Annual report : 1922/23 / King Edward VII Sanatorium, Midhurst.

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King Edward VII Sanatorium (Midhurst, England)

Publication/Creation

Midhurst, Sussex : The Sanatorium, 1923

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KING EDWARD VII SANATORIUM
MIDHURST

Seventeenth Annual Report

JULY 1922 to JULY 1923

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JULY 1922 to JULY 1923

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KING EDWARD VII SANATORIUM MIDHURST

Seventeenth Annual Report

JULY 1922 to JULY 1923

During the twelve months ending the 30th June, 1923, 244 patients were admitted to the Sanatorium, including 29 re-admissions and 23 who remained in residence too short a time to be considered in the records.

During the same period 218 patients were discharged, of whom 64 were placed in Group I., 37 in Group II., and 116 in Group III.* In one case no definite evidence of pulmonary tuberculosis was obtained.

The demand for beds has been variable. The average number of applicants on the weekly waiting list has been :—for Men 3·4, for Women 3·2. During the later months of 1922 and the earlier months of 1923, the demand was low, and there was at times no waiting list. Since April, 1923, the average number of applicants on the waiting list has been :—for Men 6, for Women 7. This increase coincides with the reduction of fee from £4 14*s.* 6*d.* to £4 4*s.* per week. These figures indicate the severity of the struggle to meet the cost of maintenance which has to be made by the class for which this sanatorium is intended.

The number of patients examined by the Medical Superintendent before admission was 120. Of these 90, or 75 per cent., were accepted as suitable; 30, or 25 per cent., were rejected.

The system of treatment adopted at Midhurst is that common to most modern sanatoriums. It consists in a completely open-air life, a regular and ordered daily routine, a diet sufficient and nourishing without being excessive, and a system of carefully graduated rest and exercise, which provides at the same time interesting occupation, all-important in tuberculosis. The several

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* For classification *see* p. 13.

grades of exercise which have been adopted during the year differ only in minor details from those given in the Fourteenth Annual Report (1919–1920), p. 6. They are six in number: Patients who for a week have done a daily walk of six miles without rise of temperature start on Grade 1; and they are gradually promoted through the intermediate stages to Grade 6.

Artificial pneumothorax is employed, with the co-operation of the Honorary Radiologist, either in cases of severe or repeated hæmoptysis, or when there has been lack of response to the usual sanatorium methods. When the treatment has been useful, the patients return to the sanatorium to be "refilled," stay the night, and leave next day. The results of this method in the past twelve months are shown in Table II., p. 7.

As will be seen from the report, the Dental Department has done much useful work during the year. The influence of dental hygiene and the removal of septic teeth in improving the general condition of tuberculous patients is well recognised.

The social side of sanatorium life is carefully arranged, and the necessary variety of entertainment has been well maintained in the past twelve months. The General Purposes Committee consists of patients. They elect a President, who also acts as Secretary. Under their management, and with the kind help of Mrs. Brinton and Lady Cowdray, a series of concerts and other entertainments, such as whist-drives, were given, and outdoor sports—golf, croquet and bowls—were enjoyed throughout the summer.

The General Results of Treatment are set forth in the following table:—

TABLE I.—GENERAL RESULTS OF TREATMENT AS SHOWN BY THE CONDITION OF THE PATIENTS ON DISCHARGE FROM THE SANATORIUM DURING THE YEAR 1922–1923

Group	Number of Cases	Arrested	Much Improved	Improved	Stationary or Worse	Died in Sanatorium
I.	64	44	18	2	0	0
II.	37	17	17	3	0	0
III.	116	9	67	27	12	1
All Cases	217	70	102	32	12	1
IV. Patients in whom no definite evidence of Pulmonary Tuberculosis was found		Number of Cases 1	—	1	—	—

TABLE II.—CASES TREATED BY THE INDUCTION OF ARTIFICIAL PNEUMOTHORAX

1st July, 1922—30th June, 1923

Case	Sex	Age	Group	Indications for Artificial Pneumothorax	Date of 1st Operation	Result	Remarks
11/365	Female	28	III.	History of ill-health following influenza 4 years ago. Extensive disease left side. No signs right side. Prolonged febrile temperature up to 102° continuing in spite of 9 weeks in bed on absolute rest.	12th July, 1922	Unsatisfactory	Previous X-Ray examination showed dense opacity left side due to thickened pleura and fibroid lung. After seven unsuccessful attempts air was introduced and a pocket of air was shown by X-Ray examination at left base. Signs of a partial pneumothorax at left base and over front of left lung were found, but manometer readings were never satisfactory. Patient's condition and febrile temperature did not improve, and after fourteen operations the treatment was discontinued.
12/37	Male	46	III.	3 months' history of cough and ill health. Extensive signs right side only with febrile temperature not responding to twelve weeks in bed.	24th January, 1923	Unsatisfactory	300 cc. and 250 cc. were introduced on two successive days. On the second day the temperature rose to 101°, and it remained high and patient appeared worse. He was of a highly nervous temperament, and it was considered advisable to discontinue the treatment.
12/211	Male	18	III.	History of repeated hæmoptyses, beginning 9 months previously. Extensive excavation and infiltration left lung. Febrile temperature not responding to absolute rest in bed.	24th April, 1923	Good	Operation performed without difficulty, and repeated. Temperature was immediately controlled. Cough and sputum disappeared. There has been marked improvement in appearance.

