*) New cases	721	18,831
(*b*) Old cases	18,110	
Number of sanitary defects reported to the local medical officers of health		65
Number of sanitary defects which after notification were remedied ...		29
Number of disinfections carried out by sanitary authorities		575
Number of cases referred by medical practitioners, Pensions authorities, &c., to tuberculosis officer for an opinion as to diagnosis or treatment		784

Housing Statistics of Patients (applicants) in Area No. 4.

		Patients Occupying Separate Bedroom.	Patients Occupying Separate Bed, but not Separate Bedroom.	Not Separate Bed.
Total number of Pulmonary cases *considered infectious or contagious.*	Under 15 years	4	6	1
	15 and over ...	326	104	18
Total number of Pulmonary cases *not* considered infectious or contagious.	Under 15 years	32	50	48
	15 and over ...	332	180	381
Total number of Non-Pulmonary cases.	Under 15 years	46	146	187
	15 and over ...	150	130	239
TOTAL		890	616	874

Dr. Jessel reports :—

1.—The total number of cases under supervision at the end of the year was 2,684, as compared with 2,833 at the end of 1923, the difference roughly corresponding with the reduction brought about by the removal from the register of non-pulmonary and pulmonary cases that have been quiescent over three and five years respectively.

The close co-operation between the dispensary and other agencies working for the prevention and treatment of the disease (private medical practitioners, medical officers of health, Pensions authorities, &c.) has been maintained.

The number of new cases specially referred to me previous to notification being received was 784. In addition 312 new notified cases who had actually applied for treatment, and 20 who had not so applied, were examined for the first time after notification. For some time past special efforts have been made to encourage more prompt notification and to ensure that particulars of notification are received at the earliest possible moment. As soon as particulars of notification are received (which, as the result of an informal arrangement with the medical officers of health, is usually before or simultaneous with their arrival at the County health department), the patient is visited by one of the dispensary nurses and arrangements made for immediate examination.

2.—*Sputum Examinations.*—The whole of the sputum examinations for the area were undertaken at the laboratory at the Eccles dispensary, and during the year 2,649 specimens were examined, of which 671 were positive and 1,978 negative. Out of the 2,649 specimens examined, 223 were done at the request of medical practitioners, of which 25 specimens (relating to 19 individual patients) were positive.

3.—*X-Ray Work.*—During the year 20 patients were screened and 355 skiagrams were taken. It has been the practice to use the X-Ray apparatus for selected cases where special assistance might reasonably be anticipated, in order to supplement the other methods of examination or to confirm the findings of clinical examination.

4.—*Care Work.*—The care committees of Leigh, Wigan, Westhoughton, and Farnworth have continued to do excellent work. These voluntary bodies have assisted 243 patients during

the year at a cost of about £410. About three-quarters of the population of the area and nearly all the urban population is covered by the activities of the care committees. During the autumn the County Council decided to extend care work to districts not at present covered by a care committee, and authorised the expenditure of a limited sum for suitable cases.

5.—*Isolation.*—As in former years, special attention has been paid to infectious pulmonary cases at home, and much credit is due to the eight tuberculosis health visitors for the results which have attended their efforts. The reports of the health visitors are regularly and carefully considered, and they are taken into consideration when patients are medically examined. In this way it has been possible to make a selection of cases suitable for institutional treatment, having regard not only to their medical condition but to their home conditions. The net result has been that very few infectious cases in the area remain for long at home if their circumstances are such that they cannot remain there without being a danger to the other members of the household. The presence of Peel Hall Hospital in the area has undoubtedly been of great advantage from this point of view.

6.—*Home Visiting.*—This is regarded as of the utmost importance, as it is only by actual visits paid by the tuberculosis officers and dispensary nurses that a clear idea of the environmental and home circumstances of the patients can be obtained, and such improvements and modifications as are indicated to further the patients' treatment, or to prevent the spread of infection, are usually only obtained at the cost of frequently repeated visits. Care has been taken not to pay unnecessary visits. The patients who are visited most frequently are those with active infectious disease or non-pulmonary cases requiring dressing.

7.—*Contacts.*—The dispensary nurses have prepared for their own districts a card-index of patients who have died from pulmonary tuberculosis during the past few years, and who had tubercle bacilli in the sputum, and the particular households are being kept under careful observation so that any secondary cases may be known as early as possible. Many contacts of patients who have had tubercle bacilli in the sputum have been examined.

8.—*Educational Work.*—Although more intangible than work which can be expressed in terms of figures, the educational work

in connection with the dispensaries must be mentioned. Apart from formal lectures and addresses, the tuberculosis officers and dispensary nurses have unlimited opportunities of imparting information on the laws of health and general hygiene to the large number of persons with whom they come into contact. As regards the vast majority of patients examined, there is some element of faulty hygiene which requires correction, and the opportunity has been taken of trying to correct such errors as are discovered. It is clear that the work of the tuberculosis service is not purely medical, but is also rich in opportunities for social service.

Area No. 5.

Seaforth, Newton-in-Makerfield, Warrington Rural, West Lancashire Rural, Whiston Rural, and Widnes Districts.

(Estimated population, 250,489.)

Consultant Tuberculosis Officer ... Dr. C. W. Laird.
Assistant Tuberculosis Officer ... Dr. C. H. Lilley.

Number of tuberculous cases under supervision on 31st December, 1924...	1,787
(Of these, 1,479 were patients who had applied for treatment.)	
Visits to patients at their Homes—	
(*a*) Number of new persons examined for diagnosis or expert opinion, including new contacts	240
(*b*) Revisits—	
(1) Respecting continued home treatment and dispensary supervision	589
(2) For other purposes, *i.e.*, admissions to institutions, after discharge from institutions, re-examination of contacts, &c.	76
Total	905

Dispensary Attendances—	New persons examined, including new contacts.	Attendances of old cases and contacts.
Seaforth (Chief), 7, Claremont Road. [Opened February, 1915]	312	2,313
St. Helens (Branch), 18, Claughton Street. [Opened 21st March, 1922]	147	518
Widnes (Branch), Brendan House. [Opened 20th July, 1914]	176	2,426
Total	635	5,257

Number of Care Committees attended by—	
(*a*) Tuberculosis officers	21
(*b*) Tuberculosis health visitors	19
Number of Lectures or Addresses given	2
Number of visits by tuberculosis officers to sanatoria, pulmonary and special hospitals	13
Number of special visits by tuberculosis officers (*i.e.*, interviews with medical officers of health, general hospital officials, &c.)	43

Total number of nurses' visits to cases—		
(*a*) New cases	511	6,143
(*b*) Old cases	5,632	
Number of sanitary defects reported to the local medical officers of health		79
Number of sanitary defects which after notification were remedied ...		49
Number of disinfections carried out by sanitary authorities		294
Number of cases referred by medical practitioners, Pensions authorities, &c., to tuberculosis officer for an opinion as to diagnosis or treatment		579

Housing Statistics of Patients (applicants) in Area No. 5.

		Patients Occupying Separate Bedroom.	Patients Occupying Separate Bed, but not Separate Bedroom.	Not Separate Bed.
Total number of Pulmonary cases *considered infectious or contagious.*	Under 15 years	4	1	...
	15 and over ...	170	51	37
Total number of Pulmonary cases *not* considered infectious or contagious.	Under 15 years	17	70	89
	15 and over ...	164	92	275
Total number of Non-Pulmonary cases.	Under 15 years	24	112	167
	15 and over ...	59	30	117
TOTAL		438	356	685

Dr. Laird reports :—

Work in this area has been carried out very much on the same lines as in previous years, and there is no apparent falling off in the number of cases referred for diagnosis and treatment. Practitioners in all parts of the area have co-operated on the whole very freely with the dispensary organisation.

There is, I think, an appreciation of the additional facilities provided for X-Ray work which were in operation here almost for the first time during the greater part of 1924, only a few skiagrams having been taken in the previous year. The X-Ray installation I have found of very material assistance, not merely in helping the establishment of a diagnosis, but also in gauging the extent of disease and thereby helping in prognosis as well. The plant has been working very satisfactorily, and the results obtained have left little room for complaint. It may be mentioned in passing that about 400 skiagrams were taken in the course of 11 months of the year. Copies of the reports of X-Ray examinations are forwarded to the medical attendant in each case, and he is kept informed in this and other ways of the progress of his cases from time to time.

It has been found possible to undertake artificial pneumothorax refills at the dispensary, and several of these were given in the course of the year with satisfactory results. The number of cases suitable for this treatment, however, is extremely limited, and the number of patients who would satisfactorily co-operate over a long period in such treatment is further restricted. The initial operation is, of course, carried out in an institution or at the patient's home.

The number of sputum examinations made at the dispensary is slightly increased compared with the previous year. Out of the 646 examinations, 159 were positive and the remainder negative.

An additional care committee has been formed for the district of Huyton-with-Roby, and this makes the fourth in Area No. 5. As yet there has been little demand on the one most recently constituted, but the other three continue to do very good work, and their members maintain a lively interest in the Committees' affairs. The institution of a care fund provided by the County Council has met a want in those districts which do not possess a care committee.

Visits have been paid by myself and Dr. Lilley to institutions in which County patients are in receipt of treatment. Routine monthly visits are made to Eccleston Hall and Hefferston Grange.

The Ministry of Pensions still calls for reports in the case of ex-service men suffering from tuberculosis, and the British Legion, the United Services Fund, and the Sailors and Soldiers Fund have co-operated in rendering assistance to ex-service men, whether in receipt of a pension or otherwise, as necessity has required.

Furness Sub-Area.

Dalton-in-Furness, Grange-over-Sands, Ulverston, and Ulverston Rural Districts.

(Estimated population, 41,859.)

Consultant Tuberculosis Officer ... Dr. E. H. Allon Pask.

Number of tuberculous cases under supervision on 31st December, 1924 ...	537
(Of these, 354 were patients who had applied for treatment.)	
Visits to patients at their Homes—	
(*a*) Number of new persons examined for diagnosis or expert opinion, including new contacts	61

(*b*) Revisits—

(1) Respecting continued home treatment and dispensary supervision	136
(2) For other purposes, *i.e.*, admissions to institutions, after discharge from institutions, re-examination of contacts, &c.	7
Total	204

Dispensary Attendances—	New persons examined, including new contacts.	Attendances of old cases and contacts.
Ulverston (Branch), Virginia House [Opened 14th October, 1915]...	146	1,152
Total number of nurses' visits to cases—		
(*a*) New cases	122	8,148
(*b*) Old cases	3,026	
Number of visits by tuberculosis officers to sanatoria, pulmonary and special hospitals		3
Number of special visits by tuberculosis officers (*i.e.*, interviews with medical officers of health, general hospital officials, &c.)		2
Number of sanitary defects reported to the local medical officers of health		21
Number of sanitary defects which after notification were remedied ...		18
Number of disinfections carried out by sanitary authorities		83
Number of cases referred by medical practitioners, Pensions authorities, &c., to tuberculosis officer for an opinion as to diagnosis or treatment		122

Housing Statistics of Patients (applicants) in Furness Sub-Area.

		Patients Occupying Separate Bedroom.	Patients Occupying Separate Bed, but not Separate Bedroom.	Not Separate Bed.
Total number of Pulmonary cases *considered infectious or contagious.*	Under 15 years	1	1	...
	15 and over ...	26	4	7
Total number of Pulmonary cases *not* considered infectious or contagious.	Under 15 years	18	32	42
	15 and over ...	67	14	95
Total number of Non-Pulmonary cases.	Under 15 years	2	11	6
	15 and over ...	15	5	8
TOTAL		129	67	158

Dr. Pask sends the following report on the work done in this Sub-Area :—

The number of cases notified in the sub-area during the year was 108, being an increase of three over the previous year.

The number of sputum examinations made at High Carley for dispensary patients was 101.

The X-Ray examinations of dispensary patients numbered 164, as compared with 144 in 1923.

Fylde Sub-Area.

Fleetwood, Fylde Rural, Garstang Rural (part of), Kirkham, Poulton-le-Fylde, Preesall, and Thornton Districts.

(Estimated population, 52,702.)

Consultant Tuberculosis Officer ... Dr. G. Leggat.

Number of tuberculous cases under supervision on 31st December, 1923 ...		267
(Of these, 244 were patients who had applied for treatment.)		
Visits to patients at their Homes—		
(*a*) Number of new persons examined for diagnosis or expert opinion, including new contacts		164
(*b*) Revisits—		
(1) Respecting continued home treatment and dispensary supervision		354
(2) For other purposes, *i.e.*, admissions to institutions, after discharge from institutions, re-examination of contacts, &c.		84
Total		602
Total number of nurses' visits to cases—		
(*a*) New cases	126	1,894
(*b*) Old cases	1,768	
Number of special visits by tuberculosis officers (*i.e.*, interviews with medical officers of health, general hospital officials, &c.)		1
Number of sanitary defects reported to the local medical officers of health		12
Number of sanitary defects which after notification were remedied ...		8
Number of disinfections carried out by sanitary authorities		91
Number of cases referred by medical practitioners, Pensions authorities, &c., to tuberculosis officer for an opinion as to diagnosis or treatment		96

Housing Statistics of Patients (applicants) in Fylde Sub-Area.

		Patients Occupying Separate Bedroom.	Patients Occupying Separate Bed, but not Separate Bedroom.	Not Separate Bed.
Total number of Pulmonary cases *considered infectious or contagious.*	Under 15 years	...	...	...
	15 and over ...	34	8	7
Total number of Pulmonary cases *not* considered infectious or contagious.	Under 15 years	10	15	8
	15 and over ...	43	17	29
Total number of Non-Pulmonary cases.	Under 15 years	4	23	12
	15 and over ...	14	7	13
Total		105	70	69

Dr. Leggat reports :—

The County Council have now been able to secure a house in a central position in Fleetwood for the purposes of a dispensary. This will greatly facilitate the work and bring the dispensary staff in closer co-operation with the general practitioners, who will be able to send cases to the dispensary at stated sessions.

As one would naturally expect, a considerable number of cases come into the sub-area for health reasons ; during the year there were 32 new patients who had so removed from other districts into the Fylde sub-area.

Whilst the erection of the new houses by the Fleetwood District Council has helped to alleviate to some little extent the overcrowding condition in that township, I am sorry to state that the conditions in this respect are still very bad, especially in the Dock Street area, where, at the homes of some of the tuberculous patients, families have been found living in one room and all sleeping in one bed. A great deal of help has been received from the Council, who have been very good in allocating some of the new Council houses to tuberculous families.

The X-Ray apparatus which is being installed at the Elswick Sanatorium will be available for the dispensary cases ; this arrangement will be more convenient for the patients who, so far, have had to travel to Lancaster or Manchester for examination.

COUNTY SANATORIA AND PULMONARY HOSPITALS.

(1) High Carley Sanatorium, near Ulverston.

Medical Superintendent :
E. H. Allon Pask, M.D. (Lond.), L.R.C.P. (Lond.), M.R.C.S. (Eng.).

Assistant Medical Superintendent :
Henry J. Villiers, L.R.C.P.I., L.R.C.S.I.

Matron : Miss E. Woosey.

High Carley Sanatorium is situated about three miles west of Ulverston, to the south of the main road to Barrow-in-Furness. The buildings stand in about 23 acres of ground, and accommodation at the end of the year was provided for 112 patients (62 males and 50 females). During the summer months eight additional beds are made available temporarily for female patients.

The Medical Superintendent and the Assistant are accommodated on the estate ; and seven houses are provided in the vicinity of the sanatorium for certain male employees.

Particular attention is paid to the employment of suitable cases on some purposeful and constructive work in order chiefly to occupy the minds of the patients and bring about improved bodily health. An army hut is equipped as a workshop, and provides means for training in woodwork, boot repairing, and hurdle making. The patients also have facilities for recreation. An X-Ray apparatus is installed.

An agreement exists between the County Council and the Barrow-in-Furness Corporation for the reservation at High Carley of a number of beds, not exceeding 16, for Borough patients. These beds when not required are filled by County patients, in accordance with arrangements with the Corporation.

During the year, 210 County patients received some form of dental treatment from the visiting dentist (Mr. Miller, L.D.S.).

The following table shows the condition of patients discharged (excluding deaths) (*a*) during the period May, 1916 to the end of 1923 ; and (*b*) during 1924 :—

(a) Condition on Discharge of 2,027 persons who received treatment in High Carley Sanatorium from 1916 to 1923.

†Stage of Disease on Admission.	Total number Discharged.	Average Duration of Treatment in Months.	Condition on Discharge.				
			Quiescent.	Improved.	Stationary.	Worse.	*No Information.
			%	%	%	%	%
Stage I. & I.S—							
Males	690	2·9	26·8	49·1	2·9	2·3	18·8
Females ...	616	3·6	42·4	41·2	5·2	2·1	9·1
Total ...	1306	...	34·1	45·4	3·9	2·2	14·2
Stage II. & II.S—							
Males	412	3·2	7·8	61·9	6·5	6·1	17·7
Females ...	264	4·4	14·0	58·7	8·7	8·7	9·8
Total ...	676	...	10·2	60·6	7·4	7·1	14·6
Stage III. & III.S—							
Males	26	3·7	...	53·8	19·2	11·5	15·4
Females ...	19	5·9	...	84·2	10·5	5·3	...
Total ...	45	...	...	66·7	15·5	8·9	8·9

(b) Condition on Discharge of 241 persons who received treatment in High Carley Sanatorium during 1924.

† Stage of Disease on Admission.	Total number Discharged	Average Duration of Treatment in Months.	Condition on Discharge.				
			Quiescent.	Improved.	Stationary.	Worse.	*No Information.
			%	%	%	%	%
Stage I. & I.S—							
Males	82	4·2	32·9	39·0	6·1	4·9	17·1
Females ...	52	4·9	44·2	28·8	9·6	5·8	11·5
Total ...	134	...	37·3	35·1	7·5	5·2	14·9
Stage II. & II.S—							
Males	67	4·9	5·9	44·8	4·5	16·4	28·3
Females ...	34	6·1	20·6	38·2	14·7	8·8	17·6
Total ...	101	...	10·9	42·6	7·9	13·9	24·7
Stage III. & III.S—							
Males	4	3·9	...	50·0	...	25·0	25·0
Females ...	2	8·0	50·0	...	50·0	...	...
Total ...	6	...	16·6	33·3	16·6	16·6	16·6

* Includes patients discharged for other than medical reasons.

† Classified according to the system of Turban-Gerhardt, and further sub-divided into cases with slight and severe constitutional symptoms, as suggested by Philip.

Dr. Pask reports as follows on matters relating to the treatment of the patients and the administration of the sanatorium :—

During the year the treatment adopted at the sanatorium has followed the usual lines. The only special forms of treatment which have been continued are artificial pneumothorax and collosol calcium, and both these have proved useful in certain cases. For artificial pneumothorax treatment, as far as possible, patients are chosen in whom the disease is unilateral, but in several of the cases the skiagram has shown evidence of early disease in the second lung; nevertheless, benefit has resulted, and there has been no lighting-up of the trouble there. The technique adopted consists of an initial injection of oxygen followed by subsequent injections of atmospheric air. The apparatus used is that devised by Dr. Woodcock, of Leeds. The initial injection of oxygen varies from 200 to 500 c.c. depending on the size of the chest, the manner in which the patient is affected by the injection, and the ease with which the gas enters. The second injection is given three or four days after the first, and the amount of air given is usually increased at each subsequent injection until a maximum is reached, and the intervals between the injections are also increased. The maximum amount of air given varies considerably with patients, but, generally speaking, I have given larger quantities than is usually recommended, and it is quite a common experience to give refills of over 1,000 c.c.

