A Study of the Vital Capacity in Pulmonary Tuberculosis, with observations on the relation to prognosis of Physique and Weight, considered independently, and in association with the Vital Capacity.

By

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The prognosis in Pulmonary Tuberculosis partakes of the complexity of prognosis in general; but dealing with this disease which is chief among those characterized by chronicity, of which the duration often extends to years in fatal cases, and which manifests its effects in practically every function of the body, the problem becomes one of more than exceeding difficulty. The physician must not only diagnose the presence of disease. He must gauge its extent, its degree of activity, the reaction of the patient, and most of all, the extent of damage which has been done to the parts and tissues involved, which find their reflection in the extent of damage to the body generally. He is faced with the question of what has been the normal for the patient affected: for it is only from a reasoned estimate of the normal that one can hope to approach an estimate of the existing abnormality. As he sums up the abnormality he finds the still wider question opened up, of how much of the abnormality is the cause of, and how much is the result of, the disease present.

In this investigation no attempt has been made to attack these questions from the usual clinical standpoints. These must always be our main grounds of opinion, but their very dependence on the experience and personal bias of the physician render them often two edged weapons. The investigation has taken account of certain purely external phenomena and the attempt is made to correlate these with their proper significance. Of these the main is the Vital Capacity, the others being certain body measurements which have a direct bearing upon this, all however giving indication of the normal and suggestion of the degree of abnormal variation.

Vital Capacity.

The Vital Capacity is defined by Hutchinson as "the greatest voluntary expiration following the deepest inspiration", and he points out that it includes the reserve air, the breathing air, and the complemental air. It includes in fact the maximum amount of air which can be drawn into, and consequently expelled from, the lungs, and does not affect the residual air which can never be expelled from the lungs during life.

Although not the first investigator in this field, Hutchinson was the first to realize that the Vital Capacity is not absolute, but is dependent upon other functions of the body: and his extensive and highly accurate observations led him to certain definite and reasoned conclusions. The bearing of his observations upon disease was accurately gauged by him and the estimation of the Vital Capacity in the diagnosis of Pulmonary Tuberculosis was proved of value.

He realized that this estimation was of a complicated nature and that other systems than the respiratory might react upon it: but he pointed out that general clinical observations rarely found any difficulty in excluding or including any extra-thoracic influence. He further analyzed the power of the inspiratory and expiratory muscles and indicated the extent to which lack of muscular tone, and excessive or defective development of the respiratory muscles might affect the observations.

For the sake of lucidity of argument I shall detail Hutchinson's conclusions.

"The Vital Capacity of man" he says "may be considered as a constant quantity, but this quantity is disturbed directly, or modified by, four circumstances -

(1) By Height (2) By Weight (3) By Age (4) By Disease".

(1) "For every inch of height (from 5 ft. to 6 ft.) eight additional cubic inches of air at 60°F are given out by a forced expiration"

(2) "The Vital Capacity increases nearly in the ratio of 1 cubic inch per pound from 105 to 155 pounds, and from 155 to 200 pounds this increase is overpowered, and there is a loss of 39.5 cubic inches as the effect of weight"

He adds later "I have not found the Vital Capacity altered in healthy men below the mean weight"

(3) "From 15 to 35 years of age the Vital Capacity is increased, and from 35 to 65 years of age it is decreased in the progression of 19, 11, & 13 cubic inches"

(4) His observations upon disease deal chiefly with Pulmonary Tuberculosis, and these I refer to a later discussion.

It is appropriate here to mention his statements regarding the influence of chest circumference "Contrary" he says "to what I ever expected (and agreeable to the opinion of others) I do not find there exists any direct relation between the circumference of the chest and the Vital Capacity" He believed, however, that chest mobility governs Vital Capacity, but did not elucidate any definite guiding relationships "The most remarkable relation of the circumference of the chest is to that of weight, with which it increases in an exact arithmetical progression of one inch for every ten pounds".

More recently Hutchinson's work has been reviewed by Dreyer who has reached a series of conclusions which, though varying from those reached by Hutchinson, do not interfere with the great significance of the results of the latter's pioneer labours. Dreyer has found that the discrepancy, which exists between his results, and those attained by Hutchinson, is not of a fundamental nature, but depends upon a mathematical error committed by Hutchinson in the analysis and compilation of his research. His results have led him to the establishment of definite relationships between Vital Capacity and body surface, body weight, stem length and chest measurement. He explains the failure of his conclusions to correspond with Hutchinson's very definite findings regarding the relation of Vital Capacity to height, and the indefinite relation of Vital Capacity to weight.

Dreyer's results can be summarized thus.

(1) The Vital Capacity is a function of the weight.

Having previously proved a definite relationship between weight and body surface, which can be expressed in the formula $\frac{W^n}{S} = K_2$, where W = body weight in grammes, S =

S = body surface in square centimetres, and the power n, is approximately 0.72, K_2 being a constant: he propounds the formula $\frac{W^n}{V.C.} = K.$, V.C. here being Vital Capacity and K, being a constant. From this he establishes the mathematical conclusion that the Vital Capacity is a simple function of the body surface. In the case of the formula $\frac{W^{.72}}{VC} = K$, he proves that K, averages 0.690. From this follows the formula $V.C. = \frac{W^{.72}}{0.690}$, by which the Vital Capacity can be gauged in terms of the weight, and consequently body surface. He has found the percentage of error in the use of this formula to average 1.85.

(2) The relation between the Vital Capacity and stem length can be correctly expressed by the formula $\frac{l^n}{VC} = K_3$, where l ($=\ell$) is the stem length in centimetres, K_3 is a constant, and the power n is approximately 2. He further finds that K_3 averages 1.9. From this it follows that the formula $V.C. = \frac{l^2 (=\ell^2)}{1.9}$ expresses the Vital Capacity in terms of the stem length. He has found the percentage of error here to average 5.76.

(3) The relation between Vital Capacity and circumference of chest can be expressed by the formula $\frac{Ch^n}{V.C.} = K_4$, where Ch is the chest measurement in centimetres, K_4 is a constant, and the power n is approximately 2. He finds that K_4 averages 1.82. From this it follows that the formula $VC = \frac{Ch^2}{1.82}$ gives an expression of the Vital Capacity in terms of the chest measurement. The percentage error observed here was 5.80.

(4) Finally the Vital Capacity can be expressed in terms of the stem length and chest measurements combined, the formula $VC = \frac{\ell \times Ch}{1.85}$ yielding results which show a percentage deviation from observation of 4.44.

The Vital Capacity of any given case can thus be gauged under four heads by the following formulae.

(1)	Weight	:-	$VC = \frac{W^{.72}}{.690}$
(2)	Stem length	:-	$VC = \frac{l^2}{1.9}$
(3)	Chest circumference	:-	$VC = \frac{Ch^2}{1.82}$
(4)	Combined Stem length and chest	:-	$VC = \frac{l \times Ch}{1.85}$

Means are thus provided of estimating the normal, and very accurately gauging the degree of abnormal variation in any particular individual.

Dreyer's results were obtained on a comparatively small number of cases (16), but he has confirmed them on an extensive series of observations made by Schuster on 959 Oxford Undergraduates. He found that the results obtained by the application of his formulae to Schuster's observations and measurements, corresponded exactly with the results obtained in his own limited number of cases.

In the concluding paragraph of his paper he points out

out the possibility of information in applying these results to the study of Pulmonary Tuberculosis, and states that from their use he has found it possible to accurately grade varying types and stages of the disease.

Basis of subsequently recorded results.

The work recorded herein has been carried out in the Corporation of Glasgow Sanatorium, Ochil Hills, and has been based upon the results of Dreyer's investigation. In all, 223 male cases, of ages ranging from 7 to 56 years, have been investigated; the investigations varying from single observations in cases where residence was a brief one, to as many as 16 observations in cases which were under treatment for a protracted period. The aim has been to observe all patients fortnightly during their period of residence, this being considered a period reasonbly long to allow of definite variations of improvement or retrogression taking place. A certain number have been observed weekly; but no more conclusive information has been obtained by that procedure than by the method of fortnightly examination.

Of the 223 cases investigated, 28 were examined in detail once only. The majority of this number consisted of patients who refused to remain in the Sanatorium, or who had just been admitted when the observations were nearing completion, the remainder consisting of patients whose stay was terminating when the series of observations was begun. Altogether 112 patients were observed throughout their complete period of residence; while observations extending over varying uncompleted periods of residence were made in 83 cases, these consisting of patients who were in the course of a period of residence when the observations were begun, and patients who were still in the Institution when the observations were closed down. Of this last group, I propose to class those who had been five weeks in residence as having completed treatment, my object being to attempt to contrast the results of treatment over varying periods in terms of Vital Capacity changes. Any period of less than five weeks is too short to allow of any definite results being obtained.

Method of Investigation.

The method employed in all cases was the following. Patients are admitted to the Institution on Friday evenings, and the physical examinations and investigations of the case histories were made on the Saturday mornings. If the number of admissions was large, the examinations were spread over Sunday and Monday mornings, the object being in all cases to allow abundant time for careful examination and classification. The case history having been taken, a very careful and detailed physical examination by the ordinary means was made, and classification on the Turban-Gerhardt scale entered on the case sheet. As a routine part of the examination the chest measurement and mobility were always observed. The utility of the Turban-Gerhardt scheme of classification has recently been very severely criticized; but no one of the critics has succeeded in evolving a scheme, which offers a better solution of a problem, which is at the best unsatisfactory.

A personal fallacy was always present. On account of the isolation of the Sanatorium, and the absence of any other resident physicians, corroboration of my classifications was not possible. I can only claim that they were carried

carried out with the minutest care, and with such skill as constant examination of such cases naturally develops.

After the completion of the physical examination, the following observations were made. (I may note parenthetically that the time occupied in recording the results of physical examination affords time for the patient to re-clothe himself and rest, an important point in securing accuracy of the subsequent observations). (1) Temperature of room, (2) Vital Capacity, (3) Standing height, (4) Stem length. The information gained under these headings was entered on a special sheet for each patient, and the appropriate calculations thus made after the patient had been carefully classified by the ordinary physical methods.

Subsequent observations of Vital Capacity were made weekly or fortnightly. The observations were made at 9.30 a.m., one and a half hours after the patient had breakfasted, and before he had undergone any fatigue for that day. The effects of a heavy meal and of bodily fatigue were thus obviated, important points in obtaining relevant readings. The temperature of the examination room was always noted for the purpose of Vital Capacity temperature correction.

Weights of patients were taken weekly, and the Vital Capacity observations of each patient made on the day of his weighing. Weighing was carried out before breakfast, after the patient had emptied his bladder. Each patient wore a uniform amount of clothing, the weight of which was known. Deduction of this from the total weight gave the naked weight.

Routine physical examination of each patient was made every two months, unless any indication for an intermediate examination presented itself. During these examinations, chest measurement and expansion were again noted and the stem length in boys observed. Any alterations under these headings were noted on the appropriate record sheets.

The following details were observed in making the observations.

(1) Temperature of Room. This was taken by an ordinary room thermometer graduated in the Fahrenheit and Centigrade scales. The thermometer was placed on the table on which the spirometer stood, the latter being always kept in the room in which the readings were taken. All readings of Vital Capacity were corrected to a temperature of 15°C.

(2) Vital Capacity. In the early stages of the investigation a spirometer of the water type, manufactured by the Oliver-Pell Manufacturing Company was used. As this spirometer offered a certain amount of resistance to expiration it was replaced by a spirometer of the dry type manufactured by Messrs. Boullite of Paris. This was found to be a very satisfactory and reliable instrument.

Observations were made with the patient sitting upright on a stool, the position of the spirometer being so regulated by depression or elevation that the patient could carry out the test with comfort. This was found to be a most important point. To obtain complete expansion of the chest, the trunk is held straight and the expanding thorax thrown forward; while complete expiration can only be obtained by a degree of bending of the trunk which allows the necessary collapse of

of the bony walls of the chest to take place. If the level of the spirometer is not carefully adapted to the patient, accurate results cannot be obtained.

Each patient was shown carefully how to proceed, the instruction including a demonstration of how to expand and contract the chest, a point by no means superfluous. Four observations were made at a time in each case, and the highest reading recorded. It was found that the taking of a greater number at a time led to fatigue, the greatest reading being usually obtained among the first three. After corrections had been made for temperature, the reading was entered on the patient's record sheet.

During the complete course of these investigations, some 6,000 (six thousand) observations were made, and I did not see any bad effects resulting from the test. Having anticipated the possibility of the test being not altogether free from danger I was pleasantly surprised and reassured on the point.

(3) Chest Measurement. The measurement taken was that of the chest during quiet respiration, the circumference measured being that lying on the nipple level. At the same time the mobility of the chest, i.e. the difference between extreme expansion and extreme contraction at this level, was noted.

(4) Stem length. The stem length was taken by the method recommended by Dreyer, the patient sitting on the floor of the examining room, with knees bent, sacrum pressed against foot of scale, and trunk maintained as straight as possible.

(5) The standing height without footgear was taken in the usual way.

The following extracted admission record of a patient in the series shows the information gained and tabulated by these observations.

Case No. 66 A.M^{c}C. aet. 26 H.169.5cms. Admission 1st

Date	V.C. in ccs.	Weight in Gms = W	V.C. Calc. in W (ccs)	Stem length = l	V.C. Calc. in l (ccs)
25/11/19	3300	59195	3955	90.5	4311

Chest Meas. = Ch (cms)	Exp.	V.C. Calc. in Ch (ccs.)	V.C. Calc. in l & Ch (ccs.)
87.0	4.5	4158	4256

An exact record of the patient's external physical condition was thus recorded, and the data provided for an estimate of the degree of variation from the normal under the various heads.

Application of Facts ascertained by the foregoing methods, to cases of Pulmonary Tuberculosis.

In the perfectly normal individual the facts elicited

elicited under the various heads would correspond with each other. Thus in the case of a man of weight and chest measurement proportionate to his height or stem length, the Vital Capacity estimations would be closely approximate to one another. Pulmonary Tuberculosis is essentially a wasting disease and serious disturbances of two of the factors, weight and chest measurement, occur. With these there is often deformity of the bony support of the body, the main deformity being a general kyphotic curve of the spinal column, not the result of disease of the bone, but of general muscular weakness, leading to failure to maintain the trunk erect. In a proportion of cases the physically undeveloped portion of the population are the victims of the disease (I am fully alive to the intricacies of such a statement, for my personal views incline to the theory of infancy infection, and I keep an open mind on the question of how far latent tubercular infection is responsible for maldevelopment), and it is not common to find in these people a normally straight spine with its proper ratio of spinal curves. A correct stem length is then impossible to obtain, and the third and most stable factor ~~xxxxxx~~ becomes of uncertain value. Fortunately the degree of variation of this factor is rarely great, and, in the present series of cases, ~~has not~~ the point bulked sufficiently largely to interfere with the accuracy of the conclusions drawn.

Patients sent to this Institution are selected as being suitable for Sanatorium treatment and are essentially cases which it is hoped to restore to a better degree of working capacity. The effects of advanced active disease have not on the whole been prominent. It is in cases of this type that accurate prognosis is of value: the advanced bedridden case obtrudes its prognosis upon one.

At this juncture it appears to be opportune to face a point which has a very definite bearing upon estimation of the normal in an abnormal individual. Dreyer's figures supported by Schuster's investigations, have been worked out upon what is probably the most physically fit section of the community, the athletic gentleman class: and Dreyer himself points out that they showed a physical fitness of actually 9 per cent more than Hutchinson's highest class, the Chatham recruits. Hutchinson's figures for different classes of the community are available; but conditions of life and work have changed since their compilation, and their accuracy under present day conditions is open to doubt.

The method adopted in the present series, which is drawn primarily from a mixed industrial population, is a purely arbitrary one; but it at least does not assume too great a degree of original fitness in the average individual examined. Dreyer infers that types differ in perfect health. "If" he says "for instance, a person is found to have too big a stem length in proportion to his weight, the circumference of chest is usually too small in proportion to weight". He gives this in support of the greater accuracy obtained by taking both stem length and chest circumference into consideration in the determination of Vital Capacity.