TABLE II.—CASES TREATED BY THE INDUCTION OF ARTIFICIAL PNEUMOTHORAX—*continued*

1st July, 1922—30th June, 1923

Case	Sex	Age	Group	Indications for Artificial Pneumothorax	Date of 1st Operation	Result	Remarks
L.A.S.	Female	20	III.	History of cough for 5 months. Extensive infiltration upper and lower lobes left side. Febrile temperature not responding to absolute rest in bed. Troublesome cough and copious expectoration up to 2 ounces in 24 hours.	2nd May, 1923	Good	Operation performed without difficulty and repeated. Temperature controlled. Cough and sputum disappeared. There has been marked improvement in appearance and condition. Patient is able to walk 2 miles a day without fatigue or dyspnœa. Congestion of larynx has cleared up, and the larynx is now normal.

The smallness in number of these cases during the year is due to two facts:—(1) that ordinary sanatorium treatment proved successful in the great majority of cases; and (2) that of the patients who did not respond to sanatorium treatment some presented contra-indications to the induction of artificial pneumothorax—such as signs of bilateral disease, rapid pulse, or unsuitable temperament. Others lived too far from the sanatorium or other available centre to render "refills" practicable.

REPORTS OF SPECIAL DEPARTMENTS

REPORT OF THE THROAT DEPARTMENT

All the 218 patients discharged during the year ending 30th June, 1923 were examined laryngoscopically by Sir St. Clair Thomson. Of these in 183 the larynx was found to be normal; in 35 diseased. The results of treatment are shown in Tables III., IV. and V.

TABLE III.—SHOWING THE RESULT ON DISCHARGE OF TREATMENT IN PATIENTS SUFFERING FROM TUBERCULOSIS OF THE LARYNX IN WHOSE SPUTUM TUBERCLE BACILLI WERE DEMONSTRATED IN THE SANATORIUM

	Number of Cases	Cured	Improved	Stationary or Worse	Died in Sanatorium	Remarks
Group I.	—	—	—	—	—	For cases treated with galvano-cautery see Table V.
Group II.	1	1	—	—	—	
Group III.	31	4	8	19	—	
All cases	32	5	8	19	—	

TABLE IV.—SHOWING THE RESULT ON DISCHARGE OF TREATMENT IN PATIENTS SUFFERING FROM TUBERCULOSIS OF THE LARYNX IN WHOSE SPUTUM TUBERCLE BACILLI WERE NOT DEMONSTRATED IN THE SANATORIUM

	Number of Cases	Cured	Improved	Stationary or Worse	Died in Sanatorium	Remarks
Group I.	1	1	—	—	—	For cases treated with galvano-cautery see Table V.
Group II.	—	—	—	—	—	
Group III.	2	—	—	2	—	
All cases	3	1	—	2	—	

TABLE V.—SHOWING THE RESULT ON DISCHARGE OF TREATMENT WITH THE GALVANO-CAUTERY IN PATIENTS SUFFERING FROM TUBERCULOSIS OF THE LARYNX

	Number of Cases	Cured	Improved	Stationary or Worse	Died in Sanatorium	Remarks
Group I.	—	—	—	—	—	
Group II.	1	1	—	—	—	
Group III.	—	—	—	—	—	
All cases	1	1	—	—	—	

REPORT OF THE X-RAY DEPARTMENT

The importance of radiography in pulmonary tuberculosis is generally recognised, and clinical examination of a patient should, if possible, include a radiographic screen and photographic report. Recent work in this subject has demonstrated that strict attention to the various details of technique is essential for the attainment of results of real clinical utility.

Since the last report two important changes have been introduced into the technique of the department.

First, the super-speed duplitized film of the Kodak Company has replaced the gelatine-bromide plate. With this film, used in conjunction with double intensifying screens, a skiagram of a chest can now be taken in from 0·2 to 0·75 of a second, according to the thickness of the chest.

Secondly, the X-ray couch has been fitted with a film-holder for stereoscopic work, and a Wheatstone stereoscope has been added to the Department. It is hoped by the stereoscopic method to differentiate between shadows cast by a thickened pleura and those cast by abnormal states of the lung. Owing to the impossibility of obtaining coal gas in cylinders, hydrogen has had to be substituted. This at first caused some trouble with the dialectric break, but after a few alterations in the latter the apparatus now works smoothly.

Cases in the year under review have been radoigraphed with one or more of the following objects :—

(1) To assist in the diagnosis of cases with indefinite or slight physical signs.