The carpenters' shop and the boot repairing department continue to provide occupation for some of the men patients. A large number of useful articles, including cupboards, spinal boxes, garden seats, &c., have been made for the sanatorium and other institutions belonging to the County Council. Articles were also made for exhibition at the Heywood Health Week in 1924. During the year 244 pairs of boots and shoes were repaired.

Wattle hurdle making has been continued, and the hurdles made have been freely utilised in the grounds in helping to afford shelter for shrubs and young plants, and, in addition, a number of hurdles have been supplied to other institutions belonging to the County Council.

A new industry was introduced during the year, *i.e.*, chair repairing. In the past, the broken cane rest chairs have been repaired by local labour at considerable expense, but it has been proved that the work performed by the men patients, who show much interest, is equal to that of the tradesmen.

The poultry farm is entirely managed by the women patients. It provides occupation for four women, who are keenly interested in their task. The accounts for the year show a small profit on the undertaking, reflecting great credit on the particular patients. From the sanatorium poultry a supply of *fresh* eggs and chickens is always obtainable, which is of great value. At the local poultry show a second prize was gained for a cockerel reared at the institution.

The recreation of the patients has been catered for as usual. In summer, bowls, croquet, and "putting" are played by those patients who are considered physically fit. An additional feature was added during the year in the form of a Marconiphone four-valve wireless apparatus, which was provided at a cost of over £50 by the many ladies and gentlemen interested in the institution, and our thanks are due to them for their generosity. It is, perhaps, hardly necessary to add that the receiving set has been very greatly appreciated by the patients and staff.

Numerous entertainments were given during the winter months by the various organisations of the district, and thanks are due to the performers for their services.

The new lawn laid out last year in front of the men's cubicles has been used as an 18-hole golf putting green, and has been much appreciated and patronised by the men patients.

The X-Ray apparatus at the sanatorium is used for dispensary patients in the Furness Sub-Area as well as for patients at the sanatorium. During the year the following work has been done :— Sanatorium patients : Screen Exams. 78, Skiagrams 82. Dispensary patients : Screen Exams. 71, Skiagrams 93.

The probationer nurses at the sanatorium attend lectures given by myself and the matron on nursing, elementary anatomy and physiology, with special reference to tuberculosis. At the end of their two years' training a certificate is issued to successful candidates, those in 1924 being Nurses Wrench, Bambrough, and Phear.

The sanatorium possesses an excellent library, which is kept up-to-date by periodical supplies of books from the British Red Cross Society and grants from the Tuberculosis Committee. In addition, a good supply of periodicals and current literature is supplied by friends interested in the institution.

During the year 1,135 specimens of sputum were examined with the following results :—Positive 554, negative 581.

An investigation has been made of the sputum on 113 cases with a positive sputum on admission, who were discharged during the year. Of these 113 cases, 15 were discharged with a negative sputum and 9 with no sputum at all, the bacillary loss being 21·32 per cent.

A film illustrating the life of patients at the sanatorium was taken with a view to exhibition at health weeks and health lectures.

(2) Oubas House Children's Sanatorium, Ulverston.

Medical Superintendent : E. H. Allon Pask, M.D.

Assistant Medical Superintendent : Dr. H. J. Villiers.

Matron : Miss E. Woosey. *Sister-in-Charge :* Miss S. Braithwaite.

In May, 1920, the County Council came to terms with Miss Keswick, the lessor, to accept an assignment, for the residue of a term of 21 years (dating from November, 1912), of the premises known as Oubas House, Ulverston, until then used by Miss Keswick as a hospital for children.

The house stands in its own grounds (about one acre in extent), and accommodation was at first provided for 18 children and later increased to 21. A portion of an army hut has been adapted for use as a classroom. Educational instruction is given to the children in conformity with the requirements of the Board of Education.

This sanatorium is administered in conjunction with the High Carley Sanatorium, the nursing staff at Oubas House consisting of a sister-in-charge, two probationer nurses (one of whom acts as night-nurse), and also one certificated teacher.

For the period 2nd August, 1921, to 31st December, 1924, 97 patients (girls) were treated and discharged, their condition being as follows :—

†Stage of Disease on Admission.	Total number Discharged (Females).	Average Duration of Treatment in Months.	Condition on Discharge.				
			Quiescent.	Improved.	Stationary.	Worse.	*No Information.
			%	%	%	%	%
Stage I. & I.S	74	7·0	59·4	39·2	...	...	1·3
Stage II. & II.S	21	9·3	47·6	38·1	4·8	9·5	..
Stage III. & III.S	2	4·9	50·0	50·0	...	...	...

* Includes patients discharged for other than medical reasons.

† Classified according to the system of Turban-Gerhardt, and further sub-divided into cases with slight and severe constitutional symptoms as suggested by Philip.

Dr. Pask reports as follows on matters relating to the treatment of patients, and the administration of the sanatorium :—

The treatment of patients at Oubas House has continued to be satisfactory.

The educational facilities provided for the children are very helpful, and apart from giving instruction in elementary subjects, so that they can keep up with their schooling, the teacher is able to interest them and so keep them cheerful and occupied.

Lady Fell and Mrs. Hutchinson have continued to pay visits to the institution, and their presence is gladly welcomed by the patients and staff.

During the year the children were instrumental in making raffia articles, which were sent for exhibition at the Heywood Health Week.

(3) Elswick Sanatorium, near Kirkham.

Medical Superintendent :
George Leggat, M.B., Ch.B., D.P.H. (Aberdeen).

Matron : Miss I. G. Barclay.

This sanatorium is situated on the east side of Elswick Village, and is about six miles from Kirkham Station. The buildings and about 11 acres of land belong to the Fylde, Preston, and Garstang Joint Smallpox Hospital Board, and were taken on lease by the Lancashire County Council in 1913 for a period of 21 years. The Council are under an obligation to vacate the premises in case of a severe epidemic of smallpox. The accommodation was originally used entirely for 57 pulmonary cases, but in February, 1925, to meet an emergency, the male pavilion was adapted for 24 non-pulmonary cases. The accommodation at the present time, September, 1925, is : Pulmonary cases, 16 males and 25 females ; non-pulmonary cases, 12 males and 12 females ; total 65.

The County Council decided in August, 1925, to erect a suitable building for an X-Ray apparatus.

Of the four houses provided under the County housing scheme, three are occupied by male employees, and the fourth has been converted into an auxiliary nursing home for one sister and two nurses.

Dental treatment was afforded by the visiting dentist (Mr. J. J. Ward, L.D.S.) to 121 patients at this sanatorium.

The following table gives the condition of patients discharged (excluding deaths) (*a*) from the 27th July, 1914, to the end of 1923, and (*b*) during 1924 :—

(*a*) *Condition on discharge of 1,221 persons who received treatment in Elswick Sanatorium from July, 1914, to 1923.*

†Stage of Disease on Admission.	Total number Discharged.	Average Duration of Treatment in Months.	Condition on Discharge.				
			Quiescent.	Improved.	Stationary.	Worse.	*No Information.
			%	%	%	%	%
Stage I. & I.S—							
Males	314	4·1	47·4	28·3	3·2	3·8	17·2
Females ...	205	4·7	57·6	29·3	2·4	2·9	7·8
Total ...	519	...	51·4	28·7	2·9	3·5	13·5
Stage II. & II.S—							
Males	398	4·3	26·4	44·2	5·3	6·5	17·6
Females ...	205	5·3	29·3	46·3	8·8	7·3	8·3
Total ...	603	...	27·4	44·9	6·5	6·8	14·4
Stage III. & III.S—							
Males	69	4·5	10·1	66·7	13·0	1·4	8·7
Females ...	30	4·5	20·0	53·3	6·7	10·0	10·0
Total ...	99	...	13·1	62·6	11·1	4·0	9·1

(*b*) *Condition on discharge of 135 persons who received treatment in Elswick Sanatorium during 1924.*

† Stage of Disease on Admission.	Total number Discharged	Average Duration of Treatment in Months.	Condition on Discharge.				
			Quiescent.	Improved.	Stationary.	Worse.	*No Information.
			%	%	%	%	%
Stage I. & I.S—							
Males	38	5·6	36·8	47·4	7·9	...	7·9
Females ...	20	5·9	70·0	15·0	5·0	5·0	5·0
Total ...	58	...	48·3	36·2	6·9	1·7	6·9
Stage II. & II.S—							
Males	50	5·8	20·0	50·0	8·0	6·0	16·0
Females ...	20	6·7	15·0	70·0	10·0	5·0	...
Total ...	70	...	18·6	55·7	8·6	5·7	11·4
Stage III. & III.S—							
Males	2	...	...	...	...	...	100
Females ...	5	3·5	40·0	20·0	40·0	...	...
Total ...	7	...	28·6	14·2	28·6	...	28·6

* Includes patients discharged for other than medical reasons.

† Classified according to the system of Turban-Gerhardt, and further sub-divided into cases with slight and severe constitutional symptoms as suggested by Philip.

Dr. Leggat reports as follows on matters relating to the treatment of patients and the administration of the sanatorium :—

During the year several new methods of treatment have been tried, but none so far has proved of value or justified its adoption in the routine treatment at the sanatorium.

As in previous years, provided that the case is a true sanatorium one, the best results have been obtained with the methods now generally adopted in modern sanatoria, viz., fresh air, good and well-cooked food, systematic rest, with graduated exercise and work.

The patient's mental state is a very important factor in the treatment, and particular attention is paid to this by an endeavour to supply congenial work for those patients considered fit for work. The carpenters' shop, the poultry runs, and the gardening have all helped towards this end. Many of the male patients continue to show a keen and preferential interest in woodwork. The following articles have been constructed :—Tables, step-ladders, poultry and chicken houses, motor garage, and female recreation room, together with the furniture therefor. In addition, all minor repairs at the sanatorium have been carried out by patients under the supervision of the instructor.

The poultry runs have been kept fully stocked, but owing to the limitation of the land, the number of chickens hatched has been reduced to about 300. Under the instructor, poultry keeping provides a useful occupation for both male and female patients. In addition to fully meeting the requirements of the sanatorium, 2,507 eggs were sold during the year. The runs were made and equipped throughout by the male patients.

The installation of electric light has proved a great benefit to the general comfort and nursing of the patients, in addition to giving a brighter and more cheery aspect to the wards. A very interesting ceremony was performed on the occasion of the visit by members of the County Council to the sanatorium in August, 1924, when the Chairman, Sir Henry Hibbert, officially opened the new recreation room for the female patients. This hut was built and decorated by the male patients, who also made the necessary articles of furniture required to equip it. The hut has proved of great benefit to the female patients.

Lectures are given by myself to the probationer nurses throughout the winter months, the subjects included being

anatomy, physiology, and hygiene. In addition, the Matron gives a course of instruction on general nursing.

Mr. J. J. Ward, L.D.S., of Preston, visits the institution weekly and carries out all the necessary dental work. Since dentistry was introduced, there has been a marked general improvement in the condition of patients, which has fully justified the expense.

Lectures to patients are given by myself on the same lines as in previous years on the causation, treatment, and prevention of tuberculosis.

The grounds continue to be improved, and an endeavour is being made gradually to get rid of all rough land by laying down lawns and flower beds.

To meet an emergency in the County scheme, caused by the closure of a certain special hospital treating patients suffering from non-pulmonary tuberculosis, part of the sanatorium, namely, the building originally used as the male ward, is now being utilised for the treatment of this type of case. This has necessitated a certain amount of reconstruction, with the provision of accommodation for the extra nursing staff, who have been housed in one of the County Council houses about half a mile from the sanatorium, which quarters have proved very satisfactory and comfortable for them. A side ward has been utilised and equipped for an operating theatre, and concrete platforms have been laid down outside the ward to facilitate the treatment of patients by heliotherapy (sunlight). Though it may be too early to give a definite opinion, so far the results appear to have justified the decision to treat non-pulmonary cases at the sanatorium, as most of the cases show undoubted improvement. The situation of Elswick and its proximity to the sea would, as a matter of fact, lead one to expect a favourable response in non-pulmonary tuberculosis.

The treatment of non-pulmonary cases has made the need for an X-Ray apparatus all the greater, and the County Council in May, 1925, decided to erect a one-storey building to contain a suitable apparatus.

The discipline for the year has been very good ; the patients on the whole are contented and happy, and again I am pleased to report that they appear to continue to appreciate the benefits to be derived from the treatment.

(4) Chadderton Pulmonary Hospital.

Visiting Medical Superintendent :
James Wood, M.D., M.B., Ch.B., D.P.H., R.C.P.S.I.

Matron : Miss D. Willman.

An agreement was made on the 1st October, 1919, with the Chadderton, Royton, and Crompton Joint Hospital Board for the use of the buildings, erected as a smallpox hospital, for the treatment of patients suffering from pulmonary tuberculosis. Accommodation is now provided for 36 female patients. The County Council are under an obligation to vacate the premises in case of an epidemic of smallpox.

Dr. Wood reports as under on matters relating to the hospital :—

During the year 1924, the treatment of patients in hospital has been on similar lines to the previous years, the chief points being rest in bed, ample supply of fresh air and nourishing food, exercise in the form of limited walks, and light work in the grounds or hospital for those who were fit to undertake it.

Trials have been made of several new methods of treatment and reports thereon sent to the Central Tuberculosis Officer. Otherwise, no new forms of treatment have been undertaken.

On the whole, the patients have settled well, and several have remained in the hospital for exceptionally long periods. It has been pleasing to note the marked improvement of a few of the severe cases who have been very contented and willing to remain in bed for several consecutive months.

Owing to the great number of wet days the tennis court was not used much. The libraries for the staff and patients have been highly appreciated.

All our patients are females and, when fit, they are encouraged to knit, sew, crochet, &c., so as to keep their minds employed.

There have been few changes in the nursing and domestic staffs.

Concerts, whist drives, and wireless entertainments have been very acceptable and much appreciated by the patients during the year.

Altogether 155 specimens of sputum were examined for tubercle bacilli ; 69 were found to be positive and 18 negative ; the remaining 68 were chiefly re-examinations of the negative sputa.

(5) Heath Charnock Pulmonary Hospital, near Chorley.

Medical Superintendent :
J. W. Rigby, L.R.C.P. (Lond.), M.R.C.S. (Eng.).
Matron : Miss H. Sinclair.

By agreement with the Chorley Joint Hospital Board, the County Council erected, equipped, and furnished two pavilions, one for male and the other for female patients, containing 16 and 14 beds respectively, together with a dining-hall and some staff accommodation. The pavilions were opened in November, 1914. The County Council provided, in 1921, a hut as a recreation-room for male patients. The Joint Board are responsible for the administration of the hospital, the County Council paying to them the cost of maintenance.

Dr. Rigby has kindly furnished the following report :—

During the past year little has taken place to alter the character of the institution, but I am pleased to say the general public are beginning to take more interest in the welfare of the patients. We have had a considerable increase in the number of books and periodicals sent for the use of the inmates, all of which help to pass their time pleasantly, and are much appreciated.

We have been able to instal a wireless set, also entirely due to the generosity of friends, and a library is in course of formation. The wireless has proved a blessing, and we contemplate increasing its usefulness by placing plug-holes for earphones in certain of the cubicles for the use of those patients who are confined to bed.

The grounds have, if anything, been better this year, but much requires to be done to improve the lawns.

In my opinion we still need more shelter, either trees or some structure. The situation of the buildings is admirable with regard to sunshine, but there is little shelter from winds from the east and west, and the institution being elevated we get the winds sweeping the verandahs too much, and we cannot have the beds out as much as we should like.

On the whole, the conduct of the patients has been excellent, and they have appreciated our efforts, but 1924 again has been notable for the absence of sunshine and the excessive number of wet days. In an institution like Heath Charnock—a pulmonary hospital—it means much extra work for the nurses to keep the spirits of the inmates good, and I am pleased to say that in spite of this the general tone has been well maintained. I have received no complaint as regards want of service or lack of food during the year.

In regard to treatment outside the usual method, in a few cases anti-catarrh vaccine (prophylactic) has done good service, as in former years. I have noticed good results from quinine in some few cases, and also the beneficial result of cubebs in relieving the irritating cough. This does give relief in many cases, but I cannot say that either drug has done any lasting good.

(6) Peel Hall Pulmonary Hospital, Little Hulton.

Visiting Medical Superintendent :
G. Jessel, M.A., M.D. (Oxon.), D.P.H. (Manchester).

Matron : Miss A. Jones.

The Hall, with about 17 acres of land attached thereto, was presented in 1914 to the Lancashire County Council by Mr. A. Wynne-Corrie, and an additional 20 acres of land has been purchased. The adaptation of the premises as a pulmonary hospital for the treatment of advanced and chronic cases suffering from tuberculosis—delayed owing to the Great War—was completed in 1921.

Accommodation is provided for 45 male patients, and the hospital serves principally Dispensary Area No. 4 in taking advanced, observation, and educational cases.

Several photographs are here reproduced showing the Hall as adapted for the treatment of tuberculous cases.

Dr. Jessel reports as follows on the year's work at the hospital :—

The work of the hospital has been continued along the lines described in last year's report. The patients have consisted of :—

(*a*) Acute cases (of recent origin or old cases which have relapsed) requiring much nursing and attention, such as could not be obtained at home.

(*b*) Chronic cases, where some material improvement in the patients' health might be expected, with restoration of working capacity in certain cases.

(*c*) Combined cases (pulmonary and non-pulmonary).

(*d*) Observation or special cases.

In almost every case tubercle bacilli were present in the sputum, so that the removal of the patients to the hospital meant

PEEL HALL PULMONARY HOSPITAL, LITTLE HULTON.—VIEW OF THE HOSPITAL FROM THE FRONT FIELD.

PEEL HALL PULMONARY HOSPITAL.—A WARD IN ONE OF THE ADAPTED BEDROOMS.

PEEL HALL PULMONARY HOSPITAL.—VERANDAH FOR PATIENTS, FORMED OUT OF OLD GREENHOUSE.

PEEL HALL PULMONARY HOSPITAL.—PATIENTS AT WORK IN THE GARDEN.

the removal of a potential source of danger to other inmates of their homes, whereby the latter had time and opportunity to increase their powers of resistance to the ubiquitous tubercle bacilli through one or more of the following direct effects of the hospital treatment, viz. :—

1.—Absence of a source of infection.

2.—No home nursing required.

3.—Relatively increased income, because hospital treatment is free.

It is probable that the falling death-rate in tuberculosis is related in some measure to the increasing hospital provision for infectious cases. The average length of stay of patients discharged during 1924 was 132 days, as compared with 102 days in 1923 and 84 days in 1922.