In the great majority of the present series of cases the chest measurement is to a certain undeterminable extent diminished. For estimation of the original Vital Capacity I have considered the existing chest measurement as normal for the individual; and although the different estimated

estimated Vital Capacities have been worked out in terms of stem length, chest measurement, and both combined, I have considered that derived from the combined stem length and chest measurement as the probable normal, and have based my comparisons accordingly. As the class from which these patients were drawn probably shows a smaller normal Vital Capacity than that of Dreyer's series, I consider that this method offers a fair prospect of approaching the probable normal.

At the same time it must be noted that a very large percentage of the adult series were discharged soldiers. In the case of those whose disease was not actively present at the date of enlistment, the army training must have considerably increased the Vital Capacity above its pre-army level.

In such healthy cases, with small relative chest measurements, as I have observed, I have found that the Vital Capacity corresponds closely with the Vital Capacity calculated in terms of the stem lengths, and considerably exceeds that calculated in terms of the combined stem lengths and chest measurements: so that in this series I believe that a Vital Capacity calculated on the combined stem length and chest measurement probably expresses in the great majority of the cases a Vital Capacity which makes a fair degree of allowance for an initial social class diminution. Such a Vital Capacity is intermediate between that calculated in terms of the stem length alone, which represents the highest grade of fitness, and that calculated in terms of the diminished chest measurement, which is not on the average consistent with any degree of health. There are fallacies here connected with the varying physique of the patients, but until these points are elucidated in modern populations, it is difficult to suggest any more reasonable standard of comparison.

This question of varying physique is an important one and demands consideration.

Physical types can conveniently be divided into three classes according to the the relation of the chest circumference to the stem length. In class I the chest measurement is slightly less than the stem length. Dreyer mentions that normally the chest measurement is 1.5% less than the stem length and may exceed it. In class II the chest measurement falls considerably below the stem length . This type is the thin, small chested, individual and includes the person of the so called habitus phthisicus. In class III the chest measurement exceeds the stem length, this forming the sturdy stocky type of individual, remarkable often for great voluntary muscular power. In health an individual falls into one of these types, and the recognition of a patient's original type is important. The types naturally merge into one another, but some such basis of classification is useful. In table II a full analysis of the cases of the series under these headings is made. I shall return later to a discussion of the point.

Table I has been constructed from 76 men who were able to state definitely what their highest weights, prior to the onset of their lung disease, had been. These cases were not selected in any way, but were simply those of the total number of patients in the Institution in the first week of May 1920 who were able to make a definite statement on the point. Details were taken of the clothes worn when the weights were

TABLE I.

A - Initials.
B - Age.
C - Highest Known Weight.
D - Weight on Admiss.
E - % Dim.of Wt.on C.
F - Chest Measurement in Cms.
G - Stem length in Cms.
H - % Diff.of chest measurement on stem length.

Numbers apply to this Table only, and are not the Series numbers.

	A	B	C	D	E	F	G	H
			st. lbs.	st. lbs.				
1	W.I.	32	11. 6	11. 8	+1.2	90	90	Nil
2	J.S.	28	11. 0	9.12	10.3	89	86.5	+2.8
3	W.B.	24	10. 9	9. 0	15.4	88.5	85.5	+3.5
4	D.C.	45	11.11	10.12	7.9	96	86.5	+11.0
5	F.A.	53	10.4	8.10	15.3	88.5	86.	+0.6
6	L.B.	21	7.12	7.10	1.8	8.3	83.5	-0.6
7	D.R.	44	8.5	7.12	6.0	86.5	87.5	-1.2
8	N.McA.	39	11.4	9.12	12.6	90.	92.5	-1.6
9	A.M.	39	9.12	8.0	19.0	84	86	-2.3
10	A.C.	20	9.10	9.7	2.2	85.5	87.5	-2.3
11	J.M.	18	7.9	6.13	9.3	76.5	78.5	-2.6
12	C.J.	29	10.10	10.2	5.2	88.5	91	-2.7
13	O.McC.	28	9.12	8.10	11.6	83	85.5	-2.9
14	R.B.	26	8.9	8.10	Nil	82	84.5	-3
15	D.McB.	23	7.0	6.10	4.1	78.5	81	-3
16	J.D	34	10.9	9.5	12.1	86	89	-3.4
17	W.M.	24	9.3	9.1	1.7	83	86	-3.5
18	J.C.	51	10.10	7.11	27.3	84	87	-3.5
19	D.H.	36	8.11	7.1	19.5	80.5	82.5	-3.6
20	A.A.	45	10.7	8.9	17.2	85.	88.5	-3.9
21	A.McC.	26	10.2	9.9	4.9	87	90	-3.9
22	J.G.	46	10.7	9.1	13.6	85.5	89	-3.9
23	M.McL.	36	10.7	9.0	14.2	86.5	90.	-3.9
24	J.T.	27	7.7	7.3	3.9	83.	86.5	-4.1
25	J.M.	34	10.2	8.5	17.6	87.5	91.5	-4.4
26	J.C.	45	11.0	10.1	8.4	88.5	93.	-4.8
27	W.B.	20	11.3	10.12	3.2	89	93.5	-4.8
28	J.S.	32	10.7	9.12	6.1	86	90.5	-5
28	D.M.	20	9.12	9.12	Nil	87.	92.	-5.5.
30	J.B.	35	10.7	9.8	8.9	86.5	91.5	-5.5
31	R.N.	40	12.0	10.5	13.7	84.5	89.5	-5.6
32	J.S.	25	10.0	9.0	10.0	82.5	87.5	-5.7
33	J.McD.	34	8.5	8.2	2.5	91.5	86.5	-5.8
34	J.M.	27	7.13	7.12	0.9	78.5	83.5	-6
35	L.J.	31	9.10	9.4	4.4	84.5	90.	-6.1
36	J.T.	41	10.12	10.2	6.5	82.5	88.	-6.3
37	J.McK.	52	11.6	10.3	10.7	86	92	-6.5
38	M.S.	35	10.3	9.9	5.6	88.	94	-6.4
39	J.McG.	42	8.4	8.4	Nil	80.5	86.5	-6.9
40	R.S.	26	9.3	8.6	8.5	81	87	-6.9
41	M.W.	29	8.2	8.2	Nil	80.5	86.5	-6.9
42	R.C.	27	8.10	7.12	9.9	79	85	-7
43	C.McG	25	10.5	8.5	19.3	84.5	91	-7.2
44	D.R.	24	8.13	8.2	8.9	81	87	-7.4
45	H.A.	40	9.10	8.0	17.6	81	87.5	-7.5
46	D.M.	30	10.8	10.2	4.0	86	93	-7.6
47	J.H.	32	11.13	9.7	20.3	84	91	-7.7
48	J.L.R.	36	10.3	9.10	4.8	84.5	91.5	-7.8
49	C.M.	27	9.5	8.11	6.1	81.5	88.5	-7.9
50	J.B.	55	7.3	7.3	Nil	75	81.5	-8
51	J.D.	27	8.5	7.8½	9.4	79	86	-8.1
52	J.McE.	25	9.3	9.3	Nil	84	91.5	-8.2
53	J.W.	25	9.3	8.3	11.0	82.5	90.0	-8.4
54	C.B.	56	10.8	8.8	19.0	84	92	-8.7
55	T.B.	25	11.7	9.1	21.1	83.5	92	-9.3
56	J.D.	27	9.10	9.0	7.9	82.5	91.	-9.4
57	D.B.	20	9.2	9.2	Nil	82.5	91	-9.4

T A B L E I. (Contd).

A		B	C	D	E	F	G	H
			st.lbs.	st.lbs.				
58	E.McK.	50	9.10	8.1	16.9	78	86	-9.3
59	H.F.	33	10.8	8.6	20.2	81	89.5	-9.5
60	W.S.	44	7.8	7.6	1.9	79	87.5	-9.7
61	G.M.	36	9.13	9.6	5.0	83	92	-9.8
62	G.H.	19	9.8	9.1	5.2	82.5	92	-10
63	W.W.	26	8.12	6.5	28.2	72.5	80	-10
64	H.McR.	39	11.3	10.3	8.9	86.5	96	-10
65	A.B.	39	8.11	7.10	12.2	79.5	88.5	-10.2
66	J.M.	31	9.1	8.2	10.2	81.	90.5	-10.5
67	A.B.	26	10.10	7.12	27.0	81.	91	-11
68	W.R.	47	8.3	7.5	10.4	75.5	85.5	-11.7
69	W.J.R.	32	8.3	7.3	12.2	79.5	90.5	-12.2
70	R.F.	18	8.2	7.5½	10.0	76.5	88.	-13
71	J.G.	36	9.10	8.5	13.9	83.	96.	-13.5
72	A.M.	34	7.8	7.7½	Nil	75.5	87.5	-13.6
73	A.McI.	26	8.8	7.9	10.8	77	89.5	-13.9
74	L.R.	27	8.7	7.3	15.1	74.	86.5	-14.4
75	W.W.	28	9.5	7.9	18.3	77.	90.5	-14.9
76	H.McL.	32	8.8	7.12	8.3	75	89.5	-16.2

were taken, and appropriate deductions made to arrive at the naked weights. The table shows the ages, highest known naked weights, naked admission weights, percentage alterations of admission weights from highest known weights in terms of the latter, chest measurements and stem lengths in centimetres, and percentage differences between chest measurements and stem lengths in terms of the latter. Classification of the disease, and duration of disease in each case are not considered, the percentage of each in each group being roughly equal.

In my analysis of this table I have considered as falling within physical Class I those cases whose chest measurements fall below their stem lengths up to 4% in terms of the latter: in Class II those cases the percentage minus difference between whose chest measurements and stem lengths exceeds 4%: and in Class III those cases whose chest measurements are equal to or exceed their stem lengths. On this basis cases 1-5 fall within Class III, cases 6-23 fall within Class I and cases 24-76 fall within Class II, the worst physical type.

The eighteen cases in Class I show admission weights which vary from 0 to 27.3% below the highest previously known weights, the average diminution for the group being 10.1%.

The fiftythree cases in Class II show admission weights which vary from 0 to 28.2% below the highest previously known weights, the average diminution for the group being 9.5%.

The five cases in Class III show variations of admission weight from the highest known weight ranging from + 1.2% to - 15.4% i.e. one case since the inception of his pulmonary disease has increased his weight by 1.2% of the highest previously known weight, both weights being above normal for the individual; while four cases show admission weights which present diminutions ranging from 7.9% to 15.4% of the highest previously known weights, the average diminution for the four being 12.2%.

No information of any definite value is deducible from these facts which are merely inserted in illustration of the fact that the original type of physique remains in the presence of loss of weight.

If the question of height and stem length is submerged it is seen that the average highest known weight for Class I is 9 st. 7 lbs. , for Class II 9 st. 7 lbs. and for Class III 11 st. The average stem length for Class I is 86.6 cm. which gives an average highest known weight of 1.53 lbs. per cm. of stem length. The average stem length for Class II is 89.5 cms. which gives an average highest known weight of 1.48 lbs. per cm. of stem length. The average stem length of Class III is 88.9 cms. which gives an average highest known weight of 1.73 lbs. per cm. of stem length.

In this group of 76 cases the higher grades of physique are evidently associated with higher grades of normal weight, the weight per cm. of stem length falling from Class III to Class I and from Class I to Class II.

The significance of realizing original types of physique and their probable weights in health is emphasized by Dreyer's

Dreyer's conclusion that in health the closest relationships exists between weight and Vital Capacity. Thus the type of physique that is associated with the greatest weight is also the type that is associated with the greatest Vital Capacity. The apparent error in the use of the combined l and Ch. formula of underestimating the normal Vital Capacity in cases of small chest measurement, and of over-estimating it in cases of large chest measurement, is thus probably considerably reduced.

The question of varying types of physique compatible with reasonable health has been very fully investigated by Mills who has correlated various physical types with variations in visceral morphology and topography. His observations have led him to recognise two broad types of body habitus which he classifies as hypersthenic and Asthenic. The hypersthenic habitus is characterized by massive bony framework and a short wide capacious thorax, with lungs conforming to its type, and showing broad bases and narrow apices extending but little above the clavicles. The abdomen is relatively long and the digestive plant characterized by the high position and great tonicity of stomach and intestine. The Asthenic habitus forms an exact antithesis,- long narrow thorax, flat capacious pelvis, short upper abdomen and a low position of stomach and intestine associated with a poor degree of tonicity. The lungs are relatively broad in their upper zones. Between these two extremes there are intermediate types which he classes as sthenic and hyposthenic. Classification of the physical characteristics of any individual is made under one of these groups or under a combination of them.

Pottenger insists on the appreciation of the normal for the individual "Our conception of the normal" he says "must be altered to suit the physical and functional capacity of the individual".

Resumé of initial Results of Investigation of all cases in the series.

Table II shows a detailed analysis of the physical findings of all the patients in the series. These findings are, in the majority of cases, the results of the initial examination of the patient. A small percentage were in the course of a period of residence when the series of investigations was commenced. In this last group some of the findings have doubtless been altered from their initial condition by the result of treatment. All cases in this group are distinguished by an asterisk.

The cases have been grouped and numbered on the basis of physical classification as previously explained. My purpose in adopting this plan was to ascertain to what extent the diminution of Vital Capacity in Pulmonary Tuberculosis was dependent upon the actual anatomical change in the lungs, and to what extent it actually reflected the degree of toxaemia. of the individual patient. The determination of the first point is beset with many difficulties: for the most careful of physical examinations on occasions fails to elucidate the full extent of the pulmonary involvement. The fallacy however is not sufficiently extensive to invalidate the results, and those obtained are of such interest as to warrant the attempted solution.

The analysis of each case is made under 24 headings which are explained by the terms employed: but some further justification for the use of some is necessary.

The information given under heads 13 and 18 is of anthropometric interest entirely, and reflects merely upon the general physique of the group of patients investigated. I have included it from the point of view of its general interest.

Columns 20, 21, 22 & 23 were introduced for the purpose of affording a ready means of interpretation of the deviations of weight and Vital Capacity from the normal in the individual patients.

In columns, 8, 9, 14, 17 & 19 the Vital Capacity is calculated for the patient in terms of his weight, stem length, chest meausrement, and combined stem length and chest measurement. In a healthy normally formed individual these columns should approximate closely to one another and to the Vital Capacity actually observed. In the tuberculous patient with diminished weight and defective physique the calculated Vital Capacities differ not only from one another, but from the deficient observed Vital Capacity. The Vital Capacity constants used by Dreyer afford a means of accurately recording progress and variations under these headings: but as these constants are not units, and, as they differ from one another, rapid interpretation of changes under their heads is not easy.

If one contrasts the Vital Capacity calculated in terms of the patient's reduced weight with that calculated in terms of his unaltered stem length, a basis for estimation of the degree of variation of weight is evident. There is thus a factor changing with variations in weight which reduces the one to the other, the factor being the quotient of the Vital Capacity Calculated in terms of the stem length and that calculated in terms of the existing weight. In the normal individual such a factor would approach unity. In the abnormal individual of reduced weight it exceeds this in proportion to the decrease of weight. Similarly one can contrast the Vital Capacity observed, with that calculated under the headings of chest measurement, stem length and combined chest measurement and stem length. There are thus four pathological factors which are determined as follows: (1) $\frac{\text{VC calc. in l}}{\text{VC calc. in W}}$ (2) $\frac{\text{VC calc. in Ch}}{\text{VC observed}}$ (3) $\frac{\text{VC calc. in l}}{\text{VC observed}}$ (4) $\frac{\text{VC calc. in l \& Ch}}{\text{VC observed.}}$

Factors 2, 3 & 4 enable one to contrast the Vital Capacity of any case with what would be normal in terms of the chest circumference, stem length, and combined chest circumference and stem length.

I have accepted the Vital Capacity calculated in terms of the stem length as a basis for the estimation of the patient's normal weight, and the Vital Capacity calculated in terms of the combined stem length and chest circumference as the probable normal Vital Capacity for the particular individual. From these two have been calculated percentage deviations of weight and Vital Capacity from the normal. These are recorded

T a b l e 111.

Stem lengths of series expresses as percentages of heights.