(2) To determine the extent of tuberculous disease in cases where an additional disease, such as emphysema, masks partially or entirely the physical signs, and in cases of fibrosis.

(3) To help in determining the advisability of inducing artificial pneumothorax, and to control cases in which an artificial pneumothorax has been induced.

(4) To determine the presence or absence of tuberculosis in parts of the body other than the lungs.

(5) To aid diagnosis in cases of disease of the cranial sinuses.

Number of plates and films taken—Men 72, Women 46; total 118.

REPORT OF THE DENTAL DEPARTMENT

The following work was carried out from July, 1922 to June, 1923 :—

Fillings, 101; Root treatments, 6; Scalings, 57; Extractions, 192; Dentures, 17; Repairs, 11.

REPORT OF THE DEPARTMENT OF PATHOLOGY

Work in the laboratory during the year comprised :—

(1) *Routine examinations of sputa* for the presence of tubercle bacilli.

A total of 999 samples of sputum were examined, the procedure being that described in the Fourteenth Annual Report, 1919–1920, page 8.

Of 377 patients 325 had their sputa examined for tubercle bacilli; the remaining 52 patients had no sputum.

Of the 325 patients whose sputum was examined 252 proved to be T.B.-positive at one time or other during their stay in the sanatorium. In the remaining 73 the sputum was persistently negative.

A note was made of the type of sputum in each case.

	Positive	Negative	Positive %
Typical purulent sputum ...	226	13	94·5%
Sputum containing a little pus	19	31	38·0%
Poor watery samples	7	29	19·4%
Total cases ...	252	73	

Among the 252 positive cases tubercle bacilli were found on the first examination in 204 cases, on the second in 27, on the third in 8, on the fourth in 2 ,on the fifth in 5, on the sixth in 2, on the seventh in 2, on the eleventh in 1, and on the thirteenth in 1.

(2) Research on the treatment of tuberculosis in laboratory animals, guinea-pigs, has been undertaken in collaboration with Sir Leonard Rogers, F.R.S., by means of esters and salts of unsaturated fatty acids. The following substances were tried : ethyl,- sodium- and potassium- hydnocarpates; ethyl- and

sodium- morrhuates (of cod-liver oil); ethyl- and potassium-linoleates (from linseed oil); sodium-soyate (of the soya bean); and a salt of the unsaturated fatty acids of the oil of the Japanese sardine.

Hydnocarpic acid of the ester and salts mentioned above is one of the fatty acids of the oil from the seeds of Hydnocarpus wightiana, a plant closely related to Taraktogenos (Hydnocarpus) Kurzii, from which chaulmoogra oil is obtained. This oil is said to contain a larger proportion of hydnocarpic acid than chaulmoogra oil. The ester and salts of hydnocarpic acid have been used with success in the treatment of leprosy.

All the acids of the above-mentioned substances are unsaturated fatty acids, and have high iodine values :—

Cod-liver oil, 155–173.
Linseed oil, above 170.
Clupanodonic acid (in Japanese sardine oil), 344.

The experiments completed have not been sufficient in number to justify definite statements as to the effect of these substances on the tuberculous process in guinea-pigs, but the results so far obtained are not very encouraging. One of the difficulties of treatment is that the ethyl esters, at least of hydnocarpic acid, are very insoluble and difficult of absorption by the animal body, *e.g.*, ½ cc. injected subcutaneously forms a swelling perceptible four or six or more weeks after injection. Further, the sodium salt of the same substance is alkaline and very irritating, causing phlebitis in man when injected into a vein, because the sodium salt of hydnocarpic acid on dilution partially splits up by hydrolysis into the hydnocarpic acid and free alkali.

(3) Apart from the pathological examinations on the patients mentioned above, an examination of the dust from one of the patients' rooms was undertaken for the presence of tubercle bacilli. The floor-sweepings, consisting of flock and dust, was added to distilled water and normal saline, and films were examined for the presence of tubercle bacilli. None were found. A portion of sweepings added to normal saline was also injected into the peritoneal cavity of a guinea-pig on June 15th, 1923. [The animal did not die, and was in good health at Christmas, 1923.]

REPORT OF THE STATISTICAL DEPARTMENT

The work of the Statistical Department has been continued on the same lines as in previous years (*see* ANNUAL REPORTS V., XI. and XII.). The total number of patients discharged from the Sanatorium up to date is 3,881. Those of whom information could not be obtained number 111.

The statistics of the ultimate results of the enquiry are given in the Tables, pp. 14–25.

As in previous Annual Reports, the Turban-Gerhardt classification has been used to indicate the clinical condition of patients on admission. This classification, based on physical signs, is as follows :—

Group I.—Disease of slight severity, limited to small areas of one lobe on either side, which, in the case of affection of both apices, does not extend beyond the spine of the scapula or the clavicle, or in the case of affection of the apex of one lung does not extend below the second rib in front.

Group II.—Disease of slight severity, more extensive than Group I., but affecting, at most, the whole of one lobe; or severe disease extending, at most, to the half of one lobe.