During the year, considerable improvements were made both inside and outside the hospital. The patients' quarters were redecorated, and the condition of the gardens and walks was improved, while a hard tennis court was made for the nursing staff.

The patients have enjoyed music from the five-valve wireless set as well as from the piano, gramophones, and the frequent concert parties which have visited the hospital. Billiards, croquet, quoits, and other games have been popular as in previous years, and good use has been made of the library.

Patients, who were up and about, were encouraged to find some active interest and occupation, in so far as this was calculated to add to their mental and physical health.

As regards treatment, there is no doubt that rest was and is the most important single factor. Drugs have been used to relieve symptoms as indicated, and artificial pneumothorax was performed in one case. Various new remedies were tried, and especially the new defatted vaccine, but the results were disappointing. All new treatments have, however, in many cases a temporary favourable psychological effect.

As in previous years, the teaching opportunities of the hospital have not been neglected. The nurses have attended a regular weekly course of lectures, and the patients have been taught the necessary facts about the cure and prevention of tuberculosis.

Apart from the importance of the hospital as a treatment centre for infectious patients, it has doubtless also served as an educational force, not only to patients, but to the large number of relatives and friends who have regularly visited the institution.

The existence of attractive, bright, airy wards, surrounded by pleasing gardens, and the practice of hygienic laws amidst an atmosphere of order, cheerfulness, and hope could scarcely fail to re-act favourably upon all concerned. The co-operation of the patients was, in fact, very good, and this was doubtless due in no small measure to the efforts of the matron and the nursing staff to make them happy and contented.

(7) Rufford Pulmonary Hospital.

The County Council acquired, on the 18th October, 1920, Rufford New Hall, situated on the west side of the main road from Preston to Ormskirk, together with 128 acres of land adjoining the Hall. Under pressure from the Ministry of Health, a scheme was prepared for using the Hall and land for discharged sailors and soldiers, and the scheme included training the patients in several occupations. Some additional land was also obtained with a view to training in agricultural work. All this, however, was abandoned by order of the Ministry of Health, owing to the financial stringency.

On 3rd January, 1924, the Lancashire County Council received the sum of £7,931 from the Lancashire Insurance Committee, being the credit balance on the Sanatorium Benefit Fund. The Council decided, with the consent of the Ministry of Health, that this important sum should be utilised as capital expenditure for an extension of the County scheme dealing with the prevention and treatment of tuberculosis rather than that the amount should be used for current revenue purposes. Owing to the pressing need for accommodation for advanced cases of pulmonary tuberculosis and for non-pulmonary tuberculosis in adults, the Council decided to spend this sum, obtained from the Sanatorium Benefit Fund, on alterations and additions to the Hall. Accordingly, the buildings are now in process of adaptation as a pulmonary hospital to accommodate about 50 patients. In addition to the ordinary requirements of a pulmonary hospital, an operating theatre, plaster room, and X-Ray room have been provided. The capital cost has been estimated at £10,171, and this is being met by the aforementioned sum of £7,931 from the Sanatorium Benefit Fund, together with a capital grant from the Ministry of Health of £2,240. Thus, the entire work of adaptation and furnishing will be carried out without any capital cost falling on the County rate.

(8) Wrightington Hall, near Wigan.

The County Council, in November, 1920, decided to purchase Wrightington Hall and Estate of 159 acres, with a view to utilising it eventually for the provision of accommodation for children.

The Hall is situated on the high road between Standish and Parbold, about six miles north-west of Wigan, and stands at an altitude of 300 feet above sea-level.

Plans were prepared for the adaptation of the buildings, but under instructions from the Ministry of Health no work was commenced, and the scheme now remains in abeyance.

DENTAL TREATMENT.

The scheme adopted for dental treatment for certain patients undergoing treatment at the Elswick and High Carley Sanatoria was extended by the County Council in March, 1924, so as to include those tuberculous patients, either at home or in institutions, who are unable to bear the whole cost of dental treatment (including new dentures) and who are not already provided for under the scheme of other bodies. Patients eligible for this form of treatment are those who are, in the opinion of the medical superintendent or tuberculosis officer, unable to derive full benefit from treatment owing to the defective condition of their teeth. Ex-service men with pensions and children of school age are not generally dealt with, as they are already covered by dental schemes of the Ministry of Pensions and Education Authorities respectively.

At High Carley and Elswick Sanatoria the essential dental equipment has been provided, and a visiting dentist appointed at each institution.

The following statement shows the dental work carried out during 1924 :—

TABLE 16.

	At High Carley Sanatorium.	At Elswick Sanatorium.	At other Sanatoria and Hospitals	At Patients' Homes.	Total.
Total No. of individual patients who received dental attention (any form)	210	121	40	18	389
New Dentures provided—					
(*a*) Complete sets	28	26	11	9	74
(*b*) Partial sets	43	13	14	6	76
Repairs to Dentures	19	6	2	3	30
No. of Extractions	431	413	121	1	966
No. of Fillings	66	73	6	...	145
No. of Scalings and Cleanings ...	2,665	769	16	1	3,451
No. of other Operations	301	158	...	...	459

The dental scheme, considering the benefit derived by the patients, has proved economical, and is fully justified.

SANATORIUM TREATMENT: ITS IMMEDIATE RESULTS AND AFTER-RESULTS.

(*a*) Immediate Results: Condition of 8,570 Patients on Discharge from Sanatorium.

Between 15th July, 1912, and 31st December, 1924, the following numbers of patients received a period or periods of sanatorium treatment, and have been discharged :—

Adults	8,052	8,570
Children	518	

In the foregoing figures a patient is counted once only, even though he may have received two or more separate periods of treatment. The number of admissions and re-admissions of patients to sanatoria in 1924 was 805, as compared with 838 in the previous year and 899 in 1922.

These cases are distinct from those who received treatment in a pulmonary hospital or observation hospital. Such treatment is granted almost solely for purposes of education or isolation, and no useful purpose is attained in trying to show curative results.

Under the County scheme, patients have never been limited to any definite period—the length of stay depending on the recommendation of the medical superintendent. Cases likely to become quiescent have always received as long a period of treatment as considered necessary on medical grounds. In spite of there being no fixed period of treatment, the average duration is about four months, and this figure is not affected by patients leaving prematurely for other than medical reasons, as deduction is made for these. In 1924 and continuing in 1925, patients have remained in sanatoria a little longer than the average of previous years.

The following table, summarising the *immediate* results of sanatorium treatment, has been prepared from the information as to the condition of patients given by medical superintendents in their discharge reports :—

TABLE 17.—*Immediate Results of Sanatorium Treatment*, 1912-1924.

Adults or Children.	†Stage of Disease on Admission.	Sputum.	No. of Cases.	Condition on Discharge from Sanatorium.				
				Quiescent. %	Improved. %	Stationary. %	Worse. %	*No Information. %
Adults (15 and over).	I. and I.S	Positive ...	1541	18·3	50·3	9·5	5·2	16·7
		Negative ...	2012	41·0	38·8	2·9	0·8	16·4
		None ...	600	51·8	31·5	3·2	0·7	12·8
		Total ...	4203‡	33·7	41·8	5·4	2·4	16·7
	II. and II.S	Positive ...	2376	9·2	51·0	12·2	8·4	19·2
		Negative ...	734	28·5	46·9	3·4	1·6	19·6
		None ...	159	40·2	38·4	4·4	2·5	14·5
		Total ...	3306§	14·9	49·0	9·7	6·5	19·8
Children (under 15).	I. and I.S	Positive ...	9	33·3	33·3	...	11·1	22·2
		Negative ...	135	45·9	39·2	3·7	...	11·1
		None ...	228	53·5	31·6	2·2	1·3	11·4
		Total ...	372	50·3	34·4	2·7	1·1	11·5
	II. and II.S	Positive ...	14	...	35·7	21·4	21·4	21·4
		Negative ...	50	52·0	30·0	6·0	2·0	10·0
		None ...	56	46·4	30·3	3·6	8·9	10·7
		Total ...	120	43·3	30·8	6·7	7·5	11·7

* Includes patients discharged for other than medical reasons.

† Classified according to the system of Turban-Gerhardt, and further sub-divided into cases with slight and severe constitutional symptoms as suggested by Philip.

‡ Includes 50 cases where the sputum was not examined.

§ Includes 37 cases where the sputum was not examined.

From the foregoing table it will be seen that the earlier the stage at which a patient is admitted to a sanatorium—and more especially when tubercle bacilli are not found in the sputum—the greater are the beneficial effects of several months' sanatorium treatment. The after-histories of these patients are dealt with on the next page.

The advanced or third stage cases have not been included in Table 17 above, as they were not strictly suitable subjects for sanatorium treatment; they were admitted chiefly in 1912 and 1913, before the County dispensary organisation was set up.

(*b*) After-Histories of Patients who Completed a Course of Sanatorium Treatment, associated with Home Treatment and Dispensary Supervision or Treatment.

The immediate results of sanatorium treatment show the condition of the patient on his or her discharge, and whilst the figures published in the preceding table may be regarded as satisfactory and encouraging, the main test of the efficacy of sanatorium treatment under modern social and economic conditions lies in the after-results of such treatment. The County tuberculosis scheme has now been working more than ten years, and this gives a sufficient period to enable the after-histories of those patients who have completed one or more courses of sanatorium treatment to be analysed so as to show how they fared in the subsequent years. The position as at the end of 1924 has been ascertained for these sanatorium cases, and the results are contained in the Table E forming Appendix IV. of this report. So that the data upon which the tables are based may be clear, it should be stated :—

(*a*) The patients are grouped according to the particular year in which they applied for treatment, the practice of classifying them under the year of discharge having been discarded on account of so many patients receiving two, three, or more courses of treatment ;

(*b*) The cases are confined to patients who have received sanatorium treatment in the true sense, that is, distinct from residence in a pulmonary hospital or observation hospital, where an arrest of the disease is not expected ;

(*c*) Only patients who remained in a sanatorium two months or longer have been included ;

(*d*) Patients who were in an advanced stage of the disease when first commencing treatment under the County scheme, and subsequently admitted to sanatoria, although given for record in Appendix IV., are not dealt with in this summary, as they are not strictly sanatorium cases providing a prospect of an arrest of the disease ; and

(*e*) Patients suffering from both pulmonary and non-pulmonary tuberculosis who received sanatorium treatment for their pulmonary condition are included in these tables.

The information contained in Appendix IV. has been summarised under a few essential headings in the table below :—

TABLE 18.—*After-Histories of 4,451 Adult Patients who completed one or more Courses of* SANATORIUM *Treatment, associated with Home Treatment and Dispensary Supervision or Treatment.*

Stage‡ of Disease.	Year of Application for Treatment.	Sputum.†	Average Duration of Sanatorium Treatment. (Months).	NET* No. of Patients who completed Sanatorium Treatment.	Position at end of 1924.			
					Cured. § %	Fit for Work. %	Unfit for Work. %	Died. %
I. & I.S. ("Early" cases).	1914–18	Positive ...	5·0	520	1·1	31·7	7·7	59·4
		Neg. or None	4·0	689	33·4	51·4	2·2	13·0
		Total ...	4·5	1209	19·5	42·9	4·5	33·0
	1919 ...	Positive ...	6·1	122	...	31·1	11·5	57·4
		Neg. or None	4·6	191	14·1	67·5	8·4	9·9
	1920 ...	Positive ...	5·5	111	...	34·2	10·8	54·9
		Neg. or None	4·9	114	...	85·1	4·4	10·5
	1921 ...	Positive ...	5·9	136	...	25·0	15·4	59·5
		Neg. or None	4·8	128	...	82·8	8·6	8·6
	1922 ...	Positive ...	5·2	93	...	27·9	23·6	48·4
		Neg. or None	5·1	90	...	74·4	16·7	8·9
	1923 ...	Positive ...	5·2	89	...	51·7	23·6	24·7
		Neg. or None	4·5	91	...	86·8	9·9	3·3
		Total ...	5·2	1165	2·3	56·6	12·5	28·5
II. and II. S. ("Intermediate" cases).	1914–18	Positive ...	5·0	797	0·6	14·4	6·4	78·5
		Neg. or None	4·3	225	20·9	44·4	3·5	31·1
		Total ...	4·8	1022	5·1	21·0	5·8	68·1
	1919 ...	Positive ...	5·2	160	...	18·7	9·4	71·9
		Neg. or None	4·9	54	9·2	72·2	9·2	9·2
	1920 ...	Positive ...	5·2	182	...	19·8	7·7	72·5
		Neg. or None	4·9	58	...	75·8	8·6	15·5
	1921 ...	Positive ...	4·9	173	...	19·6	16·2	64·2
		Neg. or None	4·9	49	...	53·1	20·4	26·5
	1922 ...	Positive ...	5·3	140	...	17·1	17·8	65·0
		Neg. or None	4·7	42	...	69·0	11·9	19·0
	1923 ...	Positive ...	5·5	157	...	29·9	32·5	37·6
		Neg. or None	4·4	40	...	70·0	20·0	10·0
		Total ...	5·1	1055	0·5	31·9	15·7	51·8

For footnotes see page 79.

The foregoing Table 18, together with the detailed table in Appendix IV., contain much information bearing on the after-results of sanatorium treatment, and innumerable subsidiary tables can be compiled from them to illustrate a number of points, but space does not allow of all problems being dealt with in detail. The main conclusions may be given as follows :—

1.—That out of a total of 1,209 early stage patients who commenced treatment during the five years 1914-18, 755, or 62·4 per cent. were cured§ or fit for work at the end of 1924, and 55, or 4·5 per cent. were living, but unfit for work ; similarly, out of a total of 1,022 intermediate stage cases, 267, or 26·1 per cent., were cured§ or fit for work at the end of 1924, and 59, or 5·8 per cent., were living, but unfit for work.

2.—That, out of a total of 1,165 early stage patients who commenced treatment during the five years 1919-23, 687, or 58·9 per cent., were cured§ or fit for work at the end of 1924, and 146, or 12·5 per cent., were living, but unfit for work ; similarly, out of a total of 1,055 intermediate stage cases, 342, or 32·4 per cent., were cured§ or fit for work at the end of 1924, and 166, or 15·7 per cent., were living, but unfit for work.

3.—That the diagnosis of the disease whilst it is in the early stages is of the utmost importance for successful treatment.

4.—That treatment afforded to patients in the early stages of the disease who have a negative or absent sputum is three or four times more successful than when the sputum has become positive, and in the case of patients in the intermediate stages, those with a negative or absent sputum benefit about three times as much in comparison with positive sputum cases.

Footnotes for pages 78 and 79.

* Net number arrived at after deducting patients left County, untraced, ceased treatment for other than medical reasons, died from other than tuberculosis, diagnosis not confirmed, and in institutions on 31/12/24.

† Where sputum is shown as positive, tubercle bacilli have been found at some time during treatment.

‡ Classified according to the system of Turban-Gerhardt, and further sub-divided into cases with slight and severe constitutional symptoms, as suggested by Philip.

§ These cases have been classified as cured (in accordance with the suggestion of the Chief M.O. of the Ministry of Health), the disease having been completely arrested for five years and no symptoms of tuberculosis present.

N.B.—The medical condition of the 2,477 living patients at the end of 1924 was : Cured 320 ; disease arrested or quiescent 1,501, disease active 611, diagnosis doubtful 45.

ANALYSIS OF AFTER-HISTORIES OF 4,451 ADULT PATIENTS WHO RECEIVED SANATORIUM TREATMENT AND 3,630 WHO RECEIVED TREATMENT AT HOME.

There have been in recent years many unfavourable opinions passed on the results of sanatorium treatment. Three years ago I published for the first time an analysis of the after-histories of a large number of patients who came on the register during the five years 1914-18 and had undergone sanatorium treatment, compared with the after-histories of patients similar, as far as possible, in age, sex and severity of the disease who had *not* had sanatorium treatment. The conclusions on page 83 show that the results of sanatorium treatment are much better than many consider them to be.

Through the dispensary staff the position, as at the end of 1924, has been ascertained of all persons diagnosed by the tuberculosis officers as suffering from tuberculosis, and who made application for treatment during the five years 1914-18, and also a second group of five years, 1919-23. The information is contained in Tables E. and F. of Appendices IV. and V. Table E, dealing with "Sanatorium cases," may be compared in considerable detail with Table F, "Non-Sanatorium cases," and for convenience certain essential particulars have been extracted from the tables in question and given in comparative form in Tables 19 (a) and 19 (b) overleaf.

It may be repeated that only patients who completed a stay of two months or more in sanatorium have been classified as "Sanatorium cases," and that many of the "Non-Sanatorium cases" have received treatment in pulmonary hospitals or observation hospitals or have had a stay of less than two months in a sanatorium, their treatment being interrupted for some reason or other.

Patients who were in an advanced stage of the disease when first commencing treatment under the County scheme are not included in the analysis, as no useful purpose would be served thereby. The small proportion of patients suffering from both pulmonary and non-pulmonary tuberculosis are included in this analysis.

TABLE 19.—(*a*) *Analysis of After-Histories of* (1) *2,231 Patients who have completed a Course of Sanatorium Treatment, associated with Dispensary Treatment or Supervision, and* (2) *1,637 Patients who have undergone Treatment at Home or in Institutions other than Sanatoria.*

Stage‡ of Disease on Application and Sputum.†	Age Groups.	Sex.	Position at end of 1924 of Adult Patients who applied during **1914–18** (five years).							
			Patients who completed two months or more *Sanatorium* Treatment.				Patients who received *Home* Treatment. (Non-Sanatorium cases).			
			Net.* No. of Patients treated.	Cured§ or Fit for Work. %	Unfit for Work. %	Died. %	Net.* No. of Patients treated.	Cured§ or Fit for Work. %	Unfit for Work. %	Died. %
(*a*) I. and I.S Positive	15–25	M	61	14·7	6·5	78·7	21	...	...	100
		F	46	10·9	4·3	84·8	12	8·3	...	91·7
	25–45	M	210	41·4	8·1	50·5	92	38·0	2·2	59·8
		F	115	33·0	5·2	61·7	41	31·7	2·4	65·8
	45–65	M	75	37·3	10·7	52·0	38	21·0	...	78·9
		F	13	30·8	23·1	46·1	7	42·8	...	57·1
	Total ...	M	346	35·8	8·4	55·8	151	28·5	1·3	70·2
		F	174	27·0	6·3	66·7	60	28·3	1·7	70·0
Neg. or None	15–25	M	89	83·1	2·2	14·6	56	67·8	...	32·1
		F	121	86·8	0·8	12·4	58	68·9	1·7	29·3
	25–45	M	173	86·1	3·5	10·4	105	68·6	3·8	27·6
		F	195	82·0	2·6	15·4	82	73·2	1·2	25·6
	45–65	M	74	82·4	...	17·6	55	61·8	9·1	29·1
		F	37	94·6	2·7	2·7	17	64·7	...	35·3
	Total ...	M	336	84·5	2·4	13·1	216	66·6	4·2	29·2
		F	353	84·9	1·9	13·0	157	70·7	1·3	28·0
(*b*) II. and II.S Positive	15–25	M	87	1·1	1·1	97·7	75	...	1·3	98·7
		F	88	9·1	3·4	87·5	90	...	...	100
	25–45	M	273	16·5	7·3	76·2	222	4·9	1·3	93·7
		F	179	15·1	5·6	79·3	153	9·8	0·6	89·5
	45–65	M	136	18·4	10·3	71·3	166	6·0	2·4	91·6
		F	34	41·2	8·8	50·0	31	12·9	3·2	83·9
	Total ...	M	496	14·3	7·0	78·6	463	4·5	1·7	93·7
		F	301	16·3	5·3	78·4	274	6·9	0·7	92·3
Neg. or None	15–25	M	23	78·3	...	21·7	26	23·1	...	76·9
		F	27	62·9	...	37·0	40	12·5	...	87·5
	25–45	M	56	57·1	7·1	35·7	78	32·0	1·3	66·7
		F	58	63·8	5·2	31·0	62	32·2	1·6	66·1
	45–65	M	42	64·3	2·4	33·3	92	29·3	5·4	65·2
		F	19	84·2	...	15·8	18	72·2	...	27·8
	Total ...	M	121	63·6	4·1	32·2	196	29·6	3·1	67·3
		F	104	67·3	2·9	29·8	120	31·7	0·8	67·5

For footnotes see page 84.