L Below 50% H	L 50-51% H	L 51-52% H	L 52-53% H	L 53-54% H	L 54-55% H	L 55-56% H	L 56% & upwards H
9 = 4.1%	21 = 9.4%	33 = 14.8%	55 = 24.6%	58 = 26.0%	34 = 15.3%	10 = 4.5%	3 = 1.3%

T a b l e 1V.

Analysis of percentages of difference between chest measurement and stem length expressed in termsof the latter.

Ch. = Chest. L. = Stem Length.

Ch exceeding or equalling L.	Ch less than L. 0-2%	Ch less than L. 2-4%	Ch less than L. 4-6%	Ch less than L. 6-8%	Ch less than L. 8-10%	Ch less than L. 10-12%	Ch less than L. 12%
21 = 9.5%	26 = 11.7%	35 = 15.8%	33 = 14.8%	44 = 19.8%	24 = 10.8%	22 = 9.9%	17 = 7.7%

recorded in columns 10 and 24 respectively.

In all cases the Vital Capacity has been calculated as a percentage of the weight under the formula given by Dreyer $VC = \frac{W \times 6.626}{100}$. This is tabulated in Column 9. No use has however been made of this column, the Vital Capacity estimation from weight by the formula $VC = \frac{W^{.72}}{.690}$ alone being used in the interpretation of results. This is expressed in Column 8.

The Vital Capacity constants were worked out in many of the series, but I have not included them in this table, with the exception of the constant in Weight which is of value in observing the changing or stationary relationships of the Vital Capacity and weight.

Analysis of Table II
Physique of Patients in the Series.

The figures relating to the physique of the patients are of general interest and from this point of view I refer briefly to them. Hutchinson in his conclusion that the Vital Capacity bore a most intimate relation to the standing height stated that he had considered the body length (stem length) and found that it did not bear any definite relationship either to the standing height or to the Vital Capacity. In Column 13 of Table II, I have expressed the stem length as a percentage of the standing height, and Table III is compounded from this column. It is there shown that the stem lengths of this series of cases vary from less than 50% to 56% of the standing height, a variation which may be due to many causes. There is probably a normal variation in individuals of different types of physique: while further variation is effected by deformities of the lower limbs or spinal column. Among other causes a slight degree of genu varum or valgum, or a slight spinal kyphosis may considerably increase or diminish this percentage. The greatest percentage of cases lies between 52% and 54% and in cases lying much below or above these figures it was always possible to detect some definite physical cause for the decrease or increase. This point is worthy of note in taking body measure ments relating to Vital Capacity.

Hutchinson's statement "that whatever be their standing height (in men between 5 & 6 feet) their sitting height is on an average 3 feet" is not borne out by the figures in this series.

The relation of the chest measurement to the stem length is largely an expression of the physique of the individual.. Dreyer states that "in the normal healthy man the circumference of the chest is on an average about 1.5 per cent smaller than the stem length, though in a fair number of individual cases the chest measurement may be greater than the stem length". As previously stated there are probably several distinctive types of physique, each consistent with an efficient degree of health: but there are grounds for belief that Dreyer's statement covers the healthiest and most vigorous type. The cases which constitute this series were drawn from the male industrial section of the Glasgow population and one could hardly presume that their initial physique had ever been of a high grade.

Table V.

Analysis of diminution of Weight in the various Turban Groups of the series.

(a) Numbers.

Group.	No. in Group.	W. above normal.	W. Dim. below 10%	W,Dim. 10-20%	W.Dim. 20-30%	W. Dim. 30-40%.	W.Dim 40% upwds.
Turban 1.	15.	3.	8.	4.	0.	0.	0.
Turban 2.	102.	13.	54.	32.	3.	0.	0.
Turban 3.	80.	9.	35.	29.	6.	1.	0.

(b) Numbers expressed as percentages of the groups.

Group.	No. in Group.	W. above normal.	W.Dim. below 10%	W.Dim. 10-20%	W.Dim. 20-30%	W.Dim. 30-40%	W.Dim 40% upwds.
Turban 1.	15.	20.0	53.4	26.6	0.0	0.0	0.0
Turban 2.	102.	12.8	53.0	31.3	2.9	0.0	0.0
Turban 3.	80.	11.3	43.7	36.3	7.5	1.2	0.0

Table IV is compounded from column 18 of Table II where the percentage difference between chest measurement and stem length is tabulated. In Table IV individual cases have been grouped in numbers and percentages according to the percentage of diminution of their chest measurements. According to Dreyer's standard, 47 cases or 21.2% of the total number show a physique of a good grade i.e. the chest measurement actually exceeding the stem length or reaching to within 2% of it. The maximum number in any group is found in the cases showing a diminution of chest measurement of from 6-8%, this number reaching 44 or 19.8% of the total number of cases: the numbers after this gradually diminishing in each percentage group. Thus 159 cases, of 71.6% of the total number, show a chest measurement which falls within 8% of the stem length. This shows a fair average physique and confirms the impression derived from handling large numbers of cases of pulmonary tuberculosis, that it is not always the worst physical specimens who contract the disease in an active form. The fact that 21.2% of the cases were of excellent physique conforms with the above impression. I have not been able to detect any relationship between grade of physique and the recuperative power. The determination of the above points is entirely of general interest and gives no help towards individual prognosis.

Weight of Patients in the Series.

In column 10 of Table II the percentage of diminution of weight is tabulated. In this table the patients have been grouped entirely on an anatomical basis, and no account has been taken of the actual general condition of the patient. It is an axiom that a Grade III patient may have a much better general condition than a highly toxic Grade I patient, a point that has been kept in view in the interpretation of apparent results.

In Table V are tabulated the various percentage diminutions of weight in each Turban group. No final conclusions can be drawn from this table, but it is worthy of note that the results are suggestive of the general relation of the actual extent of disease to the general condition of the patient, as expressed in the condition of his weight. The table is self explanatory, and shows that in the series of cases, with each grade, there is a general tendency to a more progressive loss of weight. The percentage numbers showing weights above normal, or below a 10% diminution, decrease with the advancing grades while the numbers in the higher columns of diminution of weight increase with the advancing grades. I shall refer to this point in greater detail at a later period. Its main interest lies in its relation to Vital Capacity.

Vital Capacity.

In Column 24 of Table II the percentage diminutions of Vital Capacity for each case are expressed. Table VI has been constructed from this column, and shows an analysis of percentages of diminution for the various Turban groups on a ten basis, the first part of the table dealing with numbers, and the second showing the numbers as percentages of the total numbers in each group.

In every case in the series the Vital Capacity is diminished and this diminution is apparently quite independent of the

T a b l e VI.

Analysis of Diminution of Vital Capacity in the various Turban Groups of the series. V.C. - Vital Capacity.

(a) Numbers.

Group	No.in Group	VC dim. below 10%.	VC dim 10-20%	VC dim 20-30%	VC dim 30-40%	VC dim 40-50%	VC dim 50-60%	VC dim 60-70%	VC dim 70-80%
Turban 1.	15	3	4	3	4	1	0	0	0
Turban 11	102.	1	17	36	32	12	1	2	1
Turban 111	80.	0.	0.	3	18	28	20	7	4

(b) Percentage of Numbers in Group.

Group	No in Group	VC dim below 10%	VC Dim 10-20%	VC Dim 20-30%	VC Dim 30-40%	VC Dim 40-50%	VC DIm 50-60%	VC Dim 60-70%	VC Dim 70-80%
Turban 1	15	20.0	26.7	20.0	26.7	6.6	0	0	0
Turban 11	102	0.98	16.7	35.3	31.4	11.7	0.98	1.96	0.98
Turban 111	80	0	0	3.8	22.5	35.0	25.0	8.7	5.0

the change in the patient's weight. Further, even in cases of reduced weight, the Vital Capacity observed is always inferior to that calculated in terms of the actual weight present, a most important in the determination of the relation of underweight to the general health of the individual observed. To this point I shall refer in detail later.

It is further demonstrated that the diminution of Vital Capacity is not merely a function of the reduced chest measurement, as, in all cases in the series, the Vital Capacity observed is less than that calculated in terms of the chest circumference.

Analysis of Table VI shows that, of the 15 cases in the Turban I group, 14 or 93.4% showed diminutions of Vital Capacity fairly evenly distributed over the group of ten, ranging from diminutions of under 10% to diminutions of 40%, only one patient showing a diminution exceeding 40%.

The maximum number of cases in the Turban II group fall within the columns showing diminutions of from 20-40%: while the maximum number in the Turban III group fall within the columns showing diminutions of from 30-60%.

Further in the Turban II group one patient only showed a Vital Capacity reduced less than 10%: while in the Turban III group no patients showed Vital Capacities reduced less than 20%, and 3 only (= 3.8%) showed Vital Capacities reduced less than 30%.

In this particular series of patients the more advanced grades of physical classification show progressively increasing diminutions of Vital Capacity, no consideration being taken of the general condition of the patients.

If the progressive diminution of Vital Capacity in the various groups applied to all the patients in each group, the justifiable deduction would be that the diminution rested upon an anatomical basis, and that a Grade III patient would of necessity show a greater diminution of Vital Capacity than a Grade II or Grade I patient on account of the greater area of lung diseased. The fact that some cases in Grade II show a higher Vital Capacity than some in Grade I; and that some in Grade III show a higher Vital Capacity than some in GradeII or Grade I, demonstrates the necessity of a further explanation of the point, and the question of the part played by the toxic condition of the patient may be referred to here. In all grades of active tubercular disease there is some degree of toxaemia, and that this is likely to vary with the area of lung involved is evident. A very active Grade I case may be overwhelmed by a much greater mass of toxins than a mildly active Grade III case; but in considering a mixed group of patients the probability of the more anatomically advanced cases evincing a greater proportionate degree of toxaemia on account of the greater extent of diseasedareas is evident. I shall discuss the point more fully later on. The facts, however, shown in these tables suggest that the pathological- anatomical changes produced by the disease play a part in determining the reduction of the Vital Capacity.

The cases which are classed in Group IV of Table II were all cases whose clinical SIGNS suggested a hilus type of infection. 12 of the 16 cases were under the age of

of 14 years, the remaining two being aged 18 and 29 years respectively. Accurate classification of these cases in grades of severitywas not possible. They all showed marked degrees of Vital Capacity diminution, ranging from 24.7% to 76.2%.

The cases in Group V of Table II were cases where the outstanding signs were those of Chronic Bronchitis and where there was no definite proof of the condition being of tubercular origin. In the case of case No. 218, however, there was fairly strong presumptive evidence from the point of family history and definite haemoptysis on one occasion during his residence in the Sanatorium. These cases showed Vital Capacity diminutions ranging from 41% to 66.1%.

Group VI includes four cases which were sent for admission with the diagnosis of Tubercular Cervical Glands only, no signs of intra-thoracic disease having been detected. Two of these cases were young adults and two were boys of the ages of 11 and 14 years respectively. A brief resumé of their physical conditions is of interest. Diminutions of their Vital Capacities range from 13.8% to 51.6%.

Case No. 221 is especially interesting. He was a sturdy boy of healthy colour; very active and full of energy. Indurated masses of tubercular glands were present in both sides of his neck, every group including the submaxillary and submental lymph glands being involved. There was partial collapse of the right side of his chest. A diffuse infiltrative tubercular lesion of his right lower lobe was easily detectable. Presumably attention had not been called to the condition of his chest prior to his admission to Sanatorium. The great diminution of Vital Capacity in a case of this type (51.8%) should immediately suggest some pathological intra-thoracic condition.

Case No. 220 was found on admission to have a small very mildly active lesion of Turban I extent at his right pulmonary apex. The cause of his admission was a mass of indurated glands on the left side of his neck. He showed a diminution of Vital Capacity of 13.8%. His general condition was good and a diminution of even this limited extent in such a case should focus attention upon a possible pulmonary source.

Case No. 222 was sent for admission on account of masses of tubercular glands on the right side of the neck. He had previously had excision of glands in left side of neck performed, a few hard glands however remaining on this side. There was drooping of the left shoulder and advanced atrophy of the lower portion of the trapezius muscle, presumably due to section of the left spinal accessory nerve during operation. Examination of his chest revealed slight but definite signs suggestive of intra-thoracic glandular involvement. His Vital Capacity was reduced to the extent of 31.6%, probably in part due to the atrophy of his left trapezius muscle, but sufficiently reduced to demand an explanation.

Case 223 was sent for admission on account of tubercular glands on both sides of his neck. Chronic tonsillar hypertrophy and post-nasal adenoids were part of his clinical condition. His chest signs suggested a mild degree of hilus involvement. He was a sturdy active boy and his Vital Capacity diminution of 35.3% was not explainable on general grounds.

I have quoted these four cases here, because, although the number is too restricted to form a basis for any definite conclusions, the actual facts which they demonstrate suggest certain remarks.

It is generally conceded that Tuberculosis is a generalized disease with local manifestations, and yet localized surgical tuberculosis is often classed as a clinical entity. The number of cases of tubercular adenitis of the neck which do not reveal to a careful examiner some signs suggestive of a concomitant intra-thoracic adenitis is surprisingly small. Whether these infections are coincident or whether one is consequent upon the other is an open question.

This association has been fully analysed by Wallgren who disposes of the view that lymphoid disease protects against pulmonary disease and supports Aufrecht's belief that the two are intimately related. Wallgren found that of 526 cases of lymphoid tuberculosis treated in the surgical hospital in Upsala between the years 1885-1905 at least 16.5% were also suffering from pulmonary disease while in hospital. He found that simultaneous infection of the cervical glands and lungs was common, and that not infrequently the lung infection was of older date than the cervical adenitis. He concluded however from the after histories of these patients that pulmonary disease when it follows lymphoid disease often runs a comparitively benign course.

The diminution of Vital Capacity in these four cases is sufficiently striking to suggest some diagnostic significance, and any extensive grade of diminution in such cases which is not accounted for by a bad general condition or other evident cause should direct attention to the probability of a pulmonary cause.

It was with a view of providing an easy method of interpretation of the changing Vital Capacity and weight that the various "pathological factors" previously explained were worked out; that in the Vital Capacity calculated in terms of stem length and chest circumference alone being used in expressing the changes of the Vital Capacity observed. Reference to any of the record sheets appended shows that they afford a ready means of recording progress or the reverse. In the Turban I group the P.F.4 ranges from 1.07 to 1.77, in the Turban II group from 1.06 to 3.52 and in the Turban III group from 1.6 to 4.08.

Nature of Vital Capacity and Causes of Diminution In Pulmonary Disease.

The complex nature of the Vital Capacity was fully recognised by Hutchinson who pointed out its dependence upon both intra- and extra-thoracic conditions. He proved that it did not depend upon the mere Capacity of the thorax, and cited cases which he had examined ante-mortem and post-mortem showing that one case at least had a Vital Capacity observed by him during life which was greater than the actual cubic capacity of the thorax determined post-mortem. He mentioned too a case which showed only a very slightly decreased Vital Capacity during life and yet post-mortem showed both pleurae densely and universally adherent, showing that old pleural adhesions are not the determining factor in reduction. On the other hand be believed that the mobility of the chest was intimately related to the integrity of the Vital Capacity, a point which appears, superficially at least, very probable, as full expansion of the lungs is obtained by expansion of the walls

walls of the thorax and not by decrease of size of the abdominal cavity which occurs in the inspiration of quiet respiration.

Mobility of the chest must depend upon the integrity of the motive force i.e. the power of the inspiratory muscles, and upon the effieient movement of the walls themselves; and any factor which interferes with either of these points must of necessity impair the Vital Capacity.

The fact of change in the chest walls in cases of Pulmonary Tuberculosis is well known, and the theories of FREUND and SCHIELE are founded upon this, that of Freund dealing with anomalies of the upper aperture of the thorax, and that of Schiele with the degree of departure of the ribs from the horizontal plane, as predisposing causes of tubercular lung infection. The existence of such changes suggests an immediate influence upon Vital Capacity, but how far they precede the developement of pulmonary infection, and to what extent they are consequences of it, is an undecided question. The general consensus of opinion now, in the case of Freund's theory at least, is that the abnormal thoracic aperture is a consequence of disease, and not a cause of it. These points are of considerable practical importance: for a diminished Vital Capacity in the absence of pulmonary disease might indicate a deficiency of movement of the thorax and a consequent predisposition to the developement of disease.