Group III.—All cases of greater severity than Group II., and all those with considerable cavities.

By disease of slight severity is to be understood: disseminated foci characterised by slight dullness, indefinite, rough or weak vesicular, vesico-bronchial, or broncho-vesicular breathing, and fine and medium crepitations.

By severe disease: massive infiltration recognised by definite dullness, broncho-vesicular or bronchial breathing, with or without crepitations.

Cases with signs of considerable excavation, giving rise to tympanitic percussion with amphoric or cavernous breathing and numerous coarse consonating râles come under Group III.

Pleuritic dullness, if only of slight extent, is to be left out of account; if it is considerable, pleuritis should be specially mentioned under tuberculous complications.

The following terms are used to describe the condition of patients on discharge from the Sanatorium :—

"Disease Arrested."—General health completely restored in every respect, without any sign of disease of the lungs except such as is compatible with a completely healed lesion. Sputum, if still present, free from tubercle bacilli.

"Much Improved."—General health good. Physical signs of disease in the lungs, though much diminished, not entirely cleared up, *e.g.*, limited to a few crepitations on cough only. Tubercle bacilli still to be detected in the sputum.

"Improved."—General health improved, but not restored. Physical signs of disease in the lungs still present, though less marked than on admission.

"Stationary."—No appreciable improvement in the condition of the lungs or in the general health.

"Worse."—General or local condition worse.

Table A1.—Statistics of Ultimate Results

Cases in the Sputum of which T.B. **were** *demonstrated in the Sanatorium*

All cases considered together

Year of Discharge	Number Discharged	Number reported "Well" or "Alive" in each successive year after Discharge																Number Dead in 1923	Number lost sight of in 1923
		1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923		
1906/07	125	94	82	73	65	56	42	38	47	46	42	42	38	39	34	36	34	88	3
1907/08	206	—	149	129	112	94	71	72	70	70	75	72	63	59	58	54	54	147	5
1908/09	205	—	—	154	110	93	70	64	55	64	67	62	60	56	55	52	48	154	3
1909/10	192	—	—	—	138	112	90	75	69	73	71	69	60	61	56	53	51	139	2
1910/11	197	—	—	—	—	133	92	88	74	73	72	69	61	56	48	47	47	144	6
1911/12	198	—	—	—	—	—	111	95	81	76	72	68	55	54	50	46	44	143	11
1912/13	160	—	—	—	—	—	—	113	94	78	75	67	49	52	49	48	45	111	4
1913/14	177	—	—	—	—	—	—	—	118	84	86	82	75	75	68	60	55	119	3
1914/15	193	—	—	—	—	—	—	—	—	123	117	104	83	83	75	71	68	124	1
1915/16	154	—	—	—	—	—	—	—	—	—	105	93	68	65	57	51	48	105	1
1916/17	212	—	—	—	—	—	—	—	—	—	—	166	127	116	105	99	89	121	2
1917/18	184	—	—	—	—	—	—	—	—	—	—	—	118	115	95	82	80	95	9
1918/19	198	—	—	—	—	—	—	—	—	—	—	—	—	165	136	121	112	76	10
1919/20	196	—	—	—	—	—	—	—	—	—	—	—	—	—	165	140	126	67	3
1920/21	197	—	—	—	—	—	—	—	—	—	—	—	—	—	—	156	141	53	3
1921/22	176	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	150	26	0

Table A2.—Statistics of Ultimate Results

Cases in the Sputum of which T.B. **were** *demonstrated in the Sanatorium*

Group I considered separately

Year of Discharge	Number Discharged	Number reported "Well" or "Alive" in each successive year after Discharge																Number Dead in 1923	Number lost sight of in 1923
		1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923		
1906/07	30	27	23	21	20	20	15	14	17	17	19	18	16	18	14	15	14	15	1
1907/08	45	—	43	40	35	31	27	28	30	29	32	32	27	28	27	25	26	19	0
1908/09	28	—	—	26	23	20	16	16	12	15	15	15	15	14	14	14	13	14	1
1909/10	43	—	—	—	39	37	34	27	25	29	30	30	25	27	25	25	23	20	0
1910/11	45	—	—	—	—	41	40	31	28	30	29	30	28	25	22	22	22	21	2
1911/12	33	—	—	—	—	—	27	21	20	20	20	19	15	16	13	13	12	18	3
1912/13	15	—	—	—	—	—	—	14	14	12	11	10	9	7	8	8	8	7	0
1913/14	19	—	—	—	—	—	—	—	17	14	16	17	14	15	13	10	11	8	0
1914/15	20	—	—	—	—	—	—	—	—	16	17	16	12	13	11	12	12	8	0
1915/16	16	—	—	—	—	—	—	—	—	—	15	14	11	13	12	11	11	5	0
1916/17	24	—	—	—	—	—	—	—	—	—	—	24	22	23	22	22	22	2	0
1917/18	15	—	—	—	—	—	—	—	—	—	—	—	12	14	12	11	11	3	1
1918/19	10	—	—	—	—	—	—	—	—	—	—	—	—	10	10	10	9	0	1
1919/20	29	—	—	—	—	—	—	—	—	—	—	—	—	—	29	27	25	3	1
1920/21	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	42	40	4	1
1921/22	25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	25	0	0