TABLE 19.—(*b*) *Analysis of After-Histories of (1) 2,220 Patients who have completed a Course of Sanatorium Treatment, associated with Dispensary Treatment or Supervision, and (2) 1,993 Patients who have undergone Treatment at Home or in Institutions other than Sanatoria.*

Stage‡ of Disease on Application and Sputum.†	Age Groups.	Sex.	Position at end of 1924 of Adult Patients who applied during **1919-23** (five years).							
			Patients who completed two months or more *Sanatorium* Treatment.				Patients who received *Home* Treatment (Non-Sanatorium cases).			
			Net.* No. of Patients treated.	Cured§ or Fit for Work. %	Unfit for Work. %	Died. %	Net.* No. of Patients treated.	Cured§ or Fit for Work. %	Unfit for Work. %	Died. %
(*a*) I. and I.S. Positive	15–25	M	85	22·3	14·1	63·5	31	9·7	3·2	87·1
		F	71	21·1	18·3	60·6	25	16·0	8·0	76·0
	25–45	M	212	40·6	17·4	41·9	92	40·2	13·0	46·7
		F	110	37·3	12·7	50·0	34	8·8	5·9	85·3
	45–65	M	62	25·8	17·7	56·4	45	33·3	8·9	57·8
		F	11	45·4	27·3	27·3	5	20·0	...	80·0
	Total ...	M	359	33·7	16·7	49·6	168	32·7	10·1	57·1
		F	192	31·8	15·6	52·6	64	12·5	6·2	81·2
Neg. or None	15–25	M	121	85·9	5·8	8·3	53	79·2	1·9	18·9
		F	136	88·9	8·1	2·9	69	65·2	1·4	33·3
	25–45	M	129	72·1	13·2	14·7	112	72·3	9·8	17·8
		F	146	86·3	6·8	6·8	97	80·4	8·2	11·3
	45–65	M	57	71·9	17·5	10·5	51	43·1	5·9	50·9
		F	25	80·0	4·0	16·0	17	82·3	5·9	11·8
	Total ...	M	307	77·5	11·1	11·4	216	67·1	6·9	25·9
		F	307	86·9	7·2	5·8	183	74·9	5·5	19·6
(*b*) II. and II.S. Positive	15–25	M	82	18·3	15·8	65·8	106	7·5	4·7	87·7
		F	127	14·9	11·8	73·2	130	4·6	6·9	88·5
	25–45	M	251	23·1	18·7	58·2	241	12·0	6·6	81·3
		F	204	24·0	13·7	62·2	226	13·3	7·1	79·6
	45–65	M	116	18·1	18·9	62·9	208	10·1	7·2	82·7
		F	32	28·1	25·0	46·9	69	14·5	14·5	71·0
	Total ...	M	449	20·9	18·3	60·8	555	10·4	6·5	83·1
		F	363	21·2	14·0	64·7	425	10·8	8·2	80·9
Neg. or None	15–25	M	41	78·0	12·2	9·7	38	44·7	2·6	52·6
		F	50	80·0	10·0	10·0	47	31·9	4·2	63·8
	25–45	M	46	69·5	10·9	19·6	77	46·7	3·9	49·3
		F	59	71·2	16·9	11·9	80	53·7	7·5	38·7
	45–65	M	30	50·0	23·3	26·7	106	33·0	14·1	52·8
		F	17	58·8	5·9	35·3	34	67·6	8·8	23·5
	Total ...	M	117	67·5	14·5	17·9	221	39·8	8·6	51·6
		F	126	73·0	12·7	14·3	161	50·3	6·8	42·8

For footnotes see page 84.

The following conclusions emerge from the figures and tables referred to in this chapter :—

1.—As the result of the analysis of 8,081 histories of adults who commenced treatment during the two five year periods 1914-18 and 1919-23, so far as comparison is possible, patients in the *early* and *intermediate* stages of pulmonary tuberculosis who have undergone a course of sanatorium treatment, even for three or four months, fare appreciably better in health in later years than those who did not receive such form of treatment as will be seen from the following comparative statement :—

	Sanatorium Cases Dead %	Non-Sanatorium (Home) Cases Dead %
1914-18 (5 Years)		
Negative Class, Stage I.	13·1 ...	28·7
,, ,, ,, II.	31·1 ...	67·4
Positive ,, ,, I.	59·4 ...	70·1
,, ,, ,, II.	78·5 ...	93·2
1919-23 (5 Years)		
Negative Class, Stage I.	8·6 ...	23·0
,, ,, ,, II.	16·0 ...	47·9
Positive ,, ,, I.	50·6 ...	63·8
,, ,, ,, II.	62·6 ...	82·1

2.—In both year groups the difference in favour of the sanatorium cases is very considerable for patients with negative or absent sputum, and appreciably better in the positive cases. It must never be forgotten, however, that from the more important side of prevention of the disease a stay in a sanatorium has, in the main, a definite educational result on the patient, his family and his friends.

3.—Early diagnosis is a very important factor in the successful treatment of pulmonary tuberculosis, whether at the sanatorium or at home.

4.—In both sanatorium and non-sanatorium cases, patients with a negative or absent sputum throughout treatment are much more likely to remain fit for work, and less liable to succumb to the disease than those with tubercle bacilli in the sputum.

5.—In the sanatorium and non-sanatorium cases, the mortality from pulmonary tuberculosis is greater among patients with a positive sputum, aged between fifteen and twenty-five years than in the other age groups.

The Chief Medical Officer of the Ministry of Health—Sir George Newman—in his annual report for 1924, in dealing with the value of sanatorium treatment, says: " The general view seems to be that, although sanatoria have not achieved all that was expected by some enthusiasts at the outset of the tuberculosis scheme, they have resulted in the cure of a considerable proportion of cases of pulmonary tuberculosis, and in the prolongation of life and working capacity in a much larger proportion, and that, at present, there is no alternative to sanatorium treatment, which offers a more solid prospect of general all-round gain to the community in the combat against this disease." The figures given in this chapter, and our experience generally in this County, support the view expressed by Sir George Newman.

Footnotes to Tables 19 (*a*) and 19 (*b*), pages 81 and 82.

* Net number arrived at after deducting patients left County, untraced, ceased treatment for other than medical reasons, died from other than tuberculosis, diagnosis not confirmed, and in institutions on 31/12/24.

† Where sputum is shown as positive, tubercle bacilli have been found at some time during treatment.

‡ Classified according to the system of Turban-Gerhardt, and further sub-divided into cases with slight and severe constitutional symptoms, as suggested by Philip.

§ These cases have been classified as cured (in accordance with the suggestion of the Chief M.O. of the Ministry of Health), the disease having been completely arrested for five years and no symptoms of tuberculosis present.

TREATMENT IN PULMONARY HOSPITALS.

The problem of dealing with advanced and highly infectious cases is more difficult in a large County area than in a County Borough. First, it is undesirable to have large numbers of advanced or acutely ill cases in one institution, and secondly, where such cases are treated they ought to be as near their homes as possible for convenience of visiting by relatives. Except in special circumstances, the best and most economical method of providing accommodation in a county like Lancashire, for patients who are acutely ill and who require to be isolated on general public health grounds, is to treat them in buildings attached to isolation hospitals.

The treatment, therefore, which is given in pulmonary hospitals *is quite distinct from that at sanatoria*, where are treated early cases for a probable arrest or cure of the disease, whereas in the pulmonary hospitals patients are admitted for the purposes of isolation, occasionally for observation in regard to diagnosis, and for education in general methods of hygiene which can be applied in certain selected cases, when the patient returns home, much more effectively after a short period of institutional treatment.

Following on these general principles, the Lancashire County Council have made arrangements with the responsible authorities of as many existing institutions as possible for the treatment of patients. Table 20 is inserted on page 89, giving the number of admissions and discharges from July, 1912, up to the end of 1924, the average duration of such treatment, sex, and other particulars.

The patients from each of the five dispensary areas requiring isolation are accommodated as far as possible in the pulmonary hospitals situated in the area, and, in order that the consultant tuberculosis officers may keep themselves acquainted with the cases, arrangements have been made (with one or two exceptions, where only occasional County cases are treated) for the tuberculosis officers to visit periodically the pulmonary hospitals in their area and confer with the medical superintendents on the following matters :—(1) The question of extension of patients' treatment or their return home, having special regard to the home conditions which are known to the tuberculosis officer ; (2) the question as to the patients' future treatment ; (3) applications from patients for transfer to other institutions, or for their discharge home, and to settle, where possible, any difficulties or complaints by patients which may arise.

In four of the five dispensary areas, when present schemes are completed, one of these hospitals will be in charge of the consultant tuberculosis officer, a very useful arrangement because patients come to these hospitals from the area administered by the tuberculosis officer, who is, therefore, conversant with the home conditions. Further, it is of great advantage to the tuberculosis officer, because it provides the means of applying certain forms of treatment and of carrying out valuable clinical work.

The foregoing working arrangements have enabled the highly infectious cases with unsatisfactory home conditions to remain at the pulmonary hospitals for long periods for the purpose of isolation, and for patients who have made good progress and are capable of light work to be transferred to sanatoria for the continuation of their treatment.

The isolation of patients removed from unsatisfactory home conditions where proper nursing is impossible is one of the best known methods for the prevention of tuberculosis, and, therefore, money devoted to this purpose is well spent in removing the source of infection, and thus reducing the numbers of new cases.

Brief particulars are here inserted of the arrangements existing for the use of accommodation for County patients at 15 pulmonary hospitals.

(1) Bull Hill Pulmonary Hospital, Darwen.
Withnell Hall, near Chorley.

In 1913, an arrangement was made with the Darwen Corporation whereby County patients would be admitted to a pavilion (originally erected for enteric cases but afterwards equipped for tuberculous cases) at the Bull Hill Isolation Hospital. Accommodation was provided for 18 patients, which number was increased to 20 early in 1924. Only females are treated. The Ministry of Health have decided that the pavilion must revert to its original purpose, namely, the treatment of one or other of the principal epidemic diseases, and in consequence the County Council are providing alternative hospital accommodation for tuberculous cases at Withnell Hall, which they have purchased.

No. of cases discharged during 1924 was 38, whilst 16 died.

(2) Burnley District Pulmonary Hospital.

In September, 1919, an arrangement was made with the Burnley Joint Hospital Board to allow the County Council the use of occasional beds at the above hospital for the treatment of patients suffering from pulmonary tuberculosis. Since 1922, it was found practicable to reserve 10 beds for County patients exclusively, with occasional additional beds.

No. of cases discharged during 1924 was 11, whilst 12 died.

(3) Chadderton Pulmonary Hospital, Racefield, Royton.

An agreement was made on the 1st October, 1919, with the Chadderton, Royton, and Crompton Joint Hospital Board for the use of the new buildings, erected as a small-pox hospital, for the treatment of patients suffering from pulmonary tuberculosis.

This institution is dealt with further on page 68.

The hospital accommodates 36 patients (females), and the number of cases discharged during 1924 was 78, whilst 21 died.

(4) Eccleston Hall Pulmonary Hospital, near St. Helens.

In May, 1918, arrangements were made with the St. Helens Corporation to allow the County Council the use of occasional beds at the Eccleston Hall Pulmonary Hospital, when such accommodation was not required for Borough patients.

No. of cases discharged during 1924 was 30, whilst 8 died.

(5) Heath Charnock Pulmonary Hospital, near Chorley.

By agreement with the Chorley Joint Hospital Board, the County Council erected, equipped, and furnished two pavilions, one for male and the other for female patients, containing 16 and 14 beds respectively, together with a dining hall and some additional staff accommodation.

This institution is dealt with further on page 69.

No. of cases discharged during 1924 was 28, whilst 15 died.

(6) Hefferston Grange Pulmonary Hospital, Weaverham, Cheshire.

By arrangement with the Warrington Corporation, in February, 1922, about 10 beds are reserved at this institution for the treatment of advanced cases from the County area, the first County case being admitted on the 14th June, 1922.

No. of cases discharged during 1924 was 24, whilst 5 died.

(7) Linacre Pulmonary Hospital, near Liverpool.

In October, 1915, an arrangement was made with the Bootle Corporation to allow the County Council the use of occasional beds at the Linacre Pulmonary Hospital when such accommodation is not required for patients from the Borough. The hospital was extended early in 1924, and about five beds will be reserved for County cases.

No. of cases discharged during 1924 was 6, whilst 3 died.

(8) Luneside Pulmonary Hospital, Lancaster.

By an agreement with the Lancaster Corporation, which took effect from the 1st January, 1915, the County Council are allowed the use of 21 beds at the isolation hospital, which had been adapted for the reception and treatment of persons suffering from tuberculosis.

The Consultant Tuberculosis Officer for Dispensary Area No. 1 (Dr. A. D. Brunwin) acts as visiting physician of this hospital.

No. of cases discharged during 1924 was 57, whilst 20 died.

(9) Marland Pulmonary Hospital, Rochdale.

In November, 1918, an arrangement was made with the Rochdale Corporation to allow the County Council the use of six beds at the Marland Pulmonary Hospital, and in November, 1920, the Corporation were able to increase the number of beds reserved to 15—13 females and 2 males.

No. of cases discharged during 1924 was 19, whilst 5 died.

(10) The Liverpool Hospital for Consumption, Mount Pleasant, Liverpool.

The Committee of Management allow the County Council the use of occasional beds at this Hospital.

No. of cases discharged during 1924 was 1, whilst 2 died.

(11) Peel Hall Pulmonary Hospital, Little Hulton.

This Hospital, belonging to the County Council, was opened on the 30th August, 1921, and provides accommodation for 45 advanced male patients.

This institution is dealt with further on page 70.

No. of cases discharged during 1924 was 81, whilst 32 died.

(12) Pemberton Pulmonary Hospital, Wigan.

By an agreement with the Wigan Corporation, which took effect from the 20th December, 1915, for a period of ten years, the County Council are allowed the use of four beds at the Pemberton Pulmonary Hospital.

No. of cases discharged during 1924 was 3, whilst 7 died.

(13) Rufford Pulmonary Hospital, near Ormskirk.

The County Council, in February, 1924, decided to utilise the large hall and estate purchased by them at Rufford for the purpose of a pulmonary hospital accommodating about 50 patients (females). This institution is dealt with further on page 72.

(14) Westhulme Pulmonary Hospital, Oldham.

In May, 1914, an arrangement was made with the Oldham Corporation whereby five beds, if required, would be reserved for County patients at the Westhulme Pulmonary Hospital. No. of cases discharged during 1924 was 12, whilst 3 died.

(15) Wolstenholme Hall Pulmonary Hospital, Norden.

In August, 1920, the Rochdale Corporation equipped Wolstenholme Hall, Norden, as a pulmonary hospital for male patients only, and they agreed to reserve 10 beds for County patients, this number being later increased to 25. No. of cases discharged during 1924 was 42, whilst 19 died.

Table 20.—*Summary of Cases Treated in Pulmonary Hospitals.*

The following table gives particulars of the patients treated at the various pulmonary hospitals, shown under the appropriate stages. From this statement it will be observed that 4,089 persons were admitted to and discharged from pulmonary hospitals from July, 1912, to the 31st December, 1924 :—

†Stage of Disease on Admission, Age and Sex.			Total No. of Admissions (1912 to 1924).	No. of Transfers to Sanatoria.	No. of Discharges.	No. of Deaths in Hospital.	Average duration of Treatment in months.	Maximum duration of Treatment in months.
Stage I. & I.S—								
Children	M.	...	6	1	4	1	2·3	4·0
	F.	...	7	1	5	1	7·8	14·7
Adults	M.	...	112	5	94	13	3·6	23·0
	F.	...	93	5	79	9	4·1	23·0
Total	...	...	218	12	182	24	...	...
Stage II. & II.S—								
Children	M.	...	12	...	8	4	5·1	20·7
	F.	...	19	2	16	1	5·7	13·7
Adults	M.	...	857	37	645	175	4·4	42·7
	F.	...	561	21	408	132	4·9	35·2
Total	...	...	1449	60	1077	312	...	...
Stage III. & III.S—								
Children	M.	...	15	2	9	4	4·5	12·0
	F.	...	41	4	26	11	6·6	19·5
Adults	M.	...	1428	42	939	447	4·6	57·2
	F.	...	938	28	606	304	4·4	43·7
Total	...	...	2422	76	1580	766	...	...

† Classified according to the system of Turban-Gerhardt, and further sub-divided into cases with slight and severe constitutional symptoms as suggested by Philip.

N.B.—Patients under 15 years classified as children; 15 years and over classified as adults.

In the foregoing table a patient is counted once only, even though he may have received two or more separate periods of treatment. The number of admissions and re-admissions of patients to pulmonary hospitals in 1924 was 573, as compared with 687 in the previous year.

TREATMENT IN GENERAL AND SPECIAL HOSPITALS.

Non-Pulmonary Tuberculosis.

The majority of the general hospitals and infirmaries in Lancashire have become approved by the Ministry of Health as residential institutions for the treatment of non-pulmonary (surgical) tuberculosis. Arrangements have been made by the County Council with the Management Committees of 22 of such general hospitals and of two special hospitals (Manchester and Salford Hospital for Skin Diseases and the Shropshire Orthopædic Hospital, Oswestry) for the treatment of cases recommended by the tuberculosis officers for admission to these institutions. Cordial co-operation with the hospital authorities exists whereby particulars of any County tuberculous persons who present themselves direct at the hospitals are referred to the central office or the nearest tuberculosis dispensary, so that, if necessary, the patient may be dealt with under the County scheme.

The large majority of the patients sent to the Manchester and Salford Hospital for Skin Diseases receive out-patient treatment, travelling, as directed, at intervals of one, two, four or more weeks, sufficient medicine and ointment being supplied to them for use between visits. During the year several selected cases commenced artificial light treatment at this hospital, travelling four or five times per week for this purpose. The appropriate tuberculosis officer is informed of the necessary frequency for the patients' attendances and the nature of the treatment provided at the hospital. If attending less often than once weekly, the tuberculosis officers keep the patients under close supervision, so as to ensure their carrying out treatment.