In the case of the second element of interference with mobility of the thorax, impaired motive force, no such dubiety exists, apart from cases of actual paralysis of muscles due to some quite extraneous cause. Interference with the full functioning of the muscles of respiration in cases of pulmonary tuberculosis is now generally accepted as being a result of pulmonary disease and not a cause of it. Atrophy of muscles and flattening of the thoracic wall covering the site of extensive lung disease is familiar knowledge: but the initial changes occurring in the comparatively early stages of the disease are not so fully appreciated. It is generally conceded that the spasm of overlying muscles detected in early cases is the result of true reflexes dependent upon the pulmonary condition, and is exactly analogous to the muscular spasm in the area of an affected joint, or the spasm of the abdominal muscles overlying an area of acute infection. The muscles most frequently affected in cases of lung disease are given by Pottenger as the sterno-mastoid, scaleni, trapezius and levator anguli scapulae, all accessory muscles of respiration which are called into play in the act of forced inspiration. Pottenger further presumes that "the contraction of muscles which exists for a prolonged time, should exert an active force in producing a certain amount of compression of the bony cage". The final and apparent result is always muscular atrophy.

The diaphragm is affected in a similar manner and its function is probably always disturbed in pulmonary tuberculosis. Pottenger states that the disturbance is both reflex and compensatory in character, is rarely symmetrical, but usually more marked on one side than the other. It is clinically readily demonstrable by the X-Ray screen and the following concise account of what is present in a typical case is quoted verbatim from Berry. "In a typical case it will be seen that the diaphragm on the affected side commences its descent a fraction of a second later than on the sound side. Frequently it descends in a series of jerks instead of in an even sweep,

sweep, but has the same range of movement as on the healthy side. Later in the course of the disease there may be actual limitation of the range of movement.

Concurrently with the change in diaphragmatic function there may, or may not be limitation of costal movement on the affected side: in either case the effect is to diminish air entry into the diseased lung. The actual limitation can always be seen when present and it implies diminished air entry. There is not space here for discussion of the reason for interference with diaphragmatic function, but it is at all events possible that it is Nature's effort to give rest to the infected lung. It is noteworthy that in many cases this diaphragmatic limitation does not persist when organic disease is demonstrable. Cases are frequently seen in which gross lesions are evident, yet the diaphragmatic excursion is normal, other methods for dealing with the invading bacilli having been elaborated by the system".

It is doubtful to what extent any impairment of diaphragmatic function could interfere with the Vital Capaciy, but the changes described by Berry are interesting as offering a probable analogy to the changes of function in the extrathoracic accessory respiratory muscles. The diminution of function of these muscles is reflected in a diminished Vital Capacity which is accordingly an index of the primary pulmonary cause.

The muscles of respiration likewise partake of the general muscular asthenia which is produced by toxaemia and this factor must in many cases play an important part in effecting a diminution of Vital Capacity. The toxic patient is weak, readily fatigued and unfit for any form of exertion, symptoms which must be accentuated in muscles which are already the seat of pathological changes.

The importance of the purely muscular element in normal Vital Capacity was grasped by Hutchinson who devised an instrument on the principle of a mercurial manometer to test the inspiratory and expiratory muscular powers, the point of application of the instrument being the nostrils. His findings led him to the opinion that the expiratory exceeded the inspiratory power by one third, the difference being probably due to the elastic contractile power of the costal cartilages.

One case only is cited by Hutchinson giving the combined estimation of Vital Capacity and of respiratory power, that of the American giant Freeman, who was examined by Hutchinson in 1842 when all his readings were normal --- Height 6Feet 11¼in: Weight 19st. 5lb: Vital Capacity 434 cubic in: Chest measurement 47in: Inspiratory Power 5.0in:of Mercury : Expiratory Power 6.5in.of Mercury . Two years later he re-examined Freeman who had fallen into poor health, and found a decrease of 20% in his Vital Capacity , a decrease of 20% in his inspiratory power and a decrease of approximately 10% in his weight. Freeman died of Pulmonary Phthisis in October 1845. The interesting point in this connection is the proportionate decrease of Vital Capacity and inspiratory muscular power noted by Hutchinson when the man was in the comparatively early stages of the disease. In discussing the natural resistance to deep inspiration, which he gives as equivalent to 4½inches of Mercury on every square inch of chest, Hutchinson remarks "It is possible that the cachectic condition in this early stage of the disease may disable the patient to overcome this resistance, and therefore the Vital

TABLE VII

Analysis per Group in Table II of Chest Expansion showing the number in each group according to grades of Expansion, with the percentage diminution of Vital Capacity for each set of numbers.

Ch. Exp - Chest Expansion. Av. VC. Dim. - Average Vital Capacity Diminution.

Group	No. in Group	Ch.Exp 1-2 cms	Av.VC Dim	Ch Exp 2-3 cms	Av.VC Dim	Ch Exp 3-4 cms	Av.VC Dim	Ch Exp 4-5 cms	Av.VC Dim	Ch Exp 5-6 cms	Av.VC Dim	Ch Exp 6-7 cms	Av.VC Dim	Ch. Exp 7-8 cms	Av.VC. Dim	Ch. Exp 8 cms +	Av.VC. Dim
Turban I	15	1	31.8%	1	24.8%	3	31%	3	25.1%	2	18%	4	13.4%	1	9.9%	0	
Turban II	102	0		14	40.3%	27	34.2%	26	28.7%	21	25.4%	9	23.9%	2	25%	3	19.2%
Turban III	80	6	58.4%	14	54.3%	24	48.1%	23	46.6%	9	44.3%	3	37.2%	1	37.3%	0	
Hilus IV	16	1	76.2%	2	52.3%	5	45.2%	5	44.3%	3	39.4%	0		0		0	

Vital Capacity becomes diminished by mere want of muscular power".

The actual extent of diseased areas in advanced cases must play a part in diminishing Vital Capacity by cutting off the permeable lung tissue. I shall refer to this point in greater detail at a later period: but its importance in the more advanced type of case must be borne in mind in a consideration of causes of Vital Capacity reduction.

An examination of Column 16 of Table II reveals a very considerable average diminution of mobility in the cases in the series. The question of normal chest mobility is an open one: but it may be considered that 3 in. or 7.6 cms. represents a moderate probable average, height and circumference of chest being ignored. In only three cases in this series is this figure reached or exceeded, the average expansion falling considerably below this figure. The average expansion for Group I is 4.6 cms: for Group II 4.3 cms: and for Group III 3.6 cms. The relations between the various grades of mobility and diminutions of Vital Capacity vary, in many cases conforming closely (i.e. good mobility being associated with small diminution of Vital Capacity) and in others showing no apparent relationship, the general tendency however being towards a close relationship.

Table VII has been compounded from Columns 16 & 24 of Table II to show an analysis of the various grades of chest mobility in each group. Numbers are shown under their appropriate columns with the average diminution of Vital Capacity for these numbers in the directly adjoining columns. The first four groups only in Table II are included, as the numbers in Groups V and VI are too small to allow of any definite conclusions being drawn. These groups are also not classifiable. This Table shows very clearly that in each group the lower grades of mobility tend to be associated with greater degrees of Vital Capacity diminution, and confirms the statement previously made regarding the apparent relation of mobility to Vital Capacity. Mobility, however, is merely an expression of other factors previously discussed - the integrity or otherwise of the muscular power of respiration, and the condition of the walls of the bony thorax.

The possibility of pleural adhesions being the actual cause of the Vital Capacity diminution is disposed of by Hutchinson's observation which has been previously recorded. Many of the cases in this series with only moderately diminished Vital Capacity gave histories of several previous attacks of pleurisy, and one could assume in their case the presence of more or less extensive pleural adhesions. Case No. 71 is of this type. He left the Institution with a Vital Capacity diminished only to the extent of 4%.

One can assume that probably all the factors mentioned as affecting adversely the Vital Capacity play their parts in its diminution: but the results of progress of patients observed lead me to believe, that, in the only moderately advanced case, the element of toxaemia, and its effect on the general and local muscular systems, plays the most important role, a point which attaches some importance to the clinical value of the Vital Capacity readings in the disease.

A. ROBIN classes diminution of Vital Capacity as part of a syndrome which he has been able to demonstrate in

in Pulmonary Tuberculosis, this syndrome consisting of three pathological points.

(1) Phthisical patients comsume more oxygen and produce more carbonic acid per kilogramme of weight and per minute of time than healthy individuals, this augmentation being entirely due to an increase of the pulmonary ventilation.

(2) In phthisical patients there is an increase of the oxygen consumed by the tissues, which does not take part in the formation of Carbonic Acid, but in the formation of the water combining with certain molecules and in the evolution of nitrogenous matters. This results in a diminution of the respiratory quotient.

(3) Diminution of the volume of maximum expiration (Vital Capacity) whether considered from the point of view of its absolute count or from that of the stature of the individual.

He has been able to demonstrate the syndrome not only in all stages of the disease, but in the descendants of phthisical individuals, and in persons in a state of exhaustion from any cause - all cases presenting a suitable soil for tubercular infection. He has further found their respiratory changes to vary with the condition of the patient, improving as the patient's pulmonary condition improves, and deteriorating as this becomes worse.

Robin does not explain the question of increased pulmonary ventilation, which may be due to an actual acceleration of respiration, or to an actual increase in the volume of tidal air. It can be readily understood that the tidal air may be greatly increased above its normal of some 500 ccs. per inspiration even when the Vital Capacity is diminished, and in pulmonary disease one can understand the probability of this occurring. Unfortunately I have not had the means of investigating the point. In a fair percentage of cases of pulmonary tuberculosis the resting respiration rate is definitely increased even in the absence of pyrexia and an accompanying tachycardia. The respiration rate was carefully observed over protracted periods in 95 of the present series of cases. It was taken during the rest hours when the patient had been resting on his back in bed for at least half an hour. All were cases free from pyrexia and tachycardia. 28 patients showed a continuous respiration rate of 18 or less per minute. 26 showed a rate varying from 18 to 20 per minute. 29 showed a rate varying from 20 to 24 while 7 patients showed a rate above 28 extending over a period of their residence. In those patients who had high rates on admission a general tendency to decrease was observed as improvement advanced: but no relation could be detected to the condition of the Vital Capacity.

In the light of Robin's investigations the diminution of Vital Capacity is the easily detectable clinical element in a condition of pulmonary functional derangement characteristic of pulmonary tuberculosis.

As a result of their investigation of 31 male patients suffering from Pulmonary Tuberculosis, of whom 9 were incipient, and 22 more advanced cases, Garvin, Lundsgaard and van Slyke reached the following conclusions.

conclusions.

(1) The Vital Capacity was diminished in all cases.

(2) In the case of patients in the initial stages of the disease, the decrease of Vital Capacity was due to an increase in the Residual Air, which was merely the result of inability of these patients to expire as deeply as normally. They were unable to determine the cause of this inability.

(3) In the case of patients in a more advanced stage of the disease, the decrease of Vital Capacity was due to a diminished lung volume, which was normal in those in the early stage. The residual air in the advanced cases was normal. They concluded that this diminution of lung volume was a direct expression of one phase of the pathologic-anatomic process, proliferation.

Variations of Vital Capacity in Patients undergoing Treatment.

In estimating the variations of Vital Capacity in association with variations in the clinical condition of the patient the greatest precautions have been taken to eliminate the element of bias. The two sets of records were kept separately. The records dealing with the general clinical condition of the patients observed were the official hospital records: while the Vital Capacity records were kept on a series of separately prepared sheets. The two sets were not compared during the patient's stay in the Institution. When the patient was discharged his clinical condition was carefully entered in his official record sheet, and his degree of improvement assessed on the ordinary clinical grounds. Foremost among these grounds were the detectable changes in physical signs, alterations in size of areas affected, alterations in character of the breath sounds and adventitious sounds, changes in cough as to severity, character and periodicity, changes in quantity and character of sputum, the exercise tolerance of the patient and the general appearance of the patient. Little attention on the whole was paid to weight, the fetish often of physician and patient alike. An improving weight is very often an excellent sign: but a failure of weight to improve is not necessarily a bad sign. Many patients in this series who were discharged as being clinically much improved, or very much improved, showed either no change in weight or a negligible percentage increase; these too being cases whose weights were undoubtedly below normal for their particular physical standards. In such cases one noticed often a great change in the personal appearance of the patient, which had altered from the sallow unhealthy facies of admission to a healthy facies of good colour, indicative of a healthy blood function, and absence of toxaemia. Many patients too whose weights were above normal for their physical standards on admission lost weight during treatment, and yet on all other grounds of opinion, including their own statements, had made undoubted progress. Others again gained weight to a considerable degree and yet did not appear to have made any real progress.

In many of those cases which showed a stationary or slightly increased weight on discharge, an initial increase spread over the first few weeks of stay followed by a gradual decrease occurred. I shall refer to this point again in connection with Vital Capacity variations.

variations.

In handling never less than 100 patients at a time it was not possible to retain in one's mind more than a rough idea of the Vital Capacity progress of any particular individual. As the discharge condition was scrupulously assessed without any reference to the condition of the Vital Capacity, I can claim that the comparisons are free from any element of bias which the one might exert upon the estimation of the other.

Table VIII has been constructed to demonstrate an analysis of changes of Vital Capacity and weight during the course of treatment. In the construction of this table I have grouped the patients into six classes according to their periods of residence in the Sanatorium, the figures given being in most cases those of admission and discharge. When the series of investigations was closed a number of patients remained in the midst of a course of treatment. All patients who had completed five weeks of treatment have been classed in this table as xxxxx being discharged. Those who had completed less than five weeks are grouped in section "f" of the table. Their records shown are the first and last taken, the number of each being given.

Section (a) of the table includes 24 patients who had completed 25 weeks of residence. Of these 9 were still in the Institution when the observations terminated. Of the 24, 10 were classed on clinical grounds as being very much improved (V.M.I.), 2 as being much improved (M.I.), 7 as being improved (I.), 3 as being stationary. (S.) and 2 as being undoubtedly in a worse physical condition than they showed on admission (W.)

The Vital Capacities of the 10 patients who were classed as V.M.I showed increases on their initial observations varying from 12.6% to 28.2% the average increase for the 10 being 19%.

The Vital Capacities of the 2 patients who were classed as M.I. showed increases on their initial observations of 10.5% & 18.2% respectively, the average for the two being 14.3%.

The Vital Capacities of the 7 patients who were classed as I showed increases varying from 1.5% to 15.1% the average for the 7 being 10.3%.

The Vital Capacities of the three patients classed as S showed alterations ranging from a diminution of 2% to an increase of 3.5%, the average here being an increase of 2.1%.

The Vital Capacities of the 2 patiants classed as W showed diminutions of 2.9% and 3.8% respectively, the average diminution being 3.3%.

The weights of the V.M.I. class showed variations ranging from a diminution of 0.9% to an increase of 7.9% the average showing an increase of 2.9%.

The weights of the M.I. class showed increases of 2.1% and 7.9% respectively, the average for the two being 5%.

The weights of the I class showed variations ranging from a diminution of 1.7% to an increase of 4.6% the average showing an increase of 0.6%.

The weights of the S. Class showed variations ranging from a diminution of 0.8% to an increase of 4.3% the average being an increase of 2.1% . The weights of the two patients classed as W. showed diminutions of 0.3% respectively the average being a diminution of 1.8%.

These results for the purposes of summary are tabulated in Table. IX.

TABLE. IX.

V.C. and W. changes in patients undergoing treatment for a longer period than 25 weeks.

Class.	No. in class.	V.C. Average Changes per cent.	Weight Average Changes per cent.
V. M. I.	10	+19.0.	+2.9.
M. I.	2	+14.3.	+5.0.
I.	7	+10.3.	+0.6.
S.	3	+2.1.	+2.1.
W.	2	- 3.3.	- 1.8.

Section (b) of Table VIII. included 14 patients who had completed 20 weeks of residence, but had not reached 25 weeks of residence. Of these, 6 were still undergoing treatment when the observations were closed down.

Of the 14, 5 were classed as being very much improved, 6 as being much improved , 2 as being improved, and 1 as being in a stationary condition.