Table A3.—Statistics of Ultimate Results

Cases in the Sputum of which T.B. were *demonstrated in the Sanatorium*

Group II considered separately

Year of Discharge.	Number Discharged	Number reported "Well" or "Alive" in each successive year after Discharge																Number Dead in 1923	Number lost sight of in 1923
		1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923		
1906/07	57	50	45	40	37	31	22	18	24	23	18	19	18	17	17	17	17	38	2
1907/08	85	—	69	51	56	47	32	32	31	33	35	32	28	24	25	24	23	58	4
1908/09	94	—	—	82	59	48	34	37	32	38	40	36	34	34	33	31	31	61	2
1909/10	99	—	—	—	69	59	44	38	36	36	33	32	28	26	26	24	25	72	2
1910/11	100	—	—	—	—	68	43	49	40	37	37	35	29	28	23	22	22	74	4
1911/12	110	—	—	—	—	—	65	59	49	43	41	38	34	33	32	29	29	75	6
1912/13	101	—	—	—	—	—	—	77	68	53	51	45	33	38	35	35	32	66	3
1913/14	95	—	—	—	—	—	—	—	74	54	55	54	51	50	47	42	40	53	2
1914/15	99	—	—	—	—	—	—	—	—	74	74	69	57	57	51	46	43	55	1
1915/16	71	—	—	—	—	—	—	—	—	—	54	49	35	33	28	24	22	49	0
1916/17	99	—	—	—	—	—	—	—	—	—	—	89	72	65	62	56	50	47	2
1917/18	86	—	—	—	—	—	—	—	—	—	—	—	63	65	54	50	48	33	5
1918/19	98	—	—	—	—	—	—	—	—	—	—	—	—	86	72	69	64	28	6
1919/20	69	—	—	—	—	—	—	—	—	—	—	—	—	—	63	55	48	19	2
1920/21	62	—	—	—	—	—	—	—	—	—	—	—	—	—	—	56	47	14	1
1921/22	48	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	43	5	0

Table A4.—Statistics of Ultimate Results

Cases in the Sputum of which T.B. were *demonstrated in the Sanatorium*

Group III considered separately

Year of Discharge	Number Discharged	Number reported "Well" or "Alive" in each successive year after Discharge																Number Dead in 1923	Number lost sight of in 1923
		1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923		
1906/07	38	17	14	12	8	6	5	6	6	6	5	5	4	4	3	4	3	35	0
1907/08	76	—	37	28	22	18	12	12	9	8	8	8	7	7	6	5	5	70	1
1908/09	83	—	—	40	31	22	13	12	11	11	12	11	11	8	8	7	4	79	0
1909/10	50	—	—	—	25	16	12	10	8	8	8	7	6	5	4	4	3	47	0
1910/11	52	—	—	—	—	17	9	8	6	6	6	4	4	3	3	3	3	49	0
1911/12	55	—	—	—	—	—	19	15	12	13	11	11	5	5	5	4	3	50	2
1912/13	44	—	—	—	—	—	—	22	12	13	13	12	6	7	6	5	5	38	1
1913/14	63	—	—	—	—	—	—	—	27	16	15	11	10	10	8	7	4	58	1
1914/15	74	—	—	—	—	—	—	—	—	33	26	19	14	13	13	13	13	61	0
1915/16	67	—	—	—	—	—	—	—	—	—	36	30	22	19	17	16	15	51	1
1916/17	89	—	—	—	—	—	—	—	—	—	—	53	33	28	21	21	17	72	0
1917/18	83	—	—	—	—	—	—	—	—	—	—	—	43	36	29	21	20	59	4
1918/19	90	—	—	—	—	—	—	—	—	—	—	—	—	69	54	42	39	48	3
1919/20	98	—	—	—	—	—	—	—	—	—	—	—	—	—	73	58	53	45	0
1920/21	90	—	—	—	—	—	—	—	—	—	—	—	—	—	—	58	54	35	1
1921/22	103	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	82	21	0