As occasion arises, non-pulmonary cases presenting a considerable degree of difficulty in diagnosis and in the line of treatment to be followed are sent to general hospitals for special surgical opinion.

For children requiring prolonged treatment—often several years—for non-pulmonary tuberculosis, special arrangements now exist with the authorities of eight hospitals, including the Lord Mayor Treloar Cripples' Hospital, Alton, Hants. The accommodation for children—for so long inadequate—has been greatly extended during the past few years, the number of beds occupied increasing from 31 in 1921 to 112 in June, 1925.

The institutional accommodation for adults requiring prolonged treatment—such as spinal and hip cases—is still insufficient to meet demands; the inadequacy is, as a matter of fact, general throughout the

country. In 1924 about sixty beds were obtained at the Pilkington Special Hospital, St. Helens, but this hospital was closed early in 1925. The only accommodation now available for this type of case is at the Shropshire Orthopædic Hospital (about 27 beds) and the Elswick Sanatorium (24 beds).

(*a*) Immediate Results of Institutional Treatment.

A summary of the condition on discharge of patients treated during 1924 in the general hospitals, the several children's special hospitals, and in the Manchester and Salford Skin Hospital is given below :—

Table 21.—*Condition of Patients discharged from General and Special Hospitals during 1924.*

Condition on Discharge.	General Hospitals.		Special Hospitals for Children.		Skin Hospital.			
					Out-Patient.		*In-Patient.	
	M.	F.	M.	F.	M.	F.	M.	F.
Cured	41	57	8	10	10	17	...	...
Relieved	9	14	5	1	...	...	...	...
Improved	116	86	53	39	...	...	13	16
Stationary	25	19	5	1	...	...	1	...
Worse	2	1	...	4	...	...	...	...
Died	14	6	3	3	†1	...	...	...
Left for other than medical reasons ...	11	5	1	1	7	12	...	...
Discharged for treat- of another Disease ...	1	...	...	...	...	1	...	...
Transferred to Dispensary Supervision	...	...	...	...	11	36	...	...
Transferred to other Institutions	11	6	3	3	5	3	...	...
Diagnosis not confirmed	1	3	...	...	2	...	...	...
Removed	...	...	...	...	5	4	...	...
Total	231	197	78	62	41	73	14	16
Still under treatment ...	78	41	41	45	102	164	...	3
	309	238	119	107	143	237	14	19
Grand Total ...	547		226		380		33	

* 29 in-patients resumed out-patient treatment after discharge. Number of individual patients treated at Manchester and Salford Skin Hospital during 1924 was 413.

† This patient was attending the Skin Hospital for treatment, and the certified cause of death was Pulmonary Tuberculosis.

Having dealt with the immediate results of treatment in general and special hospitals, it is necessary to show how the patients fared in health in after-years—a most important consideration. The position as at the end of 1924 has been ascertained for these cases through the dispensary organisation, and the results are given in the several subsequent tables.

(*b*) After-Histories of Patients who received General Hospital Treatment.

Table 22 below shows the after-histories of non-pulmonary cases (adults and children) who have received treatment in General Hospitals (*i.e.*, Manchester Royal Infirmary, Preston Royal Infirmary, &c.), associated with Home Treatment and Dispensary Supervision or Treatment :–

Year of Application for Treatment.	Adults or Children. †	*Net. No. of Patients who received Hospital Treatment.	Position at end of 1924.							
			Cured ‡		Fit for Work or School.		Unfit for Work or School.		Died from Tuberculosis.	
			No.	%	No.	%	No.	%	No.	%
1914-15...	Adults ...	90	48	53·3	17	18·9	3	3·3	22	24·4
	Children	2	1	50·0	...	...	...	...	1	50·0
1916 ...	Adults ...	67	34	50·7	17	25·4	4	5·9	12	17·9
	Children	10	4	40·0	1	10·0	...	...	5	50·0
1917 ...	Adults ...	122	56	45·9	35	28·7	7	5·7	24	19·7
	Children	15	5	33·3	4	26·7	...	...	6	40·0
1918 ...	Adults ...	127	60	47·2	42	33·1	7	5·5	18	14·2
	Children	21	10	47·6	6	28·6	1	4·8	4	19·0
1919 ...	Adults ...	112	37	33·0	45	40·2	7	6·2	23	20·5
	Children	22	6	27·3	12	54·5	1	4·5	3	13·6
1920 ...	Adults ...	110	31	28·2	47	42·7	16	14·5	16	14·5
	Children	30	6	20·0	19	63·3	1	3·3	4	13·3
1921 ...	Adults ...	118	11	9·3	74	62·7	13	11·0	20	16·9
	Children	37	4	10·8	24	64·9	7	18·9	2	5·4
1922 ...	Adults ...	119	...	...	79	66·4	21	17·6	19	15·9
	Children	78	...	...	61	78·2	12	15·4	5	6·4
1923 ...	Adults ...	126	...	...	91	72·2	20	15·9	15	11·9
	Children	120	...	...	77	64·2	31	25·8	12	10·0
Total ...	Adults ...	991	277	27·9	447	45·1	98	9·9	169	17·0
	Children	335	36	10·7	204	60·9	53	15·8	42	12·5

* *Net* Number arrived at after deducting patients left County, untraced, ceased treatment for other than medical reasons, died from other than tuberculosis, diagnosis not confirmed, and still in hospital on 31/12/24.

† Children—Persons under 15 years of age at the end of 1924 or date of death.

‡ These cases have been classified as cured (in accordance with the suggestion of the Chief M.O. of the Ministry of Health), the disease having been completely arrested for three years and no symptoms of tuberculosis present.

The medical condition at the end of 1924 of the 822 adults living was :—Cured 277, disease arrested or quiescent 432, active 111, diagnosis doubtful 2 ; and of the 293 children :—Cured 36, disease arrested or quiescent 218, active 35, doubtful 4.

(c) After-Histories of Children who received Treatment in Special Surgical Tuberculosis Hospitals, followed by After-Care by Dispensary Staff.

The hospitals where treatment was given are :—Alton (Lord Mayor Treloar Cripples' Hospital), Heatherwood (United Services Fund), Heswall (Royal Liverpool Children's Hospital), Leasowe (Liverpool Open-air Hospital for Children), Pilkington Hospital, St. Helens (closed in 1925), Shropshire Orthopædic Hospital, Stannington (Children's Holiday Association), and West Kirby (Children's Convalescent Home).

Table 23.

Year of Application for Treatment.	Part of Body affected.	*Net. No. of Children † who received Special Hospital Treatment.	Average duration of Treatment. (Months.)	Position at end of 1924.			
				Cured. ‡	Fit for School.	Unfit for School.	Died from Tuber-culosis.
1914-15 ...	Alimentary ...	1	1·7	1	...	...	...
	Glands	1	2·0	...	...	...	1
	Joints and Bones	4	15·9	1	...	...	3
1916 ...	Alimentary ...	1	5·5	...	1	...	...
	Glands	1	6·0	1	...	...	...
	Joints and Bones	3	19·2	1	1	...	1
1917 ...	Alimentary ...	...	...	...	...	...	...
	Glands	3	12·7	...	3	...	...
	Joints and Bones	10	16·5	3	2	2	3
1918 ...	Alimentary ...	1	35·2	...	...	1	...
	Glands	7	7·1	1	4	2	...
	Joints and Bones	12	20·2	1	7	1	3
1919 ...	Alimentary ...	1	5·7	1	...	...	...
	Glands	5	2·5	1	3	1	...
	Joints and Bones	11	18·1	2	6	1	2
	Miscellaneous ...	2	4·0	...	1	...	1
1920 ...	Alimentary ...	7	12·0	1	6	...	...
	Glands	6	5·9	2	4	...	...
	Joints and Bones	7	16·3	...	3	2	2
	Miscellaneous ...	1	6·0	...	1	...	...
1921 ...	Alimentary ...	8	5·4	1	5	...	2
	Glands	4	9·1	...	3	1	...
	Joints and Bones	14	17·2	...	7	6	1
1922 ...	Alimentary ...	5	3·7	...	5	...	...
	Glands	7	5·2	...	4	2	1
	Joints and Bones	16	18·3	...	9	6	1
1923 ...	Alimentary ...	16	5·9	...	9	6	1
	Glands	10	6·4	...	5	4	1
	Joints and Bones	20	7·0	...	8	10	2
	Miscellaneous ...	1	8·5	...	1	...	...
Total ...	.....	185	...	17	98	45	25

* † ‡—For footnotes see previous page.

The medical condition of the 160 children living at end of 1924 was :— Cured 17, disease arrested or quiescent 104, disease active 34, diagnosis doubtful 5. Thirteen of the children also suffered from pulmonary tuberculosis. Several hundred children who have received treatment have attained adult age and been transferred to the adults' tables, so that the after-results of treatment are actually better than the foregoing table shows.

In recent years a considerable advance has been made in the methods of treatment of crippled children, and the general claims made as to the effectiveness of the new methods receive confirmation in the foregoing table.

(*d*) After-Histories of Patients who received Treatment at the Skin Hospital.

Patients suffering from Lupus or other tuberculous forms of skin disease are treated principally at the Manchester and Salford Hospital, and the following table shows the after-histories of 380 cases suffering from the disease :—

Table 24.

Year of Application for Treatment	Adults (15 and over) or Children.	*Net No. of Patients who received Treatment at Skin Hospital.	No. of Out-Patients who also received In-Patient Treatment.	Position at end of 1924.						
				Cured.		Fit for Work or School.		Unfit for Work or School.		Dies from Tub
				No.	%	No.	%	No.	%	No
1914-19 ...	Adults ...	42	12	2	4·8	33	78·6	7	16·6	...
	Children	13	4	1	7·7	8	61·5	4	30·8	...
1920 ...	Adults ...	100	32	3	3·0	84	84·0	13	13·0	...
	Children	20	7	4	20·0	15	75·0	1	5·0	...
1921 ...	Adults ...	50	16	2	4·0	40	80·0	8	16·0	...
	Children	14	6	1	7·1	12	85·7	1	7·1	...
1922 ...	Adults ...	41	7	...	...	39	95·1	2	4·9	...
	Children	19	5	...	...	15	78·9	4	21·0	...
1923 ...	Adults ...	47	11	...	...	41	87·2	6	12·8	...
	Children	34	6	...	...	32	94·1	2	5·9	...
Total ...	Adults ...	280	78	7	2·5	237	84·6	36	12·8	...
	Children	100	28	6	6·0	82	82·0	12	12·0	...

* *Net* Number arrived at after deducting patients left County, untraced, ceased treatment for other than medical reasons, died from other than tuberculosis, diagnosis not confirmed, and still in hospital on 31/12/24.

N.B.—(i.) 161 Adults and 47 children are still obtaining out-patient treatment at the Skin Hospital.

(ii.) The medical condition at the end of 1924 of the 280 adults was :—Cured 7, disease arrested or quiescent 105, active 167, diagnosis doubtful 1; and of the 100 children :—Cured 6, disease arrested or quiescent 43, active 49, doubtful 2.

INSTITUTIONAL ACCOMMODATION.

On the 31st December, 1924, there were altogether 766 beds at sanatoria and hospitals occupied by County patients, as compared with 750 at the end of 1923.

The number of beds occupied fluctuates considerably during the course of the year: there is a greater demand for beds in the summer than during the winter. For instance, in the middle of 1924 the accommodation reached 852 beds. Consequently, a certain amount of elasticity is required in the acquirement of institutional accommodation to meet the needs of the moment.

Below is given a summary of the beds occupied at the several types of institutions at the end of 1924 and the previous four years, whilst in italics is given the accommodation as it stood in June, 1925:—

TABLE 25.

Type of Institution.	Number of beds in occupation at end of—					
	1920	1921	1922	1923	**1924**	June, 1925
Sanatoria	262	268	266	283	286	*294*
Sanatoria and Training Colonies ...	2	9	17	12	13	*5*
Pulmonary Hospitals	162	199	211	230	204	*233*
Observation Hospitals	5	8	8	8	5	*8*
General and Special Hospitals ...	41	60	51	58	115	*91*
Children's Sanatoria and Hospitals	83	97	125	159	143	*155*
TOTAL	555	641	678	750	766	*786*

The names of the institutions and the number of beds taken by County patients are set out fully in Appendix III.

Taking the institutional accommodation as it stood on June 30th, 1925, the number of sanatorium beds occupied worked out at *one* per 6,000 of the population, and the number of pulmonary hospital beds *one* per 7,600.

The number of admissions to sanatoria and hospitals during the past ten years is as follows:—

1915	1916	1917	1918	1919	1920	1921	1922	1923	1924
909	1286	1693	1772	1819	1914	2053	1970	2174	2030

HOME TREATMENT AND DISPENSARY TREATMENT OR SUPERVISION.

All notified cases of tuberculosis receive while at home dispensary supervision exercised through the tuberculosis officers and tuberculosis health visitors, in addition to the treatment that may be obtained from their medical practitioners.

For insured persons suffering from tuberculosis, the "National Health Insurance (Medical Benefit) Regulations, 1924," contain references to the duties of practitioners, the following being the main provisions :—

1.—If the condition of the patient is such as to require treatment which is not within the scope of the practitioner's obligations under these terms of service, the practitioner shall advise the patient as to the steps which should be taken in order to obtain that treatment, and shall, where provision is made for such treatment by any Public Authority . . . take such other steps as may be reasonably necessary in order that the patient may derive full advantage from the provision of such treatment.

An insurance practitioner is required :—

2.—To prepare and send to the tuberculosis officer an initial report (on Form G.P. 17, Revised) in regard to each insured person as soon as the practitioner becomes aware that such insured person is suffering from tuberculosis ; and also to furnish an initial report on a case when requested by the tuberculosis officer.

3.—To prepare and send to the tuberculosis officer periodical reports (quarterly) during the continuance of treatment by the practitioner.

4.—To prepare and send to the tuberculosis officer an immediate report on any serious change in the condition of a tuberculous patient.

5.—To confer with the tuberculosis officer in regard to any insured person on his list suffering from tuberculosis.

The Minister of Health (in Memo. No. 286) advises that an insurance practitioner should refer to the tuberculosis officer any case suspected to be suffering from tuberculosis in order that there may be no delay in giving the patient the benefit of any facilities available under the tuberculosis scheme of the local uthority.

The most cordial and effective co-operation exists in the County between the tuberculosis medical staff and the family doctors.

Ordinary medical treatment at dispensaries has never been undertaken, unless the patient has no doctor or requires some special form of treatment. Patients with active disease are examined by the tuberculosis officer at frequent intervals, and placed for short periods—generally three months—on dispensary supervision, and granted other forms of treatment as found necessary. Quiescent or arrested cases are kept under supervision so long as they are well, and are reviewed annually.

It is highly desirable there should be close co-operation between the medical practitioner or family doctor and the County tuberculosis officer, and, prior to each examination of patients by the latter, information is sent to the medical attendant as to time and place. In some cases general practitioners confer with the tuberculosis officer in person, to their mutual advantage, and in other cases this end is secured by telephone or correspondence.

Results of Home Treatment combined with Dispensary Treatment or Supervision.

(*a*) *Patients with Pulmonary Tuberculosis.*

Appendix V. of this report has been prepared, showing the condition at the end of 1924 of adult patients suffering from pulmonary tuberculosis who applied for treatment during the years 1914-23, and who received home treatment combined with dispensary supervision or treatment. The patients included in the table never completed a course of sanatorium treatment, but a proportion have received institutional treatment at pulmonary, observation or general hospitals. The table has been made as concise as possible, at the same time showing the results of treatment according to stage of disease, sputum, age, sex, and year of application.

The following brief particulars are extracted from the detailed table mentioned, and show the results of this form of treatment, at the same time bearing out the experience in institutional cases that patients with a positive sputum are much less likely to effect recovery than those with a negative or no sputum :—

TABLE 26.—*Results of* HOME TREATMENT *and Dispensary Supervision or Treatment.*

Stage of Disease.	Year of Application for Treatment.	Sputum.†	Net* No. of Adults who received Home Treatment.	Position at end of 1924.			
				Cured. ‡	Fit for Work. %	Unfit for Work. %	Died from Tuberculosis. %
I. & I.S. ("early" cases)	1914-15 ...	Positive ...	61	3·3	18·0	1·6	77·0
		Neg. or None	98	31·6	29·6	4·1	34·7
	1916-17 ...	Positive ...	84	...	27·4	...	72·6
		Neg. or None	174	33·9	38·5	2·3	25·3
	1918-19 ...	Positive ...	114	0·9	33·3	2·6	63·1
		Neg. or None	208	19·2	48·5	2·9	29·3
	1920 ...	Positive ...	62	...	17.7	9·7	72·6
		Neg. or None	81	...	64·2	8·6	27·2
	1921 ...	Positive ...	39	...	28·2	10·2	61·5
		Neg. or None	82	...	78·0	4·9	17·1
	1922 ...	Positive ...	41	...	21·9	4·9	73·2
		Neg. or None	68	...	73·5	7·3	19·1
	1923 ...	Positive ...	42	...	40·5	19·0	40·5
		Neg. or None	61	...	72·1	9·8	18·0
II.&II.S. ("intermediate" cases)	1914-15 ...	Positive ...	204	...	5·9	0·5	93·6
		Neg. or None	112	8·0	16·9	3·6	71·4
	1916-17 ...	Positive ...	326	...	5·5	1·8	92·6
		Neg. or None	116	7 7	22·4	0·9	68·9
	1918-19 ...	Positive ...	374	...	5·3	2·4	92·2
		Neg. or None	171	8·2	31·6	2·9	57·3
	1920 ...	Positive ...	220	...	10·9	4·1	85·0
		Neg. or None	79	...	40·5	6·3	53·2
	1921 ...	Positive ...	187	...	8·0	4·8	87·2
		Neg. or None	58	...	37·9	10·3	51·7
	1922 ...	Positive ...	183	...	9·3	7·1	83·6
		Neg. or None	72	...	44·4	9·7	45·8
	1923 ...	Positive ...	223	...	17·0	15·2	67·7
		Neg. or None	90	...	53·3	10·0	36·7

* *Net* number arrived at after deducting patients left County, untraced, ceased treatment for other than medical reasons, died from other than tuberculosis, and diagnosis not confirmed.

† Where sputum is shown as positive, tubercle bacilli have been found at some time during treatment.

‡ These cases have been classified as cured (in accordance with the suggestion of the Chief M.O. of the Ministry of Health), the disease having been completely arrested for five years and no symptoms of tuberculosis present.

N.B.—Of the 1,247 cases living at the end of 1924, their medical condition was: cured 165, disease arrested or quiescent 757, active 257, diagnosis doubtful 68.

(*b*) *Patients with Non-Pulmonary Tuberculosis.*

The following table shows the results, as at the end of 1924, of home treatment combined with dispensary treatment or supervision in respect of 1,405 patients suffering from non-pulmonary tuberculosis :—

TABLE 27.