The Vital Capacities of the 5 patients classed as V.M.I. showed increases ranging from 13% to 50.5% the average for the five being 22.9%.

The Vital Capacities of the 6 patients classed as M.I. showed increases ranging from 6.4% to 19.2% the average for the six being 14.4% .

The Vital Capacities of the 2 patients classed as I. showed increases of 9.8% and 13.7% respectively the average increase for the two being 11.7%.

The Vital Capacity of the patient classed as S. showed a diminution of 0.2%.

The weights of the V.M.I. class showed increases ranging from 0.6% to 5.7% the average for the five being 3.8%

The weights of the M.I. Class showed increases ranging from 1.1% to 7.2% the average for the six being 3.1%.

The weights of the 2 patients classed as I showed increases of 0.3% & 8.7% respectively the average increase being 4.5%.

The weight of the patient classed as S. showed an increase of 1.3%.

These results are summarized in Table X.

Table X.
V.C. & W. Change in Patients undergoing treatment for periods of 20-25 weeks.

Class.	No. in Class.	V.C. Average Change per cent.	Weight & Average Change per cent.
V.M.I.	5	+22.9	+3.8
M.I.	6	+14.4	+3.1
I.	2	+11.7	+4.5
S.	1	- 0.2	+1.3

Section (C) of Table VIII includes 28 patients who had completed periods of treatment ranging from 15 to 20 weeks. Of these, 8 were still in the Institution when the observations were concluded.

Of the 28, 8 were classed as being very much improved, 8 as being much improved, 7 as being improved and 5 as being in a stationary condition.

The Vital Capacities of the 8 patients classed as V.M.I. showed increases ranging from 16.1% to 26.3%, the average increase for the 8 being 19.3%.

The Vital Capacities of the 8 patients classed as M.I. showed increasesranging from 2.1% to 19.2% the average for the 8 cases being 10.4%.

The Vital Capacities of the 7 patients classed as I. showed increases ranging from 5.3% to 16.3% the average for the 7 being 10.7%.

The Vital Capacities of the 5 patients classed as S. showed final variations ranging from a diminution of 7.4% to an increase of 6.5%, the average for the five being an increase of 0.2%.

The weights of the V.M.I. Class showed increases ranging from 1.8% to 7.5% the average for the 8 patients being 4.3%.

The weights of the M.I. Class showed increases ranging from 1.3% to 5.8% the average for the 8 patients being 3.2%.

The weights of the I. Class showed final variations ranging from a diminution of 2.5% to an increase of 4.6% the average per patient in this class being an increase of 1.4%.

The weights of the S. Class showed final variations ranging from a diminution of 2.7% to an increase of 3.7% the average being an increase of 1.14%.

These results are summarized in Table XI.

Table XI.
V.C. & W. Changes in Patients undergoing treatment for periods of 15-20 weeks.

Class.	No. in Class.	V.C. Average Change per cent.	Weight - Average Change per cent.
V.M.I.	8	+ 19.3	+ 4.3
M.I.	8	+ 10.4	+ 3.2
I.	7	+ 10.7	+ 1.4
S.	5	+ 0.2	+ 1.14

Section (d) of Table VIII included 46 patients who had completed periods of residence ranging from 10 to 15 weeks. Of these 5 were still in the Institution when the observations were concluded.

Of the 46, 11 were classed as being very much improved, 14 as being much improved, 17 as being improved, and 4 as being in a stationary condition.

The Vital Capacities of the V.M.I. Class showed increases ranging from 13.4% to 39.2%, the average per patient being 21.6%.

The Vital Capacities of the M.I. Class showed increases ranging from 7.4% to 34.6%, the average per patient being 15.2%.

The Vital Capacities of the I. Class showed increases ranging from 1.5 to 28.8%, the average per patient being 8.6% (the patient showing the increase of 1.5% was really approaching "arrest" after a period of six months treatment, when observations of his Vital Capacity was begun. By that time he had practically reached his maximum degree of improvement. He was finally discharged as an "arrested" case.)

The Vital Capacities of the 4 patients in the S. Class

Class showed final variations ranging from a diminution of 4.7% to an increase of 3.1% the average per patient representing a diminution of 1%.

The weights in the V.M.I. Class varied from a diminution of 1.9% to an increase of 12.2%, the average per patient representing an increase of 6.0%.

The weights in the M.I. Class showed final increases ranging from 0.3% to 12.0% the average per patient being 3.9%.

The weights in the I. Class showed final variations ranging from a diminution of 3.7% to an increase of 11.7% the average per patient representing an increase of 2.1%.

The weights in the S. group show final variations ranging from a diminution of 0.9% to an increase of 1.8% the average per patient representing an increase of 0.6%.

These results are summarized in Table XII.

Table XII.

V.C. & W. Changes in Patients undergoing treatment for periods of 10 - 15 Weeks.

Class.	No. in Class.	V.C. Average Change per cent.	Weight - Average Change per cent.
V.M.I.	11	+ 21.6	+ 6.0
M.I.	14	+ 15.2	+ 3.9
I.	17	+ 8.6	+ 2.1
S.	4	- 1.0	+ 0.6

Section (e) of Table VIII includes 47 patients who had completed periods of residence ranging from 5 to 10 weeks. Of these patients 10 were still in the Institution when the series of observations was concluded.

Of the 47, none were classed as being very much improved. 5 were classed as being much improved, 23 as being improved, 17 as being in a stationary condition, and 2 as being in a worse physical and clinical condition than they were in on admission.

The Vital Capacities of the M.I. Class showed final increases ranging from 10.3% to 18.9%, the average increase per patient being 13.5%.

The Vital Capacities of the I. Class showed final increases ranging from 0.3% to 17.6%, the average per patient being 8.4%.

The Vital Capacities of the S. Class showed final variations ranging from a diminution of 5.6% to an increase of 7.9%. the average representing a decrease per patient of 0.05%

The Vital Capacities of the two patients in the W. Class showed diminutions of 5.9% and 5.3% respectively, the average diminution being 5.6%.

The weights of the M.I. Class showed final increases ranging from 0.8% to 13.1% the average increase per patient being 4.2%.

The weights of the I. Class showed final variations ranging from a diminution of 3.2% to an increase of 8.1%, the average representing an increase per patient of 1.5%.

The weights of the S. Class showed final variations ranging from a diminution of 2.5% to an increase of 4.2% the average representing a diminution per patient of 0.1%.

The weights of the two patients in the W. Class showed a diminution of 0.4% and an increase of 1.3% respectively, the average representing an increase of 0.45% per patient.

These results are summarized in Table XIII.

Table XIII.

V.C. & W. Changes in Patients undergoing treatment for periods of 5 - 10 weeks.

Class.	No. in Class.	V.C. Average Change per cent.	Weight - Average Change per cent.
M.I.	5	+ 13.5	+ 4.2
I.	23	+ 8.4	+ 1.5
S.	17	- 0.05	-0.1
W.	2	- 5.6	+ 0.45

Section (f) of Table VIII includes 10 patients who were observed over periods ranging from 3 to 5 weeks the average representing a period of $3\frac{3}{4}$ weeks. It is not possible to base any conclusions upon this group on account of the brevity of the period of observation. I have merely tabulated these cases to show that considerable variations of Vital Capacity may appear even in this short time. Seven patients showed increases, which, in 3 cases, exceeded 9%. I shall refer later to the question of the significance to be attached to increases and decreases of Vital Capacity during the early days of a patient's

patient's period of treatment.

Analysis of Variations of Vital Capacity shown by the Patients included in the foregoing Tables.

The results tabulated in Tables IX to XIII are sufficiently striking to justify the formation of very definite conclusions.

In all cases in which the patient appeared on general clinical grounds to have made improvement, there was a marked improvement in the Vital Capacity, which further corresponded in an almost mathematical manner with the degree of improvement expressed from the purely clinical standpoint.

Thus if the V.M.I. groups in each section of Table VIII are considered, averages increases of Vital Capacity per patient of 19.0%. 22.9%, 19.3% and 21.6% are evident.

In the M.I. groups the average increases are 14.3%, 14.4%, 10.4%, 15.2% and 13.5% .

In the I. groups the average increases are 10.3%, 11.7%, 10.7%, 8.6% and 8.4%. .

In the S. groups the average changes are + 2.1%, -0.2%, +0.2%, - 1.0% and - 0.05%.

In the W. groups the averages changes are - 1.8% and - 5.6% in the two groups which contain this class of case.

These changes, with the accompanying changes in weight, are compounded in Table XIV.

Table XIV.

Compound of Results expressed in Tables IX to XIII of changes of V.C. & W. in patients who had been under treatment for varying stated periods.

V I T A L. C A P A C I T Y. C H A N G E. P E R. C E N T.					
GROUP.	RESIDENCE 25 WKS.	RESIDENCE 20-25 WKS.	RESIDENCE 15-20 WKs.	RESIDENCE 10-15WKS.	RESIDENCE 5-10WKS.
V.M.I.	+ 19.0	+ 22.9	+ 19.3	+ 21.6	
M.I.	+ 14.3	+ 14.4	+ 10.4	+ 15.2	+ 13.5
I.	+ 10.3	+ 11.7	+ 10.7	+ 8.6	+ 8.4
S.	+ 2.1	- 0.2	+ 0.2	-1.8	-0.05
W.	-3.3				-5.6

W E I G H T. - C H A N G E. P E R. C E N T.

V.M.I.	+ 2.9	+ 3.8	+ 4.3	+ 6.0	
M.I.	+ 5.0	+ 3.1	+ 3.2	+ 3.9	+ 4.2
I.	+ 0.6	+ 4.5	+ 1.4	+ 2.1	+1.5
S.	+ 2.1	+ 1.3	+ 1.14	+ 0.6	-0.1
W.	-1.8				+ 0.45

It is shown in this table that the greater degrees of increase of Vital Capacity are associated with greater degrees of increase of weight; but though the increase of weight per group is apparent, reference to individual cases shows that there is a much greater individual variation of change of Weight than of Vital Capacity. For example many cases in the higher grades of clinical improvement showed actual decrease of weight or merely a fractional increase, while all such cases showed a very definite increase of Vital Capacity which is fairly constant per individual per group.

Relation of Change of Vital Capacity to Length of Residence in Sanatorium.

There is no detectable parallel relationship between the duration of stay in Sanatorium and the percentage improvement of Vital Capacity per case, except that, while the numbers in the higher grades of improvement (V.M.I. & M.I.) form a high percentage of the total numbers per residence group in all groups down to the 10-15 weeks group (namely 50%, 78.5%, 57.2%, & 54.3%), in the 5-10 weeks group the percentage of cases in the higher grades falls to 10.6% of the total number. The suggestion here is that, no great improvement has occurred in the average patient in the short residence group. The Vital Capacities of this group, however, preserve the same relations to the clinical findings as in the previously considered groups.

Table XV has been compiled from the cases whose duration of residence in the Sanatorium exceeded 15 weeks. It shows the initial Vital Capacity of each patient, and the Vital Capacities at the end of 8 weeks treatment, and at the termination of the period of observation, which in the whole table varies from 15 to 26 weeks after admission and corresponds with the discharge observation in the majority of the cases. Of the total number of 65 patients in this table, 59 showed on the final observation a Vital Capacity in most cases considerably increased above that observed at the end of 8 weeks treatment. The Vital Capacity of one patient at the end of his period of observation was identical with that observed at the 8 weeks period.

TABLE XV.

Vital Capacities in patients who underwent treatment for a period of 15 weeks and more. To illustrate the value of prolonging treatment beyond a period of 8 weeks.

No.	Initial V.C. in ces.	V.C.at 8 Weeks. in ces.	V.C.at 15 weeks & More. in ces.
46	3200	3400	3600
51	2600	2490	3080
56	3200	3530	3680
57	2850	3050	3560
58	3400	3040	3840
59	2810	3500	3650
61	2900	2680	2930
63	2890	3000	3155
65	1870	2250	2610
66	3300	3620	3840
67	2900	3270	3390
69	1100	2030	3040
71	3580	4010	4320
72	1900	1860	2430
75	2500	3030	3040
76	2590	2500	3010
80	2520	2930	2900
82	2600	3000	3150
88	2500	2590	2970
97	3100	3060	3520
98	3700	3290	3620
99	2940	3290	3420
106	2810	3120	3440
110	2890	2810	3290
111	2750	2910	3120
117	3300	3310	3665
142	1300	1020	1350
143	2500	2130	2200
144	1700	1680	1920
148	2160	2210	2520
149	2400	2810	3175
150	3100	3280	3560
154	2510	2690	2895
156	2520	2990	3310
165	1580	1800	2230
166	1800	2320	2470
167	1850	2060	2455
168	2900	3000	3040
169	1630	1650	2220
170	1950	2390	2690
172	1250	1420	2000
175	2100	2330	2730
176	2500	2800	3005
177	2000	2110	2880
180	1650	1800	2410
181	2650	3210	3510
182	1100	1260	1550
187	2090	2060	2080
189	1900	1920	1720
196	2600	3060	3220
198	2900	2820	3010
205	1200	1180	1640
207	1000	1400	1690
208	1050	1270	1540
209	1220	1510	1660
211	1490	1690	2040
212	1610	1890	2120
214	2010	2520	2050
217	2120	2010	2200
218	1500	3010	2350
89	2060	2240	2620
90	3000	3290	3740
91	2710	2780	2780
93	3130	3510	3870
96	3000	3060	2960

period. This patient No.91, had been 20 months in the Sanatorium when his observations were commenced, his condition then having become practically one of arrestment of disease. His initial and final readings at an interval of 26 weeks were practically identical (2710 & 2780 ccs).

The five patients showing a decrease of Vital Capacity on the 8 week's reading were Nos.80,96, 189, 214, & 218.

Case No.80 was admitted on 8th January,1920. when his Vital Capacity was 2520 ccs. By March 30th it had reached 3010. Thereafter his condition became unsatisfactory, periods of improvement and retrogression alternating, no real progress being made beyond that date.

Cases Nos.96 & 189 were cases which made no improvement throughout their whole periods of residence.

Case No.214 was admitted on 14th January,1920 when his Vital Capacity reading was 2010. It rose steadily and by the end of April had reached 2670 ccs. He then developed a recrudescence of activity in a previously quiescent focus in the right upper pulmonary lobe, and the Vital Capacity fell steadily during the month of May, reaching 2050 ccs on the final reading.

Case No.218 was admitted in November 1919 and improved steadily till the end of January 1920, his Vital Capacity rising from its admission level of 1500 to 3010 ccs at the latter period . About this time a serious recurrence of old bronchitic trouble occurred, and the Vital Capacity fell steadily, touching 2350ccs on the observation preceeding his discharge.

The 59 patients, whose final Vital Capacity observations exceeded those taken at the period of 8 weeks, were all in a better physical condition as a result of the prolongation of treatment beyond that period,; and the Vital Capacity increases are quite in keeping with the clinical observations, which suggested that in the group of patients, whose period of residence was under 10 weeks, a smaller degree of average improvement had occurred than in the groups which had undergone longer periods of residence. Further, none of those 59 patients appeared to show any point at which the high water level of improvement had been reached, the deduction being that the expense of these long periods of treatment was being justified.

The three months period of treatment recommended by Pensions Boards for Tuberculous War Pensioners appears to be midway between the unsatisfactory period of 8 to 10 weeks, and the more prolonged,and varying, periods indicated in a certain percentage of cases which are definitely continuing to improve under treatment.

While one cannot associate definite percentage increases of Vital Capacity with duration of treatment, the

the association between Vital Capacity and actual clinical progress remains very definite. Patients react to treatment in varying degrees, which depend largely upon the state of the disease, and their initial powers of resistance. If one compares two patients suffering from apparently the same extent of disease, one may find that one patient will achieve a degree of improvement in a period considerably smaller than is involved in the same degree of improvement for the other patient. This is perfectly rational, and is simply an illustration of the fact that recovery from pulmonary tuberculosis depends, inter-alia, upon a variety of personal factors, physical and temperamental, which vary extensively in individuals. The Vital Capacity appears to follow very closely the course of the disease. It measures very accurately the initial degree of involvement and reflects very accurately the subsequent progress of the case.