Table A5.—Statistics of Ultimate Results

Cases in the Sputum of which T.B. were not *demonstrated in the Sanatorium*

All cases considered together

Year of Discharge.	Number Discharged	Number reported "Well" or "Alive" in each successive year after Discharge																Number Dead in 1923	Number lost sight of in 1923
		1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923		
1906/07	24	23	20	19	19	18	15	14	16	18	19	21	21	19	18	18	18	3	3
1907/08	51	—	49	47	45	40	33	34	35	37	40	39	38	37	35	36	34	13	4
1908/09	66	—	—	57	45	41	33	47	40	38	40	44	43	44	44	42	43	20	3
1909/10	59	—	—	—	54	49	44	48	42	47	49	49	43	43	42	42	42	13	4
1910/11	48	—	—	—	—	42	32	38	37	40	38	37	34	34	33	31	30	14	4
1911/12	48	—	—	—	—	—	36	32	36	34	36	36	29	31	27	27	27	17	4
1912/13	31	—	—	—	—	—	—	29	28	25	28	28	24	26	25	24	25	5	1
1913/14	41	—	—	—	—	—	—	—	37	31	37	36	33	35	33	32	33	6	2
1914/15	35	—	—	—	—	—	—	—	—	28	30	29	31	24	23	20	22	12	1
1915/16	59	—	—	—	—	—	—	—	—	—	53	51	47	47	44	45	44	12	3
1916/17	58	—	—	—	—	—	—	—	—	—	—	56	53	53	47	50	47	4	7
1917/18	117	—	—	—	—	—	—	—	—	—	—	—	108	105	102	95	98	12	7
1918/19	119	—	—	—	—	—	—	—	—	—	—	—	—	115	112	109	107	10	2
1919/20	78	—	—	—	—	—	—	—	—	—	—	—	—	—	75	74	72	5	0
1920/21	93	—	—	—	—	—	—	—	—	—	—	—	—	—	—	66	66	0	0
1921/22	66	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	92	1	0

Table A6.—Statistics of Ultimate Results

Cases in the Sputum of which T.B. **were not** *demonstrated in the Sanatorium*

Group I considered separately

Year of Discharge	Number Discharged	Number reported "Well" or "Alive" in each successive year after Discharge																Number Dead in 1923	Number lost sight of in 1923
		1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923		
1906/07	16	16	14	14	14	13	10	10	11	13	13	15	15	14	13	13	14	1	1
1907/08	31	—	30	30	29	25	23	23	22	24	26	25	24	24	22	23	23	6	2
1908/09	39	—	—	36	28	27	19	31	25	23	25	28	27	28	29	27	28	8	3
1909/10	42	—	—	—	39	36	32	36	30	34	35	35	32	33	32	32	32	6	4
1910/11	37	—	—	—	—	33	25	30	29	31	29	29	27	27	26	24	24	10	3
1911/12	26	—	—	—	—	—	22	22	23	20	21	21	20	20	18	18	18	7	1
1912/13	19	—	—	—	—	—	—	18	17	16	18	17	14	15	14	15	15	3	1
1913/14	28	—	—	—	—	—	—	—	26	21	28	27	25	26	25	24	25	1	2
1914/15	17	—	—	—	—	—	—	—	—	13	15	14	9	13	11	11	12	5	0
1915/16	32	—	—	—	—	—	—	—	—	—	31	32	29	29	27	28	27	3	2
1916/17	34	—	—	—	—	—	—	—	—	—	—	33	31	33	28	31	29	1	4
1917/18	51	—	—	—	—	—	—	—	—	—	—	—	47	48	46	42	44	3	4
1918/19	35	—	—	—	—	—	—	—	—	—	—	—	—	34	34	33	33	0	2
1919/20	50	—	—	—	—	—	—	—	—	—	—	—	—	—	47	48	47	3	0
1920/21	48	—	—	—	—	—	—	—	—	—	—	—	—	—	—	48	48	0	0
1921/22	51	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	50	1	0

Table A7.—Statistics of Ultimate Results.

Cases in the Sputum of which T.B. **were not** *demonstrated in the Sanatorium*

Group II considered separately

Year of Discharge	Number Discharged	Number reported "Well" or "Alive" in each successive year after Discharge																Number Dead in 1923	Number lost sight of in 1923
		1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923		
1906/07	7	6	5	5	5	5	5	4	5	5	6	6	6	5	5	5	4	1	2
1907/08	18	—	18	15	14	13	10	11	12	13	13	13	13	12	12	12	10	6	2
1908/09	25	—	—	20	16	13	14	15	14	14	14	15	15	15	14	14	14	11	0
1909/10	15	—	—	—	13	11	10	10	11	12	12	12	9	9	9	9	9	6	0
1910/11	10	—	—	—	—	8	8	8	8	9	9	8	7	7	7	7	6	3	1
1911/12	20	—	—	—	—	—	14	9	12	13	14	14	8	10	9	8	8	9	3
1912/13	9	—	—	—	—	—	—	9	9	7	8	8	8	8	8	6	7	2	0
1913/14	11	—	—	—	—	—	—	—	9	9	8	8	7	8	7	7	7	4	0
1914/15	14	—	—	—	—	—	—	—	—	13	13	13	10	9	10	8	9	5	0
1915/16	23	—	—	—	—	—	—	—	—	—	19	16	15	16	15	15	15	7	1
1916/17	24	—	—	—	—	—	—	—	—	—	—	23	22	20	19	19	18	3	3
1917/18	59	—	—	—	—	—	—	—	—	—	—	—	55	51	50	48	48	7	4
1918/19	71	—	—	—	—	—	—	—	—	—	—	—	—	68	67	68	68	3	0
1919/20	20	—	—	—	—	—	—	—	—	—	—	—	—	—	20	20	20	0	0
1920/21	14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14	14	0	0
1921/22	28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	28	0	0