Year of Application for Treatment.	Adults (15 and over) or Children.	Net* number of Patients who received Treatment.	Position at end of 1924.							
			Cured †		Fit for Work or School.		Unfit for Work or School.		Died from Tuberculosis.	
			No.	%	No.	%	No.	%	No.	%
1914 ...	Adults ...	27	12	44·4	5	18·5	...	...	10	37·0
	Children	...	...	...	...	...	...	...	...	...
1915 ...	Adults ...	44	19	43·2	9	20·4	2	4·5	14	31·8
	Children	5	3	60·0	1	20·0	...	...	1	20·0
1916 ...	Adults ...	60	29	48·3	18	30·0	...	...	13	21·7
	Children	8	5	62·5	1	12·5	...	...	2	25·0
1917 ...	Adults ...	82	43	52·4	18	21·9	2	2·4	19	23·2
	Children	15	11	73·3	1	6·7	...	...	3	20·0
1918 ...	Adults ...	95	48	50·5	19	20·0	8	8·4	20	21·0
	Children	30	19	63·3	9	30·0	...	...	2	6·7
1919 ...	Adults ...	116	60	51·7	36	31·0	3	2·6	17	14·6
	Children	39	16	41·0	14	35·9	1	2·6	8	20·5
1920 ...	Adults ...	136	32	23·5	67	49·3	10	7·3	27	19·8
	Children	79	18	22·8	48	60·7	3	3·8	10	12·6
1921 ...	Adults ...	105	6	5·7	76	72·4	7	6·7	16	15·2
	Children	91	6	6·6	58	63·7	11	12·1	16	17·6
1922 ...	Adults ...	96	...	...	68	70·8	12	12·5	16	16·7
	Children	101	...	...	81	80·2	10	9·9	10	9·9
1923 ...	Adults ...	128	...	...	88	68·7	18	14·1	22	17·2
	Children	148	...	...	100	67·6	36	24·3	12	8·1
TOTAL ...	Adults ...	889	249	28·0	404	45·4	62	6·9	174	19·6
	Children	516	78	15·1	313	60·6	61	11·8	64	12·4

* *Net* number arrived at after deducting patients left County, untraced, ceased treatment for other than medical reasons, died from other than tuberculosis, and diagnosis not confirmed.

† These cases have been classified as cured (in accordance with the suggestion of the Chief M.O. of the Ministry of Health), the disease having been completely arrested for three years and no symptoms of tuberculosis present.

N.B.—(i.) Of the 715 adults living at the end of 1924, their medical condition was : cured 249, disease arrested or quiescent 387, active 67, diagnosis doubtful 12 ; and of the 452 children : cured 78, disease arrested or quiescent 315, active 41, doubtful 18.

(ii.) Patients who left hospital for other than medical reasons after a stay of less than six weeks are included in the table.

TUBERCULOUS EX-SERVICEMEN.

All men and women residing in the Administrative County who served in the Navy, Army, or Air Force during the Great War, and who have contracted tuberculosis during service or after discharge, are given preferential treatment as regards admission to sanatoria or hospitals.

The cost of institutional treatment granted to tuberculous pensioners is borne by the Government, and their travelling expenses are met out of the funds of the Ministry of Pensions. Detailed claims for refund are accordingly submitted from time to time.

Number of Ex-Service Men Treated.

During 1924, there were 302 new applications for treatment from discharged sailors and soldiers (not necessarily pensioners), and these were classified in the following stages on commencing treatment under the County Council. The figures for the cases prior to 1924 are also given :—

Table 28.

Stage.	1914-1920.	1921.	1922.	1923.	1924.	Total.
Pulmonary—						
Stage I. ...	1,010	171	126	78	87	1,472
Stage II. ...	583	110	118	134	134	1,079
Stage III. ...	222	53	66	59	46	446
Non-Pulmonary ...	136	41	35	38	35	285
Total ...	1,951	375	345	309	302	3,282

In addition to the above total of 3,282, there were 39 men who did not receive any form of treatment, so that altogether 3,321 applications from tuberculous ex-service men have been dealt with from the commencement of the war in 1914 up to the end of 1924. After deducting deaths, removals, and cases where the diagnosis was not confirmed, there were 1,210 men living and undergoing some form of treatment on the 31st December, 1924, and in 645 of these cases the Ministry of Pensions had held that the disease was attributable to or aggravated by war service, and had consequently granted war pensions. The number of tuberculous pensioners at the end of 1922 was 1,017, and at the end of 1923 851, so that, as anticipated, the number is now fairly rapidly declining.

The large majority of the men have received a period (in many cases two, three, or more periods) of institutional treatment, and in every instance priority of admission has been given.

Special Nourishment to Ex-Service Men.

The cost of special nourishment ("extra diet") for tuberculous pensioners is borne by the Ministry of Pensions; patients on full pension or allowances are not eligible for the grant. Pensioners in need of special nourishment are recommended for it by their medical attendant to the local War Pensions Committee, who obtain the tuberculosis officer's counter-signature.

Relief Schemes for Ex-Service Men.

As mentioned in the chapter on care work, special arrangements exist as follows for the relief of tuberculous ex-service men:—(*a*) Those who are in receipt of war pensions are eligible for assistance from the funds of the Joint Council of the Order of St. John of Jerusalem and British Red Cross Society; (*b*) the large number of men without pensions owing to their disease not being connected with actual war service are eligible for help under the relief scheme of the United Services Fund as extended in 1923. The consultant tuberculosis officers work in close co-operation with the local representatives of these organisations, and refer to them all necessitous ex-service men and their dependants.

Tuberculosis Officers as Medical Referees.

The consultant tuberculosis officers (or the assistants in their stead) act as medical referees of the Ministry of Pensions in regard to ex-service men suffering from tuberculosis, and in that capacity a very large number of men have been referred to them by the local War Pensions Committees and the Area Deputy Commissioners of Medical Services for examination and report.

Under the Regulations of the Ministry of Pensions, tuberculosis officers are requested to submit certificates and reports required under the following headings:—

(1) Notifications regarding the commencement of treatment and intimating whether or not, in the interests of the treatment, the men should abstain from remunerative occupation;

(2) Certification of medical fitness or otherwise for vocational training in the case of a tuberculous man who has applied to be provided with vocational training otherwise than in a residential institution approved by the Minister of Health;

(3) Clinical report in the case of a man who, after discharge from the service suffers from tuberculosis and claims that tuberculosis is either attributable to or aggravated by war service.

N.B.—By Circular No. 395, issued by Ministry of Health on 4th May, 1923, a tuberculosis officer is not called upon, as formerly, to give his opinion as to whether the disease is attributable to or aggravated by war service, nor does he assess the degree of the man's disablement.

(4) In the case of a man who claims that there has been an increase in the degree of his disablement since his last examination by a medical board, a report indicating whether, in the opinion of the tuberculosis officer, there has been any increase ; and, if so, of what degree ;

(5) A certificate regarding the physical condition of a man claiming an alternative pension based on his pre-war earnings, in lieu of a disablement pension, based on the degree of his present disablement ;

(6) A certificate as to whether dental treatment is necessary for the efficacy of other treatment to be provided for tuberculosis ;

(7) Reports with regard to a man on special rates of pension at specified periods after discharge from sanatoria, hospitals, or training colonies.

The consultant tuberculosis officers may also serve on Ministry of Pensions Medical Boards to assist in the periodical re-survey of pensions granted to certain discharged disabled men.

The onus of taking the initiative in applying for a pension is thrown on the ex-service man, but the tuberculosis officers render all possible assistance to those claimants who have good grounds for their application.

The tuberculosis officers' recommendations for treatment are submitted to the County Council, who are responsible for arranging for the special treatment of tuberculous ex-service men.

TREATMENT AND OCCUPATIONAL TRAINING, AND VILLAGE SETTLEMENTS.

The County Council have made arrangements to send male patients recommended by the tuberculosis officers for a course of treatment combined with training to the East Lancashire Training Colony, Barrowmore Hall, Cheshire, and to the Delamere Training Colony, Frodsham, the trades or occupations taught being : pig-keeping, boot- repairing, poultry-farming, market gardening, carpentry, joinery, gardening, and watch and clock repairing. The Ministry of Health have also established several training centres in the country where Lancashire pensioners may be sent, if necessary.

The following table gives particulars of the patients so far granted a course of treatment combined with training :—

TABLE 29.—*Treatment and Occupational Training.*

Stage of Disease on Admission.	Total No. admitted : (3rd Aug., 1920, to 31st Dec., 1924).	Total Number Discharged	Average duration of stay at Colony* (months).	Patients Discharged.			Still undergoing Training, 31st Dec., 1924.
				Course of Training completed.	Training terminated before completion of course.	Transfer to Sanatoria or Hospital.	
Stage I.	43†	34	17·25	11	22	1	9†
Stage II.	17	14	12·25	3	11	...	3
Stage III	2	1	...	...	1	...	1
Total	62	49	16·25	14	34	1	13

* Average duration relates to patients who completed course.
† Includes one Civilian ; the remaining cases dealt with in table are ex-service men.

Thus, of 49 patients who left training colonies, the great majority of whom were pensioners, only 14 were regular discharges on completion of the course. So large a proportion of irregular discharges cannot be considered satisfactory. The published figures for the whole of the country are likewise in my opinion very disappointing.

Sir George Newman, Chief Medical Officer of the Ministry of Health, in his last annual report states, in regard to men sent for a course of treatment and training, that " a considerable number of the men have been unable to turn their training to practical effect, and some of those who have attempted to do so have failed. Experience shows that the difficulties which face a man who has been trained in a new occupation in making a living by that occupation are so great as to decrease the value of such training, except in special cases where subsequent employment is assured."

Reverting to the Lancashire figures, the reasons given for the 34 patients who left irregularly or prematurely are as follow :—

Medically unfit to continue training	8	34
Temperamentally unsuitable	5	
Discharged for disciplinary reasons	9	
Left on own responsibility and against advice ...	12	

Concerning the 14 men who duly completed their training, the following statement shows their position at the end of May, 1925 :—

Successfully following occupation in which trained	1	14
Following occupation in which trained, but with only partial success	3	
Fit for work, but unable to obtain employment ...	1	
Medically unfit for work	1	
Undergoing treatment in sanatorium	1	
Following other occupations	3	
Removed out of County area	4	

These figures are very significant. Under present conditions and arrangements, training colonies and training sections cannot be considered to have obtained successful results. Despite a most careful selection of patients, we know from experience the temperamental difficulty of persuading even a fraction of the men to complete their course, generally of twelve months' duration. And for the few who do graduate, there are severe obstacles to confront them in their efforts to follow their new occupation. First, twelve months' training is insufficient to enable them to enter the staple trades of the country ; and second, their physical condition is often such as to handicap them in their competition with healthy men. Bearing these facts in mind, there appears to be good ground for gradually merging the training colonies with sanatoria in the country, or otherwise changing them into sanatoria, where the patients can undergo their course of treatment at the same time engaging in purposeful work to occupy their minds.

A trainee who is a pensioner receives during his course full treatment allowances, and is eligible for stipulated periods of leave, whilst on the satisfactory completion he becomes entitled to a training bonus and grant of tools from the Ministry of Pensions. Others are eligible for civil liability grants from the Ministry of Labour.

Prior to 1924, only tuberculous ex-service men had been recommended for training, but now occasional civilian males, many of whom were not of military age at the time of the Great War, are sent to the training colonies. In view of the unfortunate lack of success in training men in

new occupations and settling them in employment, recommendations for treatment and training are made with the greatest care and stringency; the number of new admissions in 1924 was 10.

Village Settlements.

The position of a village settlement in a tuberculosis scheme is to provide "an environment suitable for the consumptive" where he may follow the occupation in which he has been trained without having to return home and attempt to work at an unsuitable occupation or too long hours in competition with normal workers. A successful experiment in the establishment of a settlement has been carried out by a voluntary organisation at the Cambridgeshire Tuberculosis Colony under the very able direction of Dr. Varrier-Jones. It is a matter of much controversy at the present time whether similar successful settlements could be established under schemes administered by public bodies.

At the East Lancashire Tuberculosis Colony, Barrowmore Hall, belonging to the Joint Council of the Order of St. John and the British Red Cross Society, a start was made early in 1925 in providing houses on the estate for ex-patients. Up to the end of August, 1925, the following patients sent to the sanatorium or training section by the Lancashire County Council had been offered and accepted houses or other suitable accommodation in the settlement :—

14225.—G.A. Aged 25, ex-service man, pension, single. Sputum positive, early case on first examination. Trained in upholstery, previously press-hand in printing works. Has had 22 months' institutional treatment.

16445.—C.M. Aged 30, ex-service man, no pension, single. Sputum negative, stage II. and T.B. spine (early) on first examination. Trained in woodwork, previously a bricklayer's labourer. Has had 12 months' institutional treatment.

12767.—T.H.T. Aged 27, ex-service man, pension, married. Sputum positive, early case on first examination. Trained in poultry farming, previously a dairyman. Has had 29 months' institutional treatment.

14669.—R.B. Aged 31, ex-service man, no pension, married. Sputum positive, early case on first examination. Trained in carpentry, previously a police constable. Has had 20 months' institutional treatment.

Whilst it is very gratifying that this voluntary body has been able to colonise several County patients, it must not be overlooked that only the merest fraction of deserving cases have been dealt with.

APPENDIX I.

Death-Rates in 1924 from Tuberculosis in 121 Urban and Rural Districts in Lancashire, and in 7 Dispensary Areas.

Sanitary District.	Estimated Population, 1924.	Pulmonary Tuberculosis.			Non-Pulmonary Tuberculosis.	
		Number of Deaths, 1924.	Death-Rate per 1,000 of Population, 1924.	*Average* Death-Rate 10 years, 1914-23.	Number of Deaths, 1924.	Death-Rate per 1,000 of Populaton, 1924.
URBAN.						
Abram	6,930	7	1·01	0·83	...	...
Accrington (B.)	43,860	27	0·61	0·84	8	0·18
Adlington	4,552	...	...	0·73	1	0·22
Ashton-in-Makerfield ...	23,750	15	0·63	0·72	4	0·17
Ashton-under-Lyne (B.) ...	44,040	30	0·68	1·19	9	0·20
Aspull	8,205	3	0·36	0·68	...	...
Atherton	20,470	19	0·92	0·82	4	0·19
Audenshaw	8,222	...	...	0·66	2	0·24
Bacup (B.)	21,290	10	0·46	0·81	6	0·28
Barrowford	5,639	4	0·70	0·60	1	0·17
Billinge	5,263	3	0·57	0·89	1	0·19
Blackrod	3,988	2	0·50	0·60	...	...
Brierfield	8,354	6	0·71	0·97	1	0·12
Carnforth	3,280	4	1·21	0·48	...	...
Chadderton	29,160	20	0·68	0·92	5	0·17
Chorley (B.)	31,490	16	0·50	0·81	9	0·28
Church	6,866	6	0·87	0·79	2	0·29
Clayton-le-Moors	8,740	8	0·91	0·66	1	0·11
Clitheroe (B.)	12,410	10	0·80	0·86	3	0·24
Colne (B.)	25,380	19	0·74	0·96	5	0·19
Crompton	15,370	14	0·91	0·97	5	0·32
Croston	1,952	1	0·51	0·21	...	...
Dalton-in-Furness	12,240	12	0·98	1·35	2	0·16
Darwen (B.)	39,060	21	0·53	0·68	5	0·13
Denton	17,900	11	0·61	0·87	1	0·05
Droylsden	14,060	15	1·06	1·14	1	0·07
Eccles (B.)	46,020	36	0·78	1·10	4	0·09
Failsworth	17,220	14	0·81	1·13	6	0·35
Farnworth	28,930	21	0·72	1·02	5	0·17
Fleetwood	20,340	19	0·93	0·94	2	0·09
Formby	6,611	3	0·45	0·93	1	0·15
Fulwood	6,140	2	0·32	0·63	...	...
Golborne	7,598	4	0·52	0·86	1	0·13
Grange-over-Sands... ...	2,047	1	0·48	0·77	...	...
Great Crosby	13,860	9	0·64	0·72	2	0·14
Great Harwood	13,890	9	0·64	0·62	...	...
Haslingden (B.)	17,580	8	0·45	0·79	2	0·11
Haydock	11,060	12	1·08	0·83	5	0·45
Heysham	4,226	1	0·23	0·65	...	...
Heywood (B.)	26,990	17	0·62	1·08	8	0·29
Hindley	24,850	18	0·72	0·76	6	0·24
Horwich	16,060	10	0·62	0·79	6	0·37
Hurst	8,245	5	0·60	1·10	2	0·24
Huyton-with-Roby ...	5,315	3	0·56	0·71	1	0·19
Ince-in-Makerfield	24,530	22	0·89	0·91	3	0·12
Irlam	11,800	8	0·67	0·56	2	0·17
Kearsley	10,360	9	0·86	0·75	3	0·29
Kirkham	3,803	6	1·57	1·16	3	0·78
Lancaster (B.)	40,580	35	0·86	1·26	10	0·24
Lathom and Burscough ...	7,697	4	0·51	0·63	...	...
Lees	4,853	5	1·03	0·63	1	0·20
Leigh (B.)	46,960	36	0·76	1·16	9	0·19
Leyland	9,297	6	0·64	0·70	3	0·32
Litherland	17,320	18	1·03	1·28	2	0·11
Littleborough	11,640	4	0·34	0·76	3	0·26
Little Crosby	1,226	...	...	0·76	...	...
Little Hulton	8,172	4	0·48	0·72	...	...
Little Lever	5,110	...	...	0·76	1	0·19
Longridge	4,301	3	0·69	0·94	1	0·23
Lytham St. Annes (B.) ...	21,600	9	0·41	0·56	8	0·37
Middleton (B.)	28,790	19	0·65	1·05	8	0·28
Milnrow	8,670	3	0·34	0·94	...	...
Morecambe (B.)	14,140	11	0·77	0·75	1	0·07
Mossley (B.)	12,630	9	0·71	0·89	6	0·47
Nelson (B.)	40,220	24	0·59	0·66	9	0·22
Newton-in-Makerfield ...	19,840	17	0·85	0·88	1	0·05
Norden	4,185	3	0·71	0·67	2	0·47
Ormskirk	7,575	6	0·79	1·20	1	0·13
Orrell	7,126	5	0·70	0·69	3	0·42
Oswaldtwistle	15,310	6	0·39	0·72	6	0·39