Causes of Increase of Vital Capacity in Improving Cases.

Reference to the appended record sheets of the patients in the series reveals the fact that the change in the Vital Capacity in Pulmonary Tuberculosis is not merely a function of the altered weight.

Dreyer has concluded that in health the most intimate relationship exists between the weight and the Vital Capacity; but Hutchinson noted that he had never observed a deficient Vital Capacity in healthy people of sub-normal weight. A few observations which I have been able to make on healthy people of sub-normal weight confirm Hutchinson's statement. Three such cases are reproduced here.

Name.	Age.	Sex.	V.Cap.	Weight,	% Dim.of W,
N.S.	26	M	4400	64411	4.4
W.C.	26	M	4705	57154	9.5
C.C.	34	M	5000	70308	10.5

	Stem. L.	Ch.	VC.Calc in L.	VC.Calc in L.& Ch.
N.S.	91.5	88	4406	4352
W.C.	90.0	84.5	4263	4111
C.C.	97.5	91.5	5002	4823

Case (1) N.S. showed a weight which was 4.4% below normal. His Vital Capacity exactly corresponded with that calculated in terms of his stem length.

Case (2) W.C. showed a weight which was 9.5% below normal, and a Vital Capacity very much above normal for his body measurements. This subject is an athletic youth whose

whose spare time is devoted to golf, swimming, water polo and walking. He is thin, but physically very fit, and shows no sign of any disease.

Case(3) C.C. is myself, and shows a weight which is 10.5% below normal. The Vital Capacity is exactly that calculated in terms of the somewhat long stem length.

The non-dependence of Vital Capacity upon weight is further shown in the behaviour of the Vital Capacity in improving cases of Pulmonary Tuberculosis, where it often runs a course quite antagonistic to that followed by the weight.

In one type of case the Vital Capacity may show continuous improvement, while the weight may remain stationary or actually decrease. Case No.88 is a type of this. His Vital Capacity rose from 2500 ccs to 2970 ccs twenty six weeks later, while his weight oscillated between an initial weight of 8 st 10 lbs, and a final weight of 8 st 8½ lbs, both however practically normal weights for his stature. His condition was very much improved, and he was ultimately transferred to a Tuberculosis Colony. Case No.51 had an initial Vital Capacity of 2600 ccs which ultimately rose to 3080 ccs after a period of 19 weeks treatment . His weight fell from 8 st 3 lbs to 8 st 1 lb, these weights being 15% and 16% respectively below normal. This man was discharged as an improved case, and resumed his occupation of chauffeur, feeling fitter and stronger in every way . In the instance of Case No.69, in a period of 23 weeks, the Vital Capacity rose from 1100 ccs to 3040 ccs, an increase of 50.5%. The weight increased from 7 st 3 lbs on admission to 7 st 4½ lbs on discharge, this last weight being 15% below normal for his stem length. On clinical grounds, and from his own subjective standpoint, this patient was very much improved, and left the Sanatorium to resume work as an outdoor labourer. In cases of this type, the possibility of the normal weight of the individual being a subnormal one, must always be considered. Although I have estimated this particular man's weight on a normal standard for his physical measurements, his statement that his greatest known naked weight was 7 st 7 lbs throws considerable light on his weight condition. On this statement his discharge weight was only 2.4% below his actual normal.

In another type of case the Weight rises out of proportion to the Vital Capacity. This is typified in Case No.108 where the Vital Capacity rose in a period of 14 weeks from 3000 to 3240 ccs, an increase of 5.2%: while the weight rose from 7 st 4 lbs on admission to 8 st 3½ lbs on discharge 14 weeks later, an increase of 11.7%. The patient was well nourished, but pale and complained of dyspnoea on even mild exertion. He appeared to be clinically better and fitter than he was on admission but his clinical improvement was not in proportion to his rise in weight. His final weight was 3.2% below normal.

In a third type of Case the weight may rise and the Vital Capacity fall. Case No.98 illustrates this type, the weight showing an increase of 2.9% and the Vital Capacity a decrease of 2.0%. This man made no improvement during his period of 25 weeks observation. In the instance of case No.139, in a period of 13 weeks treatment the weight showed an increase of 1.7% while the Vital Capacity fell to the extent of 4.7%. This patient's physical signs remained unchanged, and he himself

himself felt no evidence of any improvement.

The above quoted cases illustrate types which are scattered throughout the series.

It is apparent that the relationship usually existing in health between Weight and Vital Capacity is not the Causal factor in the production of the changes of the latter which occur in Disease, and an explanation of the improvement of Vital Capacity in cases of Pulmonary Tuberculosis which improve under treatment is to be sought in the reversal of those factors previously discussed which contribute to its deterioration. The fundamental factor is actual improvement in the pathological changes in the lungs. The healing process, with its diminution of infiltrated areas, drying up of accessory areas of oedema, and walling off of diseased foci, tends to the reduction of the protective muscular spasm, to the diminution of absorption of toxins and allevation of the asthenia produced by them. The improving muscular system is reflected in the rising Vital Capacity.

With the improvement of Vital Capacity an improvement in Chest mobility is often detectable. An analysis of the 102 cases observed over a period of more than 10 weeks shows that 71 cases developed an increase of mobility. These were all cases showing signs of clinical improvement and of increasing Vital Capacity. This fact is probably merely an expression of increasing muscular tone, and is to be expected in the light of the facts previously suggested by Table VII, indicating that mobility tends to keep pace with Vital Capacity changes.

Types of Variation of Vital Capacity.

While consideration has so far been given to the relation of Vital Capacity variations to clinical improvement, and weight, and to the causes of Variation of Vital Capacity, there are certain features of the course of the Vital Capacity in patients undergoing treatment which have undoubted prognostic signficance.

(a) Temporary Initial Fall of Vital Capacity.

Of 90 patients observed from the first day of admission, who had been in residence for a greater period than four weeks, and whose Vital Capacity showed a final elevation above that observed on admission, 28 (or 30.1%) during the first fortnight of their residence experienced a fall of Vital Capacity.

From the relationship of the Vital Capacity to the general and pulmonary conditions, which has already been established in this investigation, one appears justified in attributing this fall to a deterioration of the patient's condition during the early days of his residence in Sanatorium. Reflection upon the sudden change of environment which has resulted from transferring a patient from the hot and probably indifferently ventilated atmosphere of a small dwelling at sea level to the cool and rather over ventilated condition of the Sanatorium at a certain elevation above sea level; upon the sudden strain placed upon a thermic mechanism, which has for months or years been diligently prevented by the

the wearing of excessive clothing, and dwelling in overheated atmospheres, from performing its physiological functions; upon the depressing influence of a natural homesickness upon the general condition, makes one appreciate the reaction strain which falls upon the patient in his new surroundings. The Vital Capacity fall is probably merely a reflection of a temporary negative phase in the patient's general defensive powers, and an indication for careful regulation of treatment till such time as acclimatization to the altered conditions has occurred.

(b) Variations in Improving Cases.

Improvement in a constantly improving case is usually reflected in a constantly rising Vital Capacity. Such a type is exemplified in Case No.73 whose Vital Capacity readings observed at weekly intervals, with one gap of 14 days, over his complete period of residence of 9½ weeks are reproduced here.

Case No.73 act.29 yrs. Adm.19,3.20. Disch.28.5.20.

DATE.	20Mar.	29Mar.	5Apr.	12Apr.	19Apr.	26Apr.	10May.	17May.	24May.
V.CAP.	3720.	3730.	3750.	3780.	3840.	3960.	4010.	4100.	4170.

This man made uninterrupted progress during his whole period of residence, and left the Sanatorium in a much improved condition.

Among others, Cases Nos 181 and 65 are more or less similar, and illustrate the constantly rising Vital Capacity synonymous with constant general progress.

This type of case, however is not very frequently encountered, as the patient, whose stay is charactized by continuous and unbroken progress, is the exception in a Sanatorium. The commoner type of Vital Capacity variation in the improving case is typified in Case No.180 whose readings are reproduced here.

Case No.180 act.35 Adm.9.1.20 Last observation 2.6.20

DATE.	10Jan.	21Jan.	4Feb.	17Feb.	3Mar.	17Mar.	24Mar.	7Apr.
V.CAP.	1650.	1690.	1830.	1760.	1800.	1610.	2030.	2040.

DATE.	21Apr.	5May.	19May.	2June.
V.CAP.	2260.	2275.	2310.	2410.

The observations in this case were made fortnightly over a period of 20 weeks, with the exception of two readings taken at intervals of a week. Steady rise of Vital Capacity occurred from admission until 4th February. Thereafter as a

a result of exacerbation of a bronchitic condition, his Vital Capacity fell. With the clearing up of this, coincidently with the onset of drier weather, a rise of Vital Capacity again appeared . From 24th March until the date of his last observation on 2nd June, a steady rise of Vital Capacity occurred. During this time his clinical progress was steady and uninterrupted.

Case No.86 which was observed at weekly intervals over a period of 9½ weeks shows a similar type of interrupted progress.

Case No.86 act 25yrs. Adm.19.3.20 Last observation 27.5.20.

DATE.	20Mar.	30Mar.	6Apr.	13Apr.	20Apr.	27Apr.	4May.	11May.	18May	27May
V.CAP.	2780.	2980.	3130.	3200.	3110.	3055.	3060.	3075.	3195.	3310

In this case a fall of Vital Capacity after an initial increase, occurred between 13th April and 18th May. No definite cause was detectable. The patient appeared well, but his condition appeared stationary. His last two observations showed a returning rise of Vital Capacity. This patient left the Institution on 17th June in a much improved condition.

In cases of this type there is often some apparent cause for a temporary fall of Vital Capacity. In many instances no such cause is detectable, the Vital Capacity varying for no apparent reason. It may fall during one week and rise during the next; but in improving cases the general tendency is an upward one.

These points illustrate the fallacy of isolated observations of Vital Capacity in this disease. Unless it is observed constantly at fairly frequent intervals, a false impression of the patient's progress is readily obtained . An observation during a period of temporary depression may reveal a decrease, which, in a few days, will pass to an increase. In interpreting a fall of Vital Capacity, one must determine its cause, which may be of serious or trivial import. An illustration of this is given in case No.180, previously cited, where the fall of Vital Capacity was of serious import. In the instance of case No.160 the Vital Capacity rose steadily from an admission reading of 2500 on 23rd February to a reading of 3360 on 24th March. The reading taken a fortnight later showed a fall to 3130, which during the next fortnight became converted to a rise to 3410. The cause of the fall on 7th April was a mild attack of coryza. I shall consider such points in detail later.

Case No.114 illustrates a fall of Vital Capacity which was of very serious prognostic significance, and which was the first sign obtained of an impending relapse. This patient was admitted on 14th January 1920 and showed a Vital Capacity observation of 2010. The Vital Capacity rose steadily and on 22nd April had attained a figure of 2670. During the last week in April slight febrile manifestations, associated with pain over the right pulmonary apex, and right shoulder, appeared, and on May 6th the Vital Capacity reading had fallen to 2350. On May 27th the reading was 2050, and his physical signs clearly indicated a slight recrudescence of activity

then

activity in an old previously quiescent apical focus.

Patients again may show on admission a diminished Vital Capacity reading which is accentuated by some temporary indisposition— a point which it is important to grasp if the proper significance is to be attached to subsequent readings.

Case No.99 illustrates this point. This man was admitted to Sanatorium on 5th December 1919. His Vital Capacity observed on 6th December was 2940 ccs. He was then complaining of pain in his right axillary region for which no definite cause was detectable.(He suffered from a fairly extensive lesion of his right upper pulmonary lobe). On 8th December brisk pleural friction appeared in the area of pain, and he was put on rest treatment in bed. His next Vital Capacity observation was made on 19th January 1920, when the pleurisy had subsided, and a reading of 3450 ccs obtained. Thereafter throughout his whole stay his Vital Capacity oscillated, the last reading of 3420 being taken on 2nd June 1920. He made no real progress during his period of residence, and was discharged as being improved only in his general condition, no signs of improvement in his pulmonary condition being detectable. His final Vital Capacity reading was slightly smaller than that taken on 19th January. His initial reading of 2940 was evidently unduly decreased on account of pleural pain; so that the recorded final increase of Vital Capacity of 11% over his admission reading is probably fallacious.

A point worthy of record is that where a fall of Vital Capacity occurs in a patient who has previously experienced a considerable increase, the fall usually takes place in stages, taking a varying but moderately extended period to fall to the initial level. This is illustrated in the instance of Case No114 above recorded, where the fall was presumably spread over a period of a month.

Another type of Vital Capacity variation is seen in the case where the Vital Capacity may remain stationary, or fall slightly, over an extended period, and then enter upon a period of increase. In such cases it is merely following closely the patient's general progress. Case No.58 which is reproduced here is an illustration of this type.

Case No.58 aet 28 yrs. Adm.26.11,19 Disch.3.5.20.

DATE.	27 Nov.	9 Dec.	23 Dec.	13 Jan.	27 Jan.	10 Feb.	24 Feb.
V.CAP.	3400.	3200.	3200.	3000.	3040.	3100.	3370.
WEIGHT.	9.10½	10.2	10.5	10.6	10.7	10.9½	10.13½

DATE.	9 Mar.	23 Mar.	1 Apr.	15 Apr.	29 Apr.
V.CAP.	3400.	3450.	3680	3810.	3840.
WEIGHT.	11.0.	11.0	10.13	10.13	10.11

His weight readings are also included because they appeared to follow a course which was in part directly opposite to that followed by his Vital Capacity. For the first two months of his residence in Sanatorium the Vital Capacity fell steadily, thereafter rising continuously until discharge. For the first four months of his residence his weight rose continuously, but fell during the last month of his stay, while the Vital Capacity continued to rise. During the first two months of this man's treatment his condition was not satisfactory. Cough was persistent and severe, and he was dyspnoeic on any but the mildest exertions. Blood streaking of the sputum occurred on several occasions. Thereafter rapid improvement set in, and his physical signs on discharge were those of restricted and quiescent disease. He was discharged as being clinically very much improved, and feeling very fit and well. The weight in this case was a very poor guide to the patient's state of progress, which was reflected very positively and accurately in his Vital Capacity readings (Dreyer's Vital Capacity Constant in Weight forms a very useful guide to the interpretation of the changing relationships between the Vital Capacity and Weight; a rising figure, as in this instance, showing a weight rising out of proportion to the increase of Vital Capacity. In the latter days of this man's residence the fall of the constant is marked, and, finally, it closely approaches the average normal of 0.690)

Case No.180 previously mentioned provides an exact parallel and shows a Vital Capacity oscillating for the first two months of residence and thereafter rising steadily. During the first two months his condition was very unsatisfactory. Cough was severe, sputum copious, and purulent, and temperature very unstable; his whole condition necessitating more or less constant rest in bed. Thereafter gradual improvement set in. Cough diminished in frequency and intensity, the daily amount of sputum fell gradually from its constant average of 4 ounces to an average of 2 ounces, temperature became normal and stable, and a very definite improvement in the pulmonary signs was detectable. This patient was an educated man and was very interested in the evident relationship between his subjective condition and the state of his Vital Capacity.

(c) Variations in Patients remaining in a Stationary Condition or becoming worse.

In this type of case the Vital Capacity again follows closely the course of the patient's condition. Case No.96 is an illustration of the type.

Case No.96 aet 30 yrs. Adm. 24.10.19 Last observation 26.5.20

DATE.	26 Nov.	10 Dec.	30 Dec.	14 Jan.	28 Jan.	11 Feb.	25 Feb.
V.CAP.	3000.	2930.	2960.	2930.	3060.	3000.	3150.

DATE.	10 Mar.	24 Mar.	14 Apr.	12 May.	26 May.
V.CAP.	2800.	3280.	3310.	3010.	2960.

This man's condition remained more or less stationary throughout his whole period of observation. He was liable to

to periods of evening pyrexia associated with exacerbation of cough and sputum, yielding to prolonged rest in bed, but recurring at intervals even when the greatest care was being observed in the regulation of his exercise, diet, and general life. His physical signs remained unaltered and he showed no evidence of clinical improvement.