Table A8.—Statistics of Ultimate Results,

Cases in the Sputum of which T.B. **were not** *demonstrated in the Sanatorium*

Group III considered separately

Year of Discharge	Number Discharged	Number reported "Well" or "Alive" in each successive year after Discharge																Number Dead in 1923	Number lost sight of in 1923
		1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923		
1906/07	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
1907/08	2	—	2	2	2	2	0	0	1	0	1	1	0	1	1	1	1	1	0
1908/09	2	—	—	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
1909/10	2	—	—	—	2	2	2	1	1	2	2	2	1	1	1	1	1	1	0
1910/11	1	—	—	—	—	1	1	0	0	0	0	0	0	0	0	0	0	1	0
1911/12	2	—	—	—	—	—	1	1	1	1	1	1	1	1	0	1	1	1	0
1912/13	3	—	—	—	—	—	—	2	2	2	2	3	2	3	3	3	3	0	0
1913/14	2	—	—	—	—	—	—	—	2	1	1	1	1	1	1	1	1	1	0
1914/15	4	—	—	—	—	—	—	—	—	2	2	2	2	2	2	1	1	2	1
1915/16	4	—	—	—	—	—	—	—	—	—	3	3	3	2	2	2	2	2	0
1916/17	0	—	—	—	—	—	—	—	—	—	—	0	0	0	0	0	0	0	0
1917/18	7	—	—	—	—	—	—	—	—	—	—	—	6	6	6	5	5	2	0
1918/19	13	—	—	—	—	—	—	—	—	—	—	—	—	13	11	8	6	7	0
1919/20	8	—	—	—	—	—	—	—	—	—	—	—	—	—	8	6	6	2	0
1920/21	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	4	0	0
1921/22	14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14	0	0

Table B1.—Statistics of Ultimate Results

Cases in the Sputum of which T.B. **were** *demonstrated in the Sanatorium*

Condition on			Discharged during the Year																Condition in 1923
Admission	Discharge		1906/07	1907/08	1908/09	1909/10	1910/11	1911/12	1912/13	1913/14	1914/15	1915/16	1916/17	1917/18	1918/19	1919/20	1920/21	1921/22	
Group I	Disease Arrested		9	13	11	7	8	5	5	4	4	7	12	—	3	10	24	13	Alive
			6	10	2	6	3	7	3	3	5	1	—	2	—	1	—	—	Dead
			1	—	1	—	—	2	—	—	—	—	—	1	—	—	—	—	Lost sight of
	Much Improved		5	11	2	14	14	6	3	6	7	2	9	9	5	12	16	11	Alive
			8	6	9	9	13	10	3	3	2	4	—	—	—	2	2	—	Dead
			—	—	—	—	1	1	—	—	—	—	—	—	1	1	1	—	Lost sight of
	Improved		—	2	—	1	—	—	—	—	—	—	1	1	1	3	—		Alive
			—	1	1	3	1	—	—	1	1	—	1	—	—	—	1	—	Dead
			—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	Lost sight of
	Stationary or Worse		—	—	—	1	—	1	—	1	1	2	—	1	—	—	—	—	Alive
			1	2	2	2	4	1	1	1	—	—	1	1	—	—	1	—	Dead
			—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Lost sight of
Group II	Disease Arrested		4	—	8	9	10	13	12	9	10	4	7	4	7	8	9	8	Alive
			2	2	4	4	5	7	11	6	4	3	3	1	—	—	2	—	Dead
			—	1	1	1	2	1	—	—	—	—	—	—	1	1	1	—	Lost sight of
	Much Improved		10	22	18	10	9	10	13	24	23	9	37	33	47	33	33	30	Alive
			21	24	18	33	40	34	22	24	30	27	27	18	14	14	10	2	Dead
			1	2	1	1	2	1	2	2	1	—	1	4	4	1	—	—	Lost sight of