Sanitary District.	Estimated Population, 1924.	Pulmonary Tuberculosis.			Non-Pulmonary Tuberculosis.	
		Number of Deaths, 1924.	Death-Rate per 1,000 of Population, 1924.	*Average* Death-Rate 10 years, 1914-23.	Number of Deaths, 1924.	Death-Rate per 1,000 of Population, 1924.
Padiham	12,550	5	0·39	0·97	1	0·08
Poulton-le-Fylde	2,803	...	...	0·66	1	0·35
Preesall	1,788	1	0·55	0·60	1	0·55
Prescot	9,830	9	0·91	1·04	2	0·20
Prestwich	19,450	7	0·35	0·93	3	0·15
Radcliffe	25,290	12	0·47	0·84	8	0·32
Rainford	3,705	3	0·80	0·24	...	...
Ramsbottom	15,230	10	0·65	0·82	7	0·46
Rawtenstall (B.)	29,200	23	0·78	0·76	7	0·24
Rishton	7,147	4	0·55	0·62	2	0·28
Royton	17,640	14	0·79	0·89	1	0·05
Skelmersdale	7,019	4	0·56	0·75	...	...
Standish-with-Langtree	7,657	5	0·65	0·67	1	0·13
Stretford	48,670	48	0·98	0·91	8	0·16
Swinton and Pendlebury	32,660	24	0·73	1·01	3	0·09
Thornton	5,910	2	0·33	0·87	...	...
Tottington	6,883	6	0·87	1·00	1	0·14
Trawden	2,727	1	0·36	0·72	...	...
Turton	12,290	6	0·48	0·71	1	0·08
Tyldesley-with-Shakerley	16,180	10	0·61	0·90	1	0·06
Ulverston	9,992	11	1·10	0·64	4	0·40
Upholland	5,599	1	0·17	0·88	1	0·17
Urmston	8,383	2	0·23	0·84	2	0·23
Walton-le-Dale	12,220	12	0·98	0·79	4	0·33
Wardle	4,571	2	0·43	1·27	1	0·22
Waterloo-with-Seaforth	30,020	35	1·16	1·00	6	0·19
Westhoughton	16,600	2	0·12	0·59	7	0·42
Whitefield	7,179	11	1·53	0·68	2	0·28
Whitworth	8,801	7	0·79	1·24	1	0·11
Widnes (B.)	41,890	42	1·00	1·21	8	0·19
Withnell	3,498	1	0·28	0·78	...	...
Worsley	14,430	12	0·83	0·54	3	0·21
Total Urban	1,535,000	1,079	0·70	0·89	300	0·19
RURAL.						
Barton-upon-Irwell	10,090	7	0·69	0·97	2	0·19
Blackburn	10,330	4	0·38	0·66	1	0·09
Burnley	19,520	14	0·71	0·65	3	0·15
Bury	9,725	6	0·61	0·79	3	0·30
Chorley	22,510	15	0·66	0·62	3	0·13
Clitheroe	6,906	3	0·43	0·62	...	...
Fylde	13,160	5	0·37	0·52	4	0·30
Garstang	11,150	3	0·26	0·47	3	0·26
Lancaster	9,252	5	0·54	0·60	...	...
Leigh	11,560	7	0·60	0·53	4	0·35
Limehurst	9,271	7	0·75	0·96	2	0·21
Lunesdale	6,469	1	0·15	0·51	...	...
Preston	24,000	8	0·33	0·74	3	0·12
Sefton	4,513	4	0·88	1·04	...	...
Ulverston	17,580	12	0·68	0·68	5	0·28
Warrington	12,830	8	0·62	0·84	1	0·07
West Lancashire	22,010	10	0·45	0·65	1	0·04
Whiston	20,570	14	0·68	0·96	2	0·09
Wigan	6,354	3	0·47	0·68	2	0·31
Total Rural	247,800	136	0·54	0·71	39	0·15
Total for Administrative County	1,782,800	1,215	0·68	0·87	339	0·19
DISPENSARY AREAS.						
No. 1	245,807	145	0·58	...	52	0·21
No. 2	359,269	218	0·61	...	64	0·17
No. 3	376,015	251	0·67	...	88	0·23
No. 4	456,659	327	0·72	...	79	0·17
No. 5	250,489	205	0·82	...	34	0·13
Furness Sub-Area	41,859	36	0·86	...	11	0·26
Fylde Sub-Area	52,702	33	0·69	...	11	0·23

APPENDIX II.

NOTIFICATIONS OF TUBERCULOSIS.

Since February 1st, 1913, tuberculosis—both "pulmonary" and "other forms"—has been compulsorily notifiable under the Public Health (Tuberculosis) Regulations, 1912. The figures for the years 1913 to 1924 are given on page 2.

Tables B and C, here inserted, analyse the notifications received both as regards parts of the body affected and in age groups.

Table D, also inserted, compares the male and female notifications.

Deaths of 384 persons "notified as suffering from Pulmonary Tuberculosis" in 1924 which took place within three months of the date of notification (referred to on page 18).

Period between date of case notification and death.	Certified cause of Death.			Total.
	Pulmonary.		Non-Pulmonary	
	Primary.	Secondary.		
Under 1 week	66	8	8	82
1 to 2 weeks	38	4	3	45
2 to 3 weeks	34	2	4	40
3 to 4 weeks	38	5	...	43
1 to 2 months	96	2	4	102
2 to 3 months	66	1	5	72
Total under 3 months	338	22	24	384
	360			

Included in the above Table are 46 deaths which occured outside the County area.

In addition to the foregoing 384 deaths which occurred within three months of notification, in 61 instances (33 pulmonary and 28 non-pulmonary) death took place before the receipt of the notification, against 51 (30 pulmonary and 21 non-pulmonary) in the preceding year.

N.B.—The Tables mentioned in Appendix II. have been prepared in the County public health department.

TABLES B, C AND D,

ANALYSING

NOTIFICATIONS UNDER PUBLIC HEALTH

(TUBERCULOSIS)

REGULATIONS, 1912.

TABLE B.

ADMINISTRATIVE COUNTY OF LANCASTER.

PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS, 1912.

CORRECTED* SUMMARY OF NOTIFICATIONS OF PULMONARY AND OTHER FORMS OF TUBERCULOSIS DURING THE FIFTY-THREE WEEKS ENDED 3RD JANUARY, 1925.

(Collated from the Weekly Returns of District Medical Officers of Health.)

NOTIFICATIONS ON FORMS A AND B—Excluding Duplicates.

	PULMONARY.				NON-PULMONARY.																																							Total Pulmonary and Non-Pulmonary.	Total Notifications (i.e. including cases previously notified by other Doctors.)
					Alimentary.		Glands.						Genito-urinary.							Joints and Bones.																									
																					Trunk.		Arm.							Leg.															
	Lungs only.	Lungs and Larynx.	Laryngitis.	Total.	Enteritis (Primary)	Peritonitis (Abdominal Tuberculosis).	Tabes (Mesenteric Glands).	Axillary.	Cervical.	Inguinal.	Mediastinal.	Not Classified (Two or more Groups).	Bladder.	Fall. Tube.	Kidney.	Prostate.	Suprarenal.	Testicle and Epididymis.	Not Classified (Two or more).	Head (including Middle Ear).	Ribs and Sternum.	Spine	Shoulder.	Scapula.	Humerus	Elbow.	Radius.	Ulna.	Hand and Wrist.	Hip and Pelvis.	Femur.	Knee.	Tibia.	Fibula.	Foot and Ankle.	Two or more different Joints.	Not Classified.	Meningitis (Brain).	Miliary (Generalised).	Skin (Lupus).	Miscellaneous.	Total.		
Thirteen weeks ended 29th March, 1924 ..	504	3	5	512	7	31	9	12	99	..	1	2	3	..	2	..	..	..	2	1	2	19	1	..	..	2	1	..	5	10	2	9	..	..	5	4	..	15	3	15	10	272	784	855
Thirteen weeks ended 28th June, 1924 ..	535	3	5	543	9	42	5	15	138	..	1	2	1	..	3	..	..	5	..	..	3	9	..	..	..	..	..	1	9	11	..	6	2	1	5	3	..	28	3	20	10	332	875	1000
Thirteen weeks ended 27th September, 1924	448	11	2	461	5	27	6	12	109	1	4	1	..	..	2	..	..	3	..	1	5	15	2	..	2	1	1	..	4	18	1	3	2	..	8	3	..	15	1	11	4	267	728	818
Fourteen weeks ended 3rd January, 1925 ..	451	4	1	456	3	31	4	8	80	..	2	..	2	1	2	..	..	..	..	..	..	17	2	1	2	3	..	..	8	18	..	6	1	1	5	4	..	20	3	15	10	249	705	800
Total	1938	21	13	*1972	24	131	24	47	426	1	8	5	6	1	9	..	..	8	2	2	10	60	5	1	4	6	2	1	26	57	3	24	5	2	23	14	..	78	10	61	34	*1120	*3092	3473

		NOTIFICATIONS ON FORMS A AND B—Excluding Duplicates.																											Total Pulmonary and Non-Pulmonary	NOTIFICATIONS. FORM B ONLY. (By School Medical Inspectors.)										Number of Cases Notified on Form C. (Admissions.)		Number of Cases notified on Form D (Discharges from Institutions).
		PULMONARY.													NON-PULMONARY.															Primary Notifications (i.e., excluding duplicates.)									Total Notifications (i.e., including cases previously notified by other Doctors.)			
																														Under 5 years.		5 to 10 years.		10 to 15 years.		Total.				Poor Law Institutions.	Sanatoria.	
	Years.	0 to 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 35.	35 to 45.	45 to 55.	55 to 65.	65 and upwds	Total.	Total M. & F.	0 to 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 35.	35 to 45.	45 to 55.	55 to 65.	65 and upwds	Total.	Total M. and F.		P.	N.P	P.	N.P	P.	N.P	P.	N.P					
Thirteen weeks ended 29th March, 1924 ..	M.	..	12	11	9	28	27	52	64	41	25	3	272	512	4	28	22	21	25	6	13	6	3	3	..	131	272	78	..	..	..	1	..	1	..	2	11	13	7	296	218
	F.	1	7	7	11	39	34	61	36	25	16	3	240		4	25	19	28	18	19	12	8	3	3	2	141			..	2	..	3	..	4	..	9					
Thirteen weeks ended 28th June, 1924 ..	M.	..	7	11	15	25	30	54	55	47	29	3	276	543	7	32	30	31	26	11	9	7	5	2	3	163	332	875	..	1	2	4	1	3	3	8	15	16	7	295	266
	F.	1	2	10	18	38	39	67	50	24	15	3	267		1	34	27	25	27	10	28	8	5	1	3	169			..	..	..	3	..	1	..	4					
Thirteen weeks ended 27th September, 1924	M.	..	5	7	12	32	21	42	44	52	19	7	241	461	3	23	23	23	29	6	8	5	4	5	..	129	267	728	..	..	..	..	1	..	1	..	7	7	4	320	302
	F.	..	1	7	9	35	37	52	45	22	11	1	220		1	20	21	24	21	17	14	7	2	6	5	138			..	..	..	3	2	1	2	4					
Fourteen weeks ended 3rd January, 1925	M.	..	3	8	16	20	32	55	36	57	24	5	256	456	5	40	17	17	15	12	13	7	5	2	..	133	249	705	..	..	..	..	..	2	..	2	6	6	5	257	301
	F.	1	2	5	17	32	29	43	38	23	7	3	200		..	20	20	17	14	9	18	7	7	1	3	116			..	..	1	3	..	..	1	3					
Total	M.	..	27	37	52	105	110	203	199	197	97	18	1045	*1972	19	123	92	92	95	35	43	25	17	12	3	556	*1120	*3092	..	1	2	5	2	6	4	12	39	42	23	1168	1087
	F.	3	12	29	55	144	139	223	169	94	49	10	927		6	99	87	94	80	55	72	30	17	11	13	564			..	2	1	12	2	6	3	20					

* Corrected figures after deducting 57 pulmonary and 38 non-pulmonary cases notified in error.

TABLE C.

ADMINISTRATIVE COUNTY OF LANCASTER.

Public Health (Tuberculosis) Regulations, 1912.

ANALYSIS OF THE NOTIFICATIONS ON FORMS A AND B (EXCLUDING DUPLICATES) RECEIVED DURING THE FIFTY-THREE WEEKS ENDED 3rd JANUARY, 1925. (*Corrected figures.)

(Collated from Weekly Returns of District Medical Officers of Health.)

Age—years ;—		0 — 1			1 — 5			5 — 10			10 — 15			15 — 20			20 — 25			25 — 35			35 — 45			45 — 55			55 — 65			65 & upwds.			TOTALS.			
SEX.	Col.	M.	F.	Both Sexes.	M.	F.	Both Sexes.	M.	F.	Both Sexes.	M.	F.	Both Sexes.	M.	F.	Both Sexes.	M.	F.	Both Sexes.	M.	F.	Both Sexes.	M.	F.	Both Sexes.	M.	F.	Both Sexes.	M.	F.	Both Sexes.	M.	F.	Both Sexes.	M.	F.	Both Sexes.	Col.
PULMONARY—																																				
Lungs only	1	..	3	3	27	12	39	37	29	66	52	55	107	105	144	249	106	138	244	195	221	416	194	165	359	191	92	283	96	49	145	17	10	27	1020	918	1938	1
Lungs and Larynx	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	1	5	6	1	7	3	2	5	4	..	4	..	..	..	..	..	..	17	4	21	2
Laryngitis	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	3	2	2	4	2	2	4	1	..	1	1	..	1	8	5	13	3
PULMONARY TOTAL	4	..	3	3	27	12	39	37	29	66	52	55	107	105	144	249	110	139	249	203	223	426	199	169	368	197	94	291	97	49	146	18	10	28	1045	927	*1972	4
Cases—Pulmonary and Non-Pulmonary combined		..	..	..	4	2	6	3	4	7	6	1	7	2	1	3	2	2	4	5	5	10	3	2	5	2	..	2	1	2	3	1	1	2	29	20	49	
NON-PULMONARY—																																				
ALIMENTARY — Enteritis (Primary)	5	2	..	2	4	3	7	4	1	5	1	1	2	..	3	3	..	..	..	..	3	3	1	..	1	..	..	..	..	..	..	..	1	1	12	12	24	5
ALIMENTARY — Peritonitis (Abdominal Tuberculosis)	6	3	1	4	18	17	35	13	15	28	10	7	17	11	8	19	4	5	9	4	7	11	1	1	2	2	3	5	..	1	1	..	..	..	66	65	131	6
GLANDS — Tabes (Mesenteric Glands)	7	..	..	..	2	1	3	4	1	5	1	7	8	3	..	3	..	1	1	1	..	1	..	1	1	..	..	2	..	..	..	..	..	..	13	11	24	7
GLANDS — Axillary	8	..	..	..	1	3	4	4	3	7	6	1	7	4	8	12	1	4	5	..	5	5	1	3	4	..	..	..	..	1	1	1	1	2	18	29	47	8
GLANDS — Cervical	9	1	..	1	44	32	76	37	38	75	43	41	84	37	40	77	16	26	42	8	31	39	6	13	19	2	3	5	4	1	5	..	3	3	198	228	426	9
GLANDS — Inguinal	10	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	10
GLANDS — Mediastinal	11	..	..	..	..	..	..	1	3	4	..	2	2	..	..	..	1	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	6	8	11
GLANDS — Not Classified (Two or more Groups)	12	..	..	..	..	..	..	1	1	2	2	1	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	2	5	12
GENITO-URINARY — Bladder	13	..	..	..	..	1	1	..	..	..	1	..	1	1	..	1	2	..	2	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	4	2	6	13
GENITO-URINARY — Fallopian Tube	14	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	14
GENITO-URINARY — Kidney	15	..	..	..	..	..	..	..	..	..	1	..	1	..	1	1	1	2	3	1	1	2	1	1	2	..	..	..	..	..	..	..	..	..	4	5	9	15
GENITO-URINARY — Prostate	16	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	16
GENITO-URINARY — Suprarenal	17	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	17
GENITO-URINARY — Testicle and Epididymis	18	..	..	..	..	..	..	1	..	1	..	..	..	1	..	1	..	..	..	1	..	1	2	..	2	1	..	1	..	..	..	..	..	..	8	..	8	18
GENITO-URINARY — Not Classified (Two or more)	19	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2	19
JOINTS AND BONES — Head (Including Middle Ear)	20	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2	2	20
JOINTS AND BONES — Trunk— Ribs and Sternum	21	..	..	..	..	..	..	1	1	2	1	..	1	2	1	3	..	..	..	..	1	1	1	1	2	..	..	..	1	..	1	..	..	..	6	4	10	21
JOINTS AND BONES — Spine	22	..	..	..	9	4	13	2	8	10	3	4	7	4	2	6	..	2	2	4	3	7	2	4	6	2	3	5	1	1	2	1	1	2	28	32	60	22
JOINTS AND BONES — Arm— Shoulder	23	..	..	..	..	..	..	..	..	..	1	..	1	..	1	1	1	..	1	2	..	2	..	..	..	..	..	..	..	..	..	..	..	..	4	1	5	23
JOINTS AND BONES — Scapula	24	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	1	..	1	24
JOINTS AND BONES — Humerus	25	..	..	..	1	..	1	..	1	1	..	..	..	..	1	1	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	2	2	4	25
JOINTS AND BONES — Elbow	26	..	..	..	1	..	1	1	..	1	1	..	1	..	1	1	2	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	1	6	26
JOINTS AND BONES — Radius	27	..	..	..	1	..	1	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	27
JOINTS AND BONES — Ulna	28	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	28
JOINTS AND BONES — Hand and Wrist	29	2	..	2	3	6	9	2	..	2	..	1	1	2	1	3	1	1	2	2	..	2	..	..	..	1	1	2	2	..	2	..	1	1	15	11	26	29
JOINTS AND BONES — Leg— Hip and Pelvis	30	..	..	..	7	3	10	4	4	8	10	7	17	6	3	9	2	1	3	5	1	6	2	..	2	1	1	2	..	..	..	..	..	..	37	20	57	30
JOINTS AND BONES — Femur	31	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	1	..	1	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	2	1	3	31
JOINTS AND BONES — Knee	32	..	..	..	3	1	4	..	2	2	..	1	1	8	1	9	..	1	1	..	2	2	2	1	3	1	..	1	..	..	..	..	..	..	14	10	24	32
JOINTS AND BONES — Tibia	33	..	..	..	..	..	..	3	..	3	..	..	..	1	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	1	5	33
JOINTS AND BONES — Fibula	34	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	34
JOINTS AND BONES — Foot and Ankle	35	..	1	1	1	4	5	2	1	3	..	2	2	2	..	2	..	..	..	2	3	5	..	..	..	1	..	1	..	2	2	..	2	2	8	15	23	35
JOINTS AND BONES — Two or more different Joints	36	..	..	..	1	1	2	3	..	3	1	..	1	1	1	2	..	..	..	..	..	..	1	..	1	1	2	3	..	2	2	..	..	..	8	6	14	36
JOINTS AND BONES — Not Classified	37	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	37
MENINGITIS (Brain)	38	8	3	11	21	17	38	6	4	10	3	3	6	3	1	4	1	2	3	2	2	4	1	1	2	..	..	..	..	..	..	..	..	..	45	33	78	38
MILIARY (Generalised)	39	2	..	2	4	1	5	..	..	..	1	1	2	..	1	1	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	7	3	10	39
SKIN (Lupus)	40	..	..	..	1	..	1	1	3	4	4	10	14	4	2	6	2	5	7	7	6	13	2	3	5	1	4	5	1	2	3	1	2	3	24	37	61	40
MISCELLANEOUS	41	1	1	2	1	5	6	1	1	2	3	3	6	2	3	5	..	2	2	1	5	6	..	..	..	2	..	2	1	1	2	..	1	1	12	22	34	41
NON-PULMONARY TOTAL	42	19	6	25	123	99	222	92	87	179	92	94	186	95	80	175	35	55	90	43	72	115	25	30	55	17	17	34	12	11	23	3	13	16	556	564	*1193	42
GRAND TOTAL	43	19	9	28	150	111	261	129	116	245	144	149	293	200	224	424	145	194	339	246	295	541	224	199	423	214	111	325	109	60	169	21	23	44	1601	1491	*3092	43

* Corrected figures after deducting 57 Pulmonary and 38 Non-Pulmonary cases notified in error.