Case No.98 is an exactly similar type, the oscillating Vital Capacity reading reflecting very closely the course of the disease. This man, on all clinical grounds, made no progress during his whole period of residence. His physical signs indicated moderately active disease of Turban II grade. Cough was not at any time very severe and sputum rarely exceeded 2 oz. daily. He however remained pale, felt unfit and had a very low grade of exercise tolerance.

Case No. 189 is reproduced here as an illustration of the course followed by the Vital Capacity in cases which show a retrograde mevement.

Case No.189 Aet.26 yrs. Adm.10.10.19 Last observation 24.5.20

DATE.	27 Nov.	3 Dec.	17 Dec.	7 Jan.	13 Jan.	26 Jan.	9Feb.	23 Feb.
V.CAP.	1900.	1800.	1940.	1990.	1800.	1920.	2000.	1870.

DATE.	22 Mar.	5 Apr.	19 Apr.	3 May.	24 May.
V.CAP.	1530.	2090.	1870.	1530.	1720.

This man's condition oscillated for a long time but latterly became undoubtly worse. He was a very advanced Turban III grade of case and his stay was charactized by alternating periods of rest in bed, and mildest of exercise. The Vital Capacity readings oscillated throughout, and latterly showed a distinct downward trend.

Case No.104 illustrates a case of Turban II grade, of moderate activity, which improved for the first month of residence and then became decidedly worse. The Vital Capacity readings followed accurately the course of his condition and the last reading taken before he left the Institution showed a diminution of 5.9% on his admission reading.

All the foregoing extracted cases are merely selected in illustration of points elucidated by a careful scrutiny of the appended record sheets of all patients in this series, a brief account of the condition, and clinical progress, of each being recorded on the appropriate sheet. The types illustrated are scattered throughout the series. The outstanding fact borne out in every case is the very close manner in which the actual progress, or deterioration, of each case is reflected in the Vital Capacity, the value of which, as a simple standard of progress, cannot in my estimation, be over-stated.

Causes of Temporary Decreases of Vital Capacity in Patients undergoing Treatment.

Treatment.

The liability of phthisical patients to recurring "colds" is notorious, and, excluding the larger percentage in which such so-called colds are merely an expression of an exacerbation of the existing disease, their exaggerated susceptibility to coryzal attacks remains an unfortunate fact.

In this series of Sanatorium cases this was by far the commonest cause of temporary depression of Vital Capacity, and the extent to which an apparently simple coryza, practically without any general manifestations, can lower the Vital Capacity makes one regard this condition as possessing a more sinister significance than is usually attached to it.

Case No.197 affords an illustration of this. He was admitted on 5th March 1920 with a Vital Capacity of 1900 ccs which rose steadily, and on 5th April attained the figure of 2550. During the week following he developed a coryzal attack, and his Vital Capacity on 12th April had fallen to 2380. The coryza was followed by a bronchitic attack which subsided slowly, and, though his weight rose steadily through out the whole period of observation, his Vital Capacity did not again rise above 2495 ccs, the figure attained on 31st May, the date of his last observation.

Case No.193 gives a slightly different illustration. He was admitted on 26th March with a Vital Capacity of 2440 which on 5th April had risen to 2500. A febrile coryzal attack developed during the following week and his Vital Capacity on 19th April had fallen to 2275. The coryza in this case cleared up completely, and, on 26th April, his Vital Capacity was 2560. Thereafter it rose continuously.

Notes of Vital Capacity depression due to a coryzal cause have been made on the case sheets concerned. The two cases extracted above merely illustrate two types of effects produced by this condition.

The patient who suffers from any degree of collateral bronchitis is liable to periods of Vital Capacity depression, associated with exacerbations of his bronchial condition, whether these are consequent upon a coryzal attack, as in the instance of Case No.197 referred to above, or rise without any such preceeding symptoms.

Case No.198 affords two illustrations of this point, attacks of bronchitis on 15th December 1919, and 12th April 1920, reducing his Vital Capacity from 2900 to 2670, and from 3010 to 2760 respectively. As the bronchitis in such cases is often of tubercular origin, the differentation between an attack of bronchitis and an actual exacerbation of the tubercular disease is probably a fine one. I adhere to it merely because it serves a useful clinical purpose.

As in all disease, the fight of the tuberculous patient is a question of the balance of power, and the day falls to the preponderating side. In the favourably progressing case with good tolerance and resistance of high grade,

grade, the progress is smooth, so long as the favourable balance remains. If the balance is upset by any factor which aggravates the disease, or lowers the resistance, a degree of toxaemia results, which is beyond the tolerance level, and excess symptoms of toxaemia appear. Such accidents are not uncommon even in the favourably progressing case, and during such periods the Vital Capacity naturally falls.

Case No.214 previously cited illustrates this point and shows a Vital Capacity reduced by an aggravation of disease.

Case No.196 was a case whose slight progress was interrupted by many periods of retrogression due to periods of aggravation of extensive disease. The most typical example is evident on 25th Feb.1920, when a fall of Vital Capacity to 2800 from a previous reading taken on 11th Feb. of 3100 was observed. During the interval which existed between the readings he had developed slight evening pyrexia, and experienced considerable aggravation of cough, and increase of sputum. The condition gradually subsided.

This cause of fall of Vital Capacity has been previously referred to in the case of patients showing a downward movement, and the interpretation of its due significance is of the highest importance . The Vital Capacity reading is merely a guide to a patient's condition. The condition itself must be determined by other means.

A not uncommon cause of temporary decrease of Vital Capacity is evident in any condition which interferes with the mobility of the thorax as a whole. The influence of acute pleurisy with the retarding action of pain has been referred to, and Hutchinson's observation on the non-effect of chronic pleural adhesions has been mentioned. Anything which affects the action of the chest muscles will naturally produce a fall of Vital Capacity and the action of myalgia is shown in Case No.187, where the Vital Capacity fell from 2440 on 13th April to a level of 2240 on 27th April, the patient having in the meantime contracted an attack of myalgia involving apparently the serrations of the right serratus magnus muscle, and from which he was just beginning to convalesce when the latter reading was taken. Such a cause for a fall of Vital Capacity is easily detected, and illustrates an occasion where a fall is of no significance whatever.

Maximum Diminution of Vital Capacity observed.

The greatest diminution of Vital Capacity observed was in the case of Case No.120 where it reached 76.7%. The patient had been in the Institution since May 1919, his Vital Capacity observations being made on 27th November 1919 when the above figure was registered . He was in a most advanced state of the disease, and was transfered early in December to a Tuberculosis Hospital where he died.

Case No.199 was a case of very active hilus tubercular disease with extensive collapse of the right lung, apparently a pressure phenomenon. He was very ill on admission in October 1919, the reading recorded being taken towards the end of the following month, and showing a diminution of 76.2% . He was transferred to a Tuberculosis Hospital in December 1919, and

and after some vicissitudes made an apparently good recovery. I regret that I was unable to obtain a subsequent Vital Capacity reading in this case.

Case No.133 showed an admission Vital Capacity observation of 670 ccs which was equivalent to a diminution of 75.6%. This boy, aged 16 years, was a very advanced Grade III pulmonary case with symptoms suggestive of intestinal involvement. He was afebrile, and his pulse rate rarely exceeded 80 per minute. Cough was only moderately severe, and sputum averaged $\frac{1}{4}$ oz daily. The lung symptom indications appeared favourable, but his extreme emaciation and intestinal symptoms were of grave importance . He was $7\frac{1}{2}$ weeks in the Institution and his Vital Capacity rose gradually to 800 ccs. He was ultimately discharged at his mother's request. Apparently an error of judgment was committed in sending this boy for treatment in a Sanatorium during the worst months of winter, and the comparatively mild group of symptoms, even in the presence of advanced signs, was probably the determining cause. Such slight, and undoubtedly temporary, improvement as he made, was due entirely to the complete rest which he was compelled to undergo. If one reflects that the respiratory tidal air in a boy of this age must approximate 400 ccs , the respiratory reserve margin is seen to be extremely small, rendering the possibility of any form of exercise, with its consequent deepening of the respiratory act, very doubtful. A preliminary Vital Capacity reading in such a case would have indicated transfer to a hospital, and not to a Sanatorium, where the form of treatment is essentially an active one.

Four other cases, Nos.135, 142, 158 and 180, all adults, showed diminutions of 60%, 67.6%, 60%, and 60.2% respectively. All were dyspnoeic on exertion. Nos. 135 and 158 died in the Sanatorium. Case No.180 has been previously referred to in some detail. He ultimately improved considerably and was still in residence when the series of observations was concluded. Case No.142, after a long period of treatment with varying results, began to fail and left the Sanatorium in a very unsatisfactory condition.

Even in the presence of apparently reasonably favourable clinical signs and symptoms, the detection of an excessive decrease of Vital Capacity should call for very serious consideration of the advisability of sending a patient to an Institution where the modes of life and treatment are essentially active.

Relation of Vital Capacity to Working Capacity.

The approach to an estimate of this relationship is beset with many difficulties. Human Nature varies, and the extremes are rarely visible to such a degree as in the case of the sufferers from pulmonary tuberculosis. The desire to work and the desire not to work, play vigorous parts in their lives, and it is often most difficult to say that those who desire to work are fit, and that those who do not desire to work are unfit. Such conclusions as I have attempted to draw have been reached from a consideration of men whose honest desire was to re-attain a degree of active working Capacity, and who looked upon the work allotted to them in the Sanatorium as the means to attaining that end.

end.

Cases Nos.137, 138 and 139 were among the most willing workers in this series of cases,.Case No.137 had a Vital Capacity diminution of 42.8% when he was put upon general physical work, his discharge and greatest Vital Capacity reading being 42.1% below normal. He was a Grade III case and when transferred for training in a Tuberculosis Colony showed signs of extensive but absolutely quiescent disease.

Case No.138 had a Vital Capacity diminution of 35.3% when he was allotted work, his discharge reading being 35.8% below normal. He was also transferred finally to a Tuberculosis Colony. His physical signs, and grade, and character, of disease, closely resembled those of case No.137, the disease being in a completely quiescent condition at the time of his transfer.

Case No.139 was allotted work at his own special request. He had very extensive double pulmonary signs with moderate degrees of cough and sputum, his disease having extended over a period of 9 years. He was employed on light gardening work, but was observed by me on more than one occasion wheeling a fairly heavy barrow over rough ground. His temperature, pulse rate, and general clinical condition, indicated no adverse effects. This man, throughout his whole stay, had a Vital Capacity which was never diminished to a smaller extent than 53.3%, and he was evidently fit for a few hours daily open air work. He was discharged in February 1920 at his own request, but has since failed in health. His case was interesting from many points of view. He had a greatly decreased, and stationary, Vital Capacity which was associated with a rising weight. His physical signs indicated extensive, moderately active, double pulmonary disease, the course of the signs being apparently stationary. No actual improvement was detectable throughout his whole period of residence. Therein the signs were closely analogous to the Vital Capacity readings. The interpretation of his work Capacity is difficult; but the case appears to be parallel with those cases, which seek medical advice for the first time, with fairly advanced and evidently moderately long-standing disease, and who give an honest history of symptoms of short duration. The only applicable explanation is, that tolerance in their case has proceeded pari passu with the disease, until some factor has intervened to upset the balance. Slight cough of some kind among the industrial classes is so common as to be ignored, and it is only when it becomes persistent and severe that any pathological significance is attached to it. Its value as a suggestive initial symptom is thus slight. So long as toxin tolerance remains high, general symptoms remain at a low level, and by ignoring the presence of slight cough, apparent fitness for work may be maintained.

The first two cases described--Nos.137 and 138--performed hard manual work, and are selected here as examples of such work capacity being compatible with a moderately advanced diminution of Vital Capacity.

Case No.98 provides an instance of a man who was willing to work, but appeared unfit to do so. He had disease of Grade II extent, of apparently a very moderate degree of activity. His

His Vital Capacity varied from 12% to 5% below normal, and appeared to be in keeping with the extent and activity of his disease, as determined by ordinary clinical methods. He remained pale, slept badly, and was always languid and apathetic, his symptoms appearing to be out of all proportion to his pulmonary signs. He was however quite edentulous, and suffered from a constant degree of gastric and intestinal discomfort, and the bulk of his general asthenic symptoms appeared to be possibly attributable to an intestinal toxaemia. His Vital Capacity readings supported the clinical pulmonary findings; and he is an instance of a good Vital Capacity not being necessarily a guarantee of a good work capacity. His case however suggested (as I have observed in a few other cases) that where the pulmonary signs appear to be favourable, and the Vital Capacity reading is not unduly diminished, attention should be paid to other systems of the body in the search for the cause of a disabling bad general condition.

Case No.99 is an instance of a man who suffered from disease of Turban II grade and who showed a Vital Capacity diminution which averaged about 20%. His case has been previously referred to. He was absolutely unfit for any form of physical work, any excessive grade of exercise producing a train of symptoms of excessive auto-inoculation.

In a previous part of this paper it has been shown from analysis of Table II that the extent of disease appears to bear some relation to the Vital Capacity diminution; though it was pointed out that the relation was far from being a constant one. Later it was shown that improvement under treatment was invariably accompanied by an increase of Vital Capacity; and, in the discussion of the causes of diminution, and improvement of Vital Capacity, the part played by toxaemia was suggested as being an important one. It appears to me that to arrive at a full and proper interpretation of a Vital Capacity reading the pathological-anatomical element must be considered in conjunction with the toxic element. A very toxic Turban II case may show a greater diminution of Vital Capacity than a less toxic Turban III case but the ultimate possible limit of Vital Capacity improvement of the Turban III case is probably less than that of the Turban II case. Such a conclusion has been suggested to me by the behaviour of the Vital Capacity in a limited number of arrested and quiescent cases.

Three cases, Nos.33, 43, and 83 were discharged as arrested cases. All had originally been of Turban II grade. Case No.33 showed a discharge Vital Capacity diminution of 30%. Case No.43 showed a discharge Vital Capacity diminution of 11.6%, while Case No.83 showed a discharge Vital Capacity diminution of 11.3%. Cases Nos. 137 and 138 were transferred to Colony with disease in a quiescent condition, and showed Vital Capacity diminutions of 42.1% and 35.8% respectively.

One can appreciate the probability that the Vital Capacity in any case where any degree of anatomical change has occurred in thorax, lungs, or muscles of respiration, can never return to normal. As an instance, Case No.35 referred to above, showed a very considerable degree of flattening of the upper half of the right side of his chest (over the original area of disease), with marked deficiency of movement of this

this side, and could not possibly re-attain a normal Vital Capacity. So with Cases Nos. 137 and 138 which were cases of extensive disease, with fibrosing changes taking place in both lungs, the chance of returning to normal was bound to be in inverse proportion to the damage already done to lung tissue and thoracic wall. In Cases 43 and 83 the chest wall showed very little evidence of flattening and impairment of movement, while the pulmonary signs suggested almost complete return of function.

Estimation of the significance of a diminution of Vital Capacity must thus always be made in conjunction with the results of the clinical examination. A serious diminution of Vital Capacity, in conjunction with evidence of very restricted disease, probably indicates a grave degree of activity and general disturbance. Moderate diminution of Vital Capacity, in conjunction with moderately extensive disease, indicates a reasonable immediate prognosis. A diminution of Vital Capacity, which would be a serious one in a Turban I Case, may not be serious in a Turban II, or Turban III, case. Further a Turban II Case, where little collapse of lung, and consequent chest wall change, have recurred, may show less Vital Capacity diminution than a similar grade of case, where such changes have occurred: while the prognosis in the latter may be better than in the former case.

Such appears to be the explanation of the comparatively small diminution of Vital Capacity in cases of the nature of No. 99 in the series, already mentioned. This man had definite pulmonary tuberculosis corresponding to a grade II classification. His condition was very unstable and he required much supervision and care, His case was however apparently of fairly short duration, its early course having been of a subacute nature. I believe that at a later period of his disease, when the pulmonary condition becomes stabilized, and fibrous changes begin to predominate in the diseased areas, he will have a smaller Vital Capacity, and a greater Work Capacity, than he had during the course of these observations.

In the course of examination of a few supposed normal individuals I examined G. C. aet. 20 who was employed as second ploughman and general farm-hand on the farm attached to the Sanatorium. He was a sturdy man of exeellent physique and healthy appearance, and, on the estimate of the farm manager, a good steady worker. The following is an analysis of his investigation.