	Improved	3	—	5	6	1	5	4	5	2	7	3	9	7	6	4	4	Alive
		9	14	21	19	12	14	15	7	7	7	8	6	9	4	1	3	Dead
		—	1	—	—	—	2	1	—	—	—	—	—	1	—	—	—	Lost sight of
	Stationary or Worse	—	1	—	—	2	1	3	2	8	2	3	2	3	1	1	1	Alive
		6	18	18	16	17	20	18	16	14	12	9	8	5	1	1	—	Dead
		1	—	—	—	—	2	—	—	—	—	1	1	—	—	—	—	Lost sight of
Group III	Disease Arrested	—	—	—	—	—	2	—	—	—	—	—	—	—	3	6	8	Alive
		—	—	2	—	—	—	1	1	—	1	1	—	—	—	—	—	Dead
		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Lost sight of
	Much Improved	2	3	1	2	2	—	—	3	6	13	10	14	29	23	28	55	Alive
		8	16	9	9	9	6	5	6	14	10	24	20	17	15	8	9	Dead
		—	1	—	—	—	1	1	—	—	1	—	2	3	—	—	—	Lost sight of
	Improved	1	2	2	1	—	—	2	—	3	2	3	3	8	23	19	17	Alive
		10	21	27	17	17	13	9	10	16	12	23	17	14	15	20	9	Dead
		—	—	—	—	—	1	—	—	—	—	—	1	—	—	1	—	Lost sight of
	Stationary or Worse	—	—	1	—	1	1	3	1	4	—	4	3	2	4	1	2	Alive
		17	33	41	21	23	31	23	41	31	28	24	22	17	15	7	3	Dead
		—	—	—	—	—	—	—	1	—	—	—	1	—	—	—	—	Lost sight of
	Summary	34	54	48	51	47	44	45	55	68	48	89	79	112	126	141	150	Alive
		88	147	154	139	144	143	111	119	124	105	121	95	76	67	53	26	Dead
		3	5	3	2	6	11	4	3	1	1	2	10	10	3	3	0	Lost sight of
	Total -	125	206	205	192	197	198	160	177	193	154	212	184	198	196	197	176	

Table B2.—Statistics of Ultimate Results

Cases in the Sputum of which T.B. were not *demonstrated in the Sanatorium*

Condition on		Discharged during the Year																Condition in 1923
Admission	Discharge	1906/07	1907/08	1908/09	1909/10	1910/11	1911/12	1912/13	1913/14	1914/15	1915/16	1916/17	1917/18	1918/19	1919/20	1920/21	1921/22	
Group I	Disease Arrested	12	19	23	29	24	17	12	6	6	26	16	35	24	36	45	46	Alive
		1	4	7	5	10	7	1	—	1	3	1	3	—	3	—	1	Dead
		1	2	3	4	1	1	1	—	—	1	3	3	2	—	—	—	Lost sight of
	Much Improved	2	4	2	2	—	—	—	17	4	1	13	8	8	6	1	2	Alive
		—	1	1	—	—	—	2	1	4	—	—	—	—	—	—	—	Dead
		—	—	—	—	1	—	—	1	—	1	1	—	—	—	—	—	Lost sight of
	Improved	—	—	2	—	—	1	—	2	2	—	—	1	—	4	2	2	Alive
		—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	Dead
		—	—	—	—	—	—	—	1	—	—	—	1	—	—	—	—	Lost sight of
	Stationary or Worse	—	—	1	1	—	—	3	—	—	—	—	—	1	1	—	—	Alive
		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Dead
		—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	Lost sight of
Group II	Disease Arrested	3	5	6	4	3	3	3	1	1	8	7	12	26	12	11	22	Alive
		1	2	2	2	2	3	1	1	—	3	1	3	1	—	—	—	Dead
		1	1	—	—	1	3	—	—	—	1	1	4	—	—	—	—	Lost sight of
	Much Improved	1	4	3	4	2	4	1	2	8	3	7	27	32	3	1	3	Alive
		—	3	6	4	1	5	1	2	3	2	2	1	1	—	—	—	Dead
		1	1	—	—	—	—	—	—	—	—	2	—	—	—	—	—	Lost sight of

	Improved	—	1	4	—	—	—	1	3	—	—	3	6	6	5	1	3	Alive
		—	—	1	—	—	1	—	1	1	1	—	2	—	—	—	—	Dead
		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Lost sight of
	Stationary or Worse	—	—	1	1	1	1	2	1	—	4	1	3	4	—	1	—	Alive
		—	1	2	—	—	—	—	—	1	1	—	1	1	—	—	—	Dead
		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Lost sight of
Group III	Disease Arrested	—	—	—	—	—	—	1	—	—	—	—	1	1	1	2	9	Alive
		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Dead
		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Lost sight of
	Much Improved	—	1	1	1	—	—	2	1	1	1	—	3	3	4	1	1	Alive
		1	1	1	—	—	1	—	—	—	—	—	2	3	1	—	—	Dead
		—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	Lost sight of
	Improved	—	—	—	—	—	1	—	—	—	1	—	1	—	—	1	4	Alive
		—	—	—	1	1	—	—	—	—	1	—	—	2	1	—	—	Dead
		—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	Lost sight of
	Stationary or Worse	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	Alive
		—	—	—	—	—	—	—	1	2	1	—	—	2	—	—	—	Dead
		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Lost sight of
	Summary	18	34	43	42	30	27	25	33	22	44	47	97	107	72	66	92	Alive
		3	13	20	13	14	17	5	6	12	12	4	12	10	5	0	1	Dead
		3	4	3	4	4	4	1	2	1	3	7	8	2	1	0	0	Lost sight of
	Total -	24	51	66	59	48	48	31	41	35	59	58	117	119	78	66	93	

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