TABLE D.

ADMINISTRATIVE COUNTY OF LANCASTER.

Public Health (Tuberculosis) Regulations, 1912.

THE FOLLOWING TABLE COMPARES THE MALE AND FEMALE NOTIFIED CASES IN THE ADMINISTRATIVE COUNTY DURING THE YEARS 1913 TO 1924, AT CERTAIN AGE GROUPS :—

		PULMONARY TUBERCULOSIS.													NON-PULMONARY TUBERCULOSIS.											
	Cases Male or Female.	0 to 1	1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 and upwds.	Total.	Total M. & F.	0 to 1	1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 and upwds.	Total.	Total M. & F.
1913 ... ... (11 months)	M	1	24	97	70	129	131	311	292	228	114	29	1426		29	128	177	137	98	58	71	48	27	18	3	794	
	F	*6*	*28*	*100*	*104*	*158*	*188*	*296*	*201*	*103*	*65*	*25*	*1274*	2700	*28*	*118*	*134*	*132*	*118*	*86*	*80*	*47*	*29*	*19*	*7*	*798*	1592
1914	M	6	40	80	83	112	172	329	315	240	107	23	1507		43	111	131	95	77	36	47	23	20	14	3	600	
	F	*3*	*32*	*115*	*107*	*140*	*181*	*336*	*225*	*107*	*47*	*20*	*1313*	2820	*37*	*88*	*98*	*89*	*77*	*44*	*58*	*27*	*12*	*6*	*4*	*540*	1140
1915	M	5	47	97	79	127	138	305	303	235	117	34	1487		39	109	113	93	61	46	50	29	14	5	3	562	
	F	*5*	*27*	*96*	*111*	*152*	*191*	*383*	*239*	*100*	*60*	*21*	*1385*	2872	*26*	*88*	*107*	*88*	*84*	*53*	*61*	*33*	*15*	*7*	*4*	*566*	1128
1916	M	1	31	71	77	121	157	331	296	190	96	36	1407		20	127	135	99	65	42	47	34	12	13	5	599	
	F	*2*	*24*	*81*	*96*	*165*	*186*	*345*	*220*	*98*	*52*	*13*	*1282*	2689	*8*	*68*	*122*	*114*	*85*	*46*	*65*	*41*	*19*	*11*	*2*	*581*	1180
1917	M	4	20	77	62	113	104	262	268	190	90	30	1220		21	116	109	105	61	23	42	30	8	9	1	525	
	F	*2*	*22*	*90*	*100*	*129*	*155*	*296*	*185*	*107*	*50*	*19*	*1155*	2375	*7*	*79*	*97*	*98*	*89*	*59*	*49*	*25*	*23*	*6*	*5*	*537*	1062
1918	M	3	35	55	59	140	108	300	317	232	98	28	1375		14	75	103	65	60	19	29	16	14	7	2	404	
	F	*1*	*24*	*69*	*74*	*139*	*166*	*297*	*207*	*117*	*52*	*13*	*1159*	2534	*10*	*75*	*84*	*92*	*80*	*46*	*46*	*29*	*9*	*6*	*4*	*481*	885
1919	M	2	22	53	55	94	107	238	212	165	91	17	1056		13	50	97	80	53	26	31	22	19	12	4	407	
	F	*5*	*14*	*54*	*80*	*126*	*161*	*261*	*184*	*99*	*41*	*24*	*1049*	2105	*10*	*59*	*98*	*76*	*61*	*43*	*41*	*29*	*11*	*7*	*5*	*440*	847
1920	M	2	24	56	63	94	120	281	249	160	90	14	1153		31	62	107	108	68	26	35	23	16	11	5	492	
	F	*2*	*20*	*53*	*71*	*115*	*122*	*264*	*147*	*84*	*36*	*17*	*931*	2084	*12*	*66*	*86*	*78*	*62*	*46*	*52*	*34*	*23*	*16*	*1*	*476*	968
1921	M	1	17	43	47	94	133	222	225	162	84	19	1047		12	60	110	84	53	32	41	23	17	6	4	442	
	F	...	*12*	*53*	*77*	*132*	*160*	*255*	*156*	*82*	*50*	*20*	*997*	2044	*15*	*62*	*89*	*81*	*65*	*41*	*53*	*15*	*21*	*9*	*6*	*457*	899
1922	M	3	16	38	47	83	120	227	190	148	99	27	998		18	101	111	79	55	37	39	22	13	7	3	485	
	F	*4*	*15*	*45*	*57*	*135*	*135*	*202*	*146*	*61*	*42*	*23*	*865*	*1863	*13*	*77*	*80*	*95*	*61*	*45*	*50*	*24*	*14*	*7*	*5*	*471*	*956
1923	M	2	10	41	43	82	132	236	207	147	94	13	1007		18	115	134	105	75	35	45	22	14	15	6	584	
	F	*1*	*14*	*43*	*60*	*115*	*149*	*251*	*149*	*83*	*49*	*16*	*930*	†1937	*14*	*103*	*110*	*107*	*68*	*60*	*64*	*31*	*28*	*14*	*5*	*604*	†1188
1924	M	...	27	37	52	105	110	203	199	197	97	18	1045		19	123	92	92	95	35	43	25	17	12	3	556	
	F	*3*	*12*	*29*	*55*	*144*	*139*	*223*	*169*	*94*	*49*	*10*	*927*	‡1972	*6*	*99*	*87*	*94*	*80*	*55*	*72*	*30*	*17*	*11*	*13*	*564*	‡*1120*

* Corrected figures for 1922 after deducting 14 Pulmonary and 12 Non-Pulmonary cases notified in error.

† „ 1923 „ 33 „ 31 „ „

‡ „ 1924 „ 57 „ 38 „ „

APPENDIX III.

INSTITUTIONAL ACCOMMODATION.

The following Tables show the number of beds occupied by County patients undergoing residential treatment for pulmonary and non-pulmonary tuberculosis as on the 31st December of 1920, 1921, 1922, 1923 and 1924:—

	Number of Beds occupied—				
	End of 1920.	End of 1921.	End of 1922.	End of 1923.	End of 1924.
Sanatoria—					
Aitken, near Bury	53	47	45	48	42
Blencathra, Cumberland	1	...	...	...	...
Bournemouth (Home)	1	...	1	...	...
Bournemouth (Royal National)	...	...	1	1	1
Crossley, Kingswood	...	3	...	1	...
East Lancashire, Cheshire	...	...	...	...	13
Elswick, near Kirkham	54	55	56	58	59
Fazakerley, Liverpool	...	...	1	1	...
Halifax (Shelf)	16	18	10	12	8
High Carley, Ulverston	62	75	90	96	101
Holy Cross, Surrey	1	1	1	...	...
King Edward VII., Midhurst, Sussex	1	...	2	1	1
King George's, Hants (for sailors)	...	...	1	2	2
Liverpool, Kingswood	...	...	2	3	...
Maghull, near Liverpool	4	...	...	...	...
Meathop, Grange-over-Sands	51	47	37	42	45
Mendip Hills	1	...	...	...	...
Nordrach-on-Dee	1	1	1	2	...
Pendyffryn Hall, North Wales	...	...	...	...	1
Strinesdale, Oldham	1	...	...	1	...
Ventnor, Isle of Wight	...	...	1	1	1
Wensleydale, Aysgarth	...	1	1	...	...
Wilkinson, Bolton	15	20	16	14	12
	262	268	266	283	286
Sanatoria and Training Colonies—					
Barrowmore Hall, Cheshire	...	4	13	11	12
Delamere, Cheshire	...	5	4	1	...
Maltings Farm, Colchester	...	...	...	...	1
Preston Hall, Kent	2	...	...	...	...
	2	9	17	12	13
Hospitals (Pulmonary)—					
Ainsworth, near Bury	34	...	...	...	...
Bull Hill, Darwen	19	18	16	18	18
Burnley	13	10	13	11	10
Chadderton, near Oldham	*	29	27	34	38
Eccleston Hall, St. Helens	10	4	10	15	8
Heath Charnock, Chorley	30	29	25	29	31
Hefferston Grange, Cheshire	...	...	15	9	4
Launeside, Lancaster	17	15	14	18	16
Linacre, Bootle	...	3	1	...	1
Marland, Rochdale	14	14	8	11	5
Mount Pleasant, Liverpool	2	...	3	3	...
Peel Hall, Little Hulton	...	44	44	45	45
Pemberton, Wigan	4	4	4	4	3
Westhulme, Oldham	5	7	6	3	5
Wolstenholme Hall, Norden	14	22	25	30	20
	162	199	211	230	204

	Number of Beds occupied— End of 1920.	End of 1921.	End of 1922.	End of 1923.	End of 1924.
Observation Hospitals—					
Bury	5	8	8	8	5
Hospitals (Non-Pulmonary)—					
Ancoats Hospital, Manchester	2	4	6	2	1
Ashton-under-Lyne Infirmary	...	7	3	8	4
Blackburn Royal Infirmary	1	3	1	1	1
Bolton Infirmary	...	4	7	3	...
Bootle Borough Hospital	...	3	1	...	3
Burnley Victoria Hospital	...	...	1	...	...
Bury Infirmary	..	6	1	2	3
Liverpool David Lewis Northern Hospital	2	...	...	...	...
Liverpool Royal Infirmary	2	...	2	1	...
Liverpool Royal Southern Hospital	2	...	...	...	...
Liverpool Stanley Hospital	...	...	1	...	...
Manchester Royal Infirmary	14	9	9	6	9
Manchester & Salford Skin Hospital	5	4	4	3	2
Margate Royal Sea Bathing Hospital	...	...	...	1	...
North Lonsdale Hospital, Barrow	...	1	...	1	2
Pilkington, St. Helens	...	...	...	...	52
Preston Royal Infirmary	4	8	6	4	5
Salford Royal Hospital	...	1	...	...	...
Shropshire Orthopædic Hospital, Oswestry	...	...	2	25	29
Southport Infirmary	...	1	...	...	...
Warrington Infirmary	3	5	3	...	4
Wigan Infirmary	6	4	4	1	...
	41	60	51	58	115
Sanatoria (for Children only)—					
(a) Pulmonary—					
Bowdon, Cheshire	13	4	2	1	2
Eastby, near Skipton	37	43	35	40	31
Freshfield, near Liverpool	2	1	..	1	1
Oubas House, Ulverston	...	18	21	21	21
(b) Non-Pulmonary—					
Alton, Hants. (Lord Mayor Treloar Cripples' Hospital)	...	...	11	17	14
Heatherwood, Berks. (United Services Fund)	...	...	15	20	24
Heswall (Royal Liverpool Children's Hospital)	3	3	4	11	3
Leasowe (Liverpool Open-Air Hospital for Children)	20	20	26	26	31
Myrtle Street, Liverpool (Royal Liverpool Children's Hospital)	...	...	2	...	...
Pendlebury (Royal Manchester Children's Hospital)	...	...	4	6	2
Stannington (Children's Holiday Association) Northumberland	...	...	...	10	6
West Kirby (Children's Convalescent Home)	8	8	5	6	8
	83	97	125	150	143
GRAND TOTAL	555	641	678	750	766

* Chadderton closed in 1920 owing to small-pox.

APPENDIX IV.

Table E.

After-Histories of 6,348 Adults who completed a Course of Sanatorium Treatment.

APPENDIX IV.

TABLE E.—After-histories of 6,348 Adult* Patients suffering from Pulmonary Tuberculosis who have completed a course of SANATORIUM TREATMENT associated with Home Treatment and Dispensary Supervision or Treatment.

N.B.—A proportion of the patients dealt with in this Table also received treatment in Pulmonary, Observation, or General Hospitals. Patients who failed to complete two months' stay in a Sanatorium are excluded from this Table.

† Stage of Disease on First Examination by Tuberculosis Officer	‡ Sputum	Age Groups ¶	Gross No. of Adults who received Sanatorium Treatment		Deduct: Patients left County, Untraced, Treatment ceased for other than medical reasons		Deaths from other than Tuberculosis		Diagnosis not Confirmed		Still in Institutions on 31st Dec., 1924		Net No. of Adults who received Sanatorium Treatment		Average Duration of Sanatorium Treatment (Months)	
		Years.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
I. and I.S.	Positive	15-25	174	159	25	11	...	...	...	...	3	7	146	217	5·3	6·0
		25-45	527	252	86	47	5	3	...	...	14	7	422	215	5·4	5·2
		45-65	131	27	8	3	2	...	...	...	4	...	127	24	6·4	9·6
		Total	832	445	119	61	7	3	...	...	21	14	705	366		
	Negative or None	15-25	335	359	85	56	2	0	35	26	5	2	250	257	6·9	6·9
		25-45	336	387	103	147	9	3	86	83	4	3	302	347	6·4	6·2
		45-65	182	87	21	19	6	3	23	24	...	...	131	42	7·7	7·1
		Total	1002	1074	212	231	17	15	144	153	11	2	663	646		
II. and II.S.	Positive	15-25	194	158	37	39	3	1	...	...	5	12	149	215	5·6	5·6
		25-45	616	458	74	61	2	2	...	...	16	11	528	383	6·9	5·9
		45-65	283	73	19	2	5	1	...	...	7	5	252	66	8·7	5·4
		Total	1093	702	130	91	10	4	...	...	28	28	963	664		
	Negative or None	15-25	94	104	19	11	6	1	6	20	1	1	64	77	5·8	5·2
		25-45	186	182	36	47	5	1	22	26	3	1	102	117	4·3	4·3
		45-65	100	52	11	9	4	2	22	4	1	1	72	36	4·1	5·7
		Total	380	338	66	71	11	4	49	50	5	3	238	230		
III. and III.S.	Positive	15-25	36	26	7	1	...	...	...	...	...	2	29	23	4·7	5·2
		25-45	76	32	10	1	...	...	...	...	3	1	63	45	5·6	4·3
		45-65	30	8	1	1	...	...	...	...	4	...	45	8	4·5	6·9
		Total	142	26	18	2	...	...	...	...	7	3	137	66		
	Negative or None	15-25	17	28	6	2	...	1	2	2	...	1	9	22	4·9	5·4
		25-45	22	22	4	4	...	1	4	3	...	...	14	21	4·3	4·2
		45-65	15	9	...	2	1	...	3	7	...	...	31	6	3·6	2·9
		Total	54	49	10	8	1	2	9	6	...	2	34	37		

* ADULTS.—Persons 15 years of age and upwards at end of 1924 or date of death.
† Classified according to the system of Turban-Gerhardt, and further subdivided into cases with slight and severe constitutional symptoms as suggested by Philip.
‡ Where sputum is shown as positive, tubercle bacilli have been demonstrated in sputum once at any time during treatment.
§ These cases have been classified as cured (in accordance with the suggestion of the Chief M.O. of the Ministry of Health), the disease having been completely arrested for five years and no symptoms of tuberculosis present.
¶ Twelve patients 65 years of age and over have for convenience been included in the group 45—65.

APPENDIX V.

Table F.

Results of Home Treatment combined with Dispensary Treatment or Supervision.

8,476 Adult Patients suffering from Pulmonary Tuberculosis.

APPENDIX V.

TABLE F.—Condition at end of 1924 of 8,476 ADULT* Patients suffering from Pulmonary Tuberculosis who received Treatment at HOME, combined with Dispensary Treatment or Supervision.

N.B.—These patients have never completed a course of "Sanatorium Treatment"; a proportion of them have, however, at some time or other received treatment in Hospital (i.e., Pulmonary, Observation, or General Hospital) as distinct from a Sanatorium.

Patients who remained less than two months in a Sanatorium are included in this Table.

† Stage of Disease on First Examination by Tuberculosis Officer.	‡ Sputum.	Age Groups ¶	Gross No. of Adults who received Home Treatment		Deduct: Patients left County, Untraced, Treatment ceased for other than medical reasons.		Deduct: Deaths from other than Tuberculosis.		Deduct: Diagnosis not Confirmed.		Deduct: Still in Institution on 31st Dec., 1924.		Nett No. of Adults who received Home Treatment.	
		Years.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
I. and I.S.	Positive	15-25	60	40	8	2	...	...	...	...	...	...	52	37
		25-45	232	86	42	11	3	...	...	...	3	...	184	75
		45-65	93	14	7	2	2	...	...	...	1	...	83	12
		Total	385	140	57	15	5	...	...	...	4	...	319	124
	Negative or None	15-25	251	264	46	22	8	3	88	33	...	...	109	222
		25-45	651	432	176	167	20	10	237	145	1	...	217	110
		45-65	233	72	22	7	13	9	92	22	...	...	106	34
		Total	1135	771	244	197	41	22	417	202	1	...	432	360
II. and II.S.	Positive	15-25	195	224	11	11	...	2	...	...	1	2	183	209
		25-45	522	412	56	36	3	2	...	...	2	6	463	379
		45-65	391	169	16	5	1	1	...	...	1	3	374	109
		Total	1107	766	71	52	6	5	...	...	11	19	1018	499
	Negative or None	15-25	92	112	16	11	1	3	16	20	1	2	64	82
		25-45	289	224	53	29	9	20	32	26	...	2	155	142
		45-65	277	82	22	20	18	2	37	28	2	...	198	52
		Total	658	412	85	60	28	11	85	54	3	2	417	281
III. and III.S.	Positive	15-25	244	283	9	20	...	...	...	...	...	2	235	261
		25-45	663	505	41	23	4	1	...	...	4	4	614	472
		45-65	415	221	18	7	3	...	...	...	5	1	389	178
		Total	1322	1009	68	40	7	1	...	...	9	7	1238	911
	Negative or None	15-25	112	106	15	11	4	...	20	5	...	...	83	100
		25-45	164	261	18	11	2	3	15	7	...	1	129	112
		45-65	159	49	8	7	7	...	11	9	1	...	132	33
		Total	435	366	41	33	13	3	36	22	1	1	344	269

* ADULTS.—Persons 15 years of age and upwards at end of 1924 or date of death.
† Classified according to the system of Turban-Gerhardt, and further sub-divided into cases with slight and severe constitutional symptoms as suggested by Philip.
‡ Where sputum is shown as positive, tubercle bacilli have been demonstrated in sputum once at any time during treatment.
§ These cases have been classified as cured (in accordance with the suggestion of the Chief M.O. of the Ministry of Health), the disease having been completely arrested for five years and no symptoms of tuberculosis present.
¶ One hundred and twenty-one patients 65 years of age and over have for convenience been included in the group 45—65.