G.C. aet. 20 yrs. Ploughman

V. Cap.	Weight	V.C. Calc. in W.	Stem l.	V.C. Calc. in l.	Ch.	Exp.
3360	57154	3857	85	3802	86.5	5.0

V.C. Calc in Ch.	V.C. Calc in l & Ch.	V.C. Dim.
4110	3974	15.5

His Vital Capacity was 15.5% below his estimated standard, while his weight was apparently normal. He further belonged to a class which should rank among the high grades of Vital Capacity. On examining his chest, I found that he had extensive, and, apparently chronic bronchitis, with signs of an old fibrosed tubercular lesionof small extent at his right apex. My casual association with him in his work on the estate had enabled me to observe that he had a cough associated with expectoration; but, when questioned, he denied the presence of sputum, rendering the question of its examination impossible. This man was maintaining a high grade of health, and performing hard manual labour in all types of weather, with efficiency. He was to all general observation a perfectly healthy man. The degree of Vital Capacity diminution in relation to his clinical chest findings was small, and it is this relationship which appears to me to determine any value that a Vital Capacity observation may have in enabling one to assess the working capacity. It should supplement, and not replace, judgment based on clinical findings. My observations lead me to believe that it is of no value as an absolute standard, except in cases of excessive diminution, and of restricted value as a relative standard. Further, even in cases where the Vital Capacity reading is only moderately diminished, and apparently in keeping with the pulmonary signs, there may be some other concomitant condition rendering the patient unfit for work. Case No. 98 previously quoted illustrates this point. This type of case, however, shows the value of Vital Capacity observation in excluding a pulmonary cause for lack of physical efficiency.

Relation of Vital Capacity Diminution to Exertion Dyspnoea.

This relationship is intimately associated with the relationship of Vital Capacity diminution to working capacity, and opens up the question of dyspnoea in Tuberculosis. I do not propose to enter into a discussion of the various haemic, nervous, and toxic origins of the condition, but merely to remark upon certain associations, and lack of associations, between Vital Capacity diminution and dyspnoea.

In every case which has shown an excessive Vital Capacity diminution - in such I include all diminutions above 55% - dyspnoea has been present on mild exertion, and the relation between the two, previously stated in the instance of Case No. 133, is fairly clear. The more moderate, but still comparitively high, degrees of diminution, need not necessarily be associated with any marked degree of dyspnoea: the determining factor apparently being the extent to which the existing diminution is determined by purely anatomical changes in the presence of fairly quiescent disease, or by actual toxic manifestations. Case No 137, previously referred, to had extensive quiescent disease showing evidence of fibrotic change. His Vital Capacity was reduced to the extent of 50.6%, and dyspnoea was only present on really heavy exertion. Case No. 143 showed a Vital Capacity diminution of 40%. He was a case of fairly extensive active double pulmonary disease with apparently less actual lung change than Case No. 137. He made no progress while in Sanatorium, and dyspnoea on even slight exertion was a prominent symptom throughout his stay. In Case No. 137 such slight dyspnoea as was present was probably of mechanical origin. In Case No. 143 a toxic cause was undoubtedly at work. Reduction of Vital Capacity per se as a cause of dyspnoea depends entirely upon the extent of reduction, and consequent

TABLE NO. XVI.

Being Hutchison's Table Q of the Comparison of the Vital Capacity in Healthy and Diseased Cases , - reduced to cubic centimetres and the percentage diminution per case added.

EARLY STAGE			ADVANCED STAGE		
V.C.Diseased	V.C.Healthy	Per Centg Reduction	V.C.Diseased	V.C.Healthy	Per Centg Reduction
1853	3608	48.7	968	2114	54.3
1886	2838	33.6	1459	3674	60.3
1722	2838	39.3	1771	4166	57.5
2132	3346	36.3	1181	2114	44.3
2099	3608	41.8	1312	3756	65.1
1968	3756	47.6	1230	4166	70.5
1640	3165	48.3	558	4034	86.2
2296	4034	43.1	2804	4428	36.7
1640	3346	51.0	984	3887	74.7
1804	3608	50.0			
2130	3756	43.3			
2114	3346	39.8			
3149	3772	16.5			
3690	4920	25.0			
2378	3608	34.1			
3280	3936	16.7			
3034	3772	19.6			
3575	3936	9.2			
2116	3608	41.4			
5641	7117	20.8			
3608	4264	15.4			
3214	4166	22.9			
	Average Reduction of V.C.p.cent.	33.8		Average Reduction of V.C.p.cent.	61.1

consequent approach of the Vital Capacity to the volume of Tidal Respiration. A very considerable degree of reduction of Vital Capacity may occur with only slight dyspnoeic effect, if the state of the disease is a moderately quiescent one.

The point however is of academic, rather than practical, interest.

Practical Application of Facts Elicited regarding Vital Capacity Changes in Pulmonary Tuberculosis.

(1) Diagnosis. The practical application of Vital Capacity readings in the diagnosis of Pulmonary Tuberculosis, and diseases of the chest, was appreciated by Hutchinson, who introduced his Spirometer "with a view of establishing a precise and easy method of detecting disease". He demonstrated the reduction of Vital Capacity in Pulmonary Tuberculosis, and laid stress upon it as a diagnostic finding of considerable value. He quoted cases in illustration of the point that he had, on occasions, detected a fall of Vital Capacity in persons whom he had previously observed, before clinical signs of tubercular lung disease manifested themselves; these being cases which later developed pulmonary tuberculosis. I have not had an opportunity of verifying such facts, whose proper sphere of investigation is the Dispensary; but from the undoubted relation which the degrees of Vital Capacity reduction bear to the stages of the disease, I can appreciate that it may provide most valuable diagnostic aid in cases of doubt. In every case in this series the Vital Capacity was diminished, and among the 198 cases which exhibited conclusive signs of intra-pulmonary disease, 194 had Vital Capacity diminished to a greater extent than 10%: while 173 exhibited diminutions exceeding 20%. In any case in which the suspicion of pulmonary tuberculosis is aroused, a deficient Vital Capacity reading in the absence of other causes of deficiency, should strongly support the suspicion of the disease.

(2) Estimation of Disease as regards extent and severity. Table No. XVI is Hutchinson's Table Q, with cubic inches reduced to cubic centimetres and the percentage reduction of Vital Capacity added. The cases shown in this table as early cases, show an average Vital Capacity reduction of 33.8%, while those shown as advanced cases show an average reduction of 61.1% These figures are parallel with the results shown by the analysis of the 198 cases in this series falling within groups 1, 2, and 3 of the Turban-Gerhardt scale of classification. It was shown in Table VI that the general tendency of the consecutive groups is to show higher degrees of Vital Capacity reduction, so that a poor Vital Capacity in a definitely diagnosed case of the disease is presumptive evidence of the case being either moderately advanced from the pathological-anatomical point of view, or else evincing a profound degree of toxaemia. The test naturally is merely an adjuvant to the ordinary clinical methods of examination; but, when properly applied and interpreted, affords information of undoubted value, and on three grounds, that of primary diagnosis, that of estimation, of the extent of pulmonary involvement, and that of estimation of the degree of activity of the disease, may be of very genuine help in moulding one's judgment.

(3) Estimation of Progress of Patients undergoing treatment. The course followed by the Vital Capacity in patients

patients undergoing treatment has already been very clearly defined, and the relation of an improving Vital Capacity to an improving pulmonary condition has been to my mind very firmly established. This has been the most outstanding result of the whole investigation, and the value of Vital Capacity readings during treatment, properly taken, and properly interpreted, cannot be over estimated. The test is a simple one and appreciation of the various previously detailed causes of decrease is quickly gained. A constant increase invariably means constant progress.

After the writing of these results was begun an article by Dreyer and Burrell on the application of Vital Capacity Constants to the study of Pulmonary Tuberculosis, appeared. Certain conclusions have been formulated by them as a result of their work. Some are in complete accordance with my own conclusions, while others appear to me to require slight amplification. Their first and second conclusions, that in cases of pulmonary tuberculosis the Vital Capacity is definitely decreased as compared with what would be normal for any individual; and, that an improvement in the clinical condition of the patient is found to be accompanied by an increase of Vital Capacity, while an advance of the disease results in a decrease of Vital Capacity, are absolutely in unison with my findings: and, I support their finding "that the Vital Capacity gives a valuable quantitutive measure of the benefit, if any, which a patient receives as the result of treatment". My results are also in keeping with their fourth conclusion that "As an aid to diagnosis, a single or repeated examination of the Vital Capacity of doubtful cases will also prove useful".

The applicability of their fifth conclusion that "a systematic study of Vital Capacity in its proper relationship to body size has given important information as to the beneficial effects of different treatments of pulmonary tuberculosis, and has made it possible to distinguish quantitatively the degrees of improvement" is readily supported, though I can only state that it appears as a natural corollary of my conclusions and was not faced as a separate problem in this series of investigations.

Their third conclusion appears to me to require amplification. "The determination of the Vital Capacity is useful for the classification of cases of pulmonary tuberculosis, because it is possible by this means numerically to express the injury to health (e.g. degree of toxaemia) which would otherwise depend on the individual interpretation of physical signs by different observers. In this connexion it should be noted that classification by physical signs alone may place a patient nearing death from an acute lesion in a high category, while another patient with satisfactory fibrosis and extensive cavitation, likely to live for several years, maybe placed in the lowest category."

My conclusions, previously stated, are that the Vital Capacity, considered apart from careful physical examination, is of very restricted value. In the types of cases quoted in the concluding sentence of Dreyer and Burrell's third conclusion, exactly corresponding diminutions of Vital Capacity might be observed, due in the one instance to excessive toxaemia, and in the other, to advanced pathological-anatomical body changes. I have previously laid stress upon the parts played by these two factors in the reduction of Vital Capacity in this disease, and it is only by a careful physical examination, and a careful

careful interpretation of the reduction of Vital Capacity in the light of the physical findings, that the most complete aids to a proper judgment can be obtained. The Vital Capacity estimation is a valuable adjuvant to the methods of clinical examination. With this observation, this third conclusion is supported by my results: so that the two sets of conclusions are exactly comparable.

(4) Application of Vital Capacity Estimations to Life Insurance Work.

I have already quoted Hutchinson's remark that he has never known a case of a person of subnormal weight, but otherwise healthy, exhibiting a deficiency of Vital Capacity; and in an earlier part of this paper I tabulated the Vital Capacity findings of three cases of healthy underweight, observed by myself, all showing Vital Capacity readings up to, or above, their normal standards. The applicability of the Spirometer to Insurance work was pointed out by Hutchinson, and in the light of the foregoing facts its field here appears to be a wide one.

The question of underweight from the Insurance Company's point of view is a most important one, and the following views are those which hold the greatest influence in the acceptance of lives of this class (a) May quotes from the Medico-Actuarial Investigation of 1914 that tall underweight men, 5 ft. 11 ln. to 6 ft. 2 in. showed a considerably higher mortality than short and medium underweight. (b) A full discussion of the question of underweight was given by Orr before the Faculty of Actuaries of Edinburgh in December, 1919, when stress was laid upon a deficient chest measurement, and subnormal weight, as being of grave import in young lives i.e. lives under the age of 35 years.

It is an open question to what extent underweight, and deficient chest measurement , are predisposing causes of tubercular lung disease, and to what extent they are actually the result of it; and it is sometimes a most difficult question to determine in such cases the absence of active lung disease of a minor extent. My restricted experience of healthy cases of underweight supports Hutchinson's dogmatic statement, and I apprehend that considerable information might be obtained from properly interpreted Vital Capacity readings in such cases.

Even with apparent care, cases of comparatively advanced tuberculosis become accepted by Insurance Companies of repute. Case No.158 of this series was admitted to this Sanatorium in March 1920, for his first period of treatment, his condition having been very recently diagnosed. He was a most advanced Grade III case with extensive cavitation of the right lung, extensive fibrosing disease of the left lung, advanced tuberculosis of the larynx, and a large tubercular ulcer of the lower lip. He died early in June 1920. Shortly after his death, I received a letter, from a reputable Insurance Company, relating to my Death Certificate estimation of duration of disease of 2½ years, and informing me that this man had been accepted by them for an Insurance policy a year previously. The condition of his left lung alone supported a brief history of more than suggestive symptoms which I managed to obtain from him on admission, dating back to a period of some 30 months previously, when clinical symptoms had apparently manifested themselves for the first time. Assuming that this man underwent a negative chest examination at the time of his acceptance for Insurance, I feel sure that a Vital Capacity estimation taken at that time would have redirected attention to the condition of his lungs.

I have not seen a case of Pulmonary Tuberculosis with a normal Vital Capacity, and should consequently suspect all cases of subnormal Vital Capacity as being sufferers from active pulmonary tubercular disease, until I had satisfactorily found some other explanation for the deficient Vital Capacity reading.

Conclusions.

The following resumé of conclusions already reached is tabulated for the effect of conciseness.

(1) Recognition of a patient's original type of physique is important if one is to gauge the extent of reaction of his disease upon him. The varying types of physique do not bear any particular relation to recuperative capacity. They however bear a very definite relation to weight in health and consequently to the normal Vital Capacity of the individual in health.

(2) The behaviour of the weight, as regards increase and decrease bears a varying and uncertain relation to the progress of the patiant. Its value in prognosis is a positive one only.

(3) An estimation of chest mobility is a useful guide to the determination of pulmonary efficiency. Grades of chest mobility appear to be closely related to grades of Vital Capacity.

(4) The estimation of the Vital Capacity by a suitable spirometer is a simple clinical test, which even in Pulmonary Tuberculosis is attended by the minimum of ill effects. No ill effects were observed in the course of 6,000 observations.

(5) The Vital Capacity is always reduced in Pulmonary Tuberculosis, a fact of considerable significance in the diagnosis of doubtful cases. It should, however, be borne in mind that other lung diseases than tuberculosis may effect a reduction.

(6) The Vital Capacity, with certain reservations, is reduced in proportion to the grade of the disease. There are grounds for considering that two elements are concerned in this reduction (a) the element of toxaemia (b) the element of pathological structural tissue change. In the early case the probability is that the toxic element is the main factor in causing reduction. In the more advanced case both elements play their parts. The significance of the reduction can only be interpreted in association with the results of careful clinical examination.

(7) The Vital Capacity in pulmonary tuberculosis varies according to the state of the patient, increasing when improvement takes place and decreasing during periods of physical retrogression. An increase of Vital Capacity is in this respect, per se, an absolutely reliable guide to the progress of the patient. A stationary, or slightly decreasing, Vital Capacity, usually denotes an unsatisfactory condition: but in such cases the Vital Capacity must be considered in association with the clinical findings, and other possible causes of diminution eliminated. Advancing disease is always associated with diminishing Vital Capacity: but diminishing Vital Capacity need not necessarily indicate advancing disease.

(8) The Vital Capacity is of restricted value in estimating the work capacity of the victims of pulmonary tuberculosis. Excessive Vital Capacity diminution is not compatible with work

work capacity: but the more moderate grades of diminution bear no definite relation to work Capacity. The upsetting factors here are the varying parts played by the anatomical and toxic elements in the reduction of Vital Capacity. The fairly advanced, but temporarily quiescent type of case, may have a Vital Capacity considerably reduced by causes which are largely anatomical, and yet have, within limits, a good work capacity. The moderately early case where anatomical change is slight, but where disease is active, and toxic manifestations controllable only by comparative rest, may have a much higher relative Vital Capacity, and yet be quite unfit for any grade of work.

(9) The Vital Capacity estimation appears to offer certain points of information in cases of glandular tuberculosis, especially tuberculosis of the cervical glands. A diminution of Vital Capacity in such cases, which cannot be accounted for on general grounds, should indicate the probability of a coincident intra-thoracic glandular involvement.

(10) The applicability of Vital Capacity observations to Insurance work, pointed out by Hutchinson, appears to be supported by the results which have manifested themselves in the course of this investigation.

ADDENDUM.

Since completion of the foregoing work it has been suggested to me that practice in the use of the spirometer may be responsible for rising Vital Capacity readings, and the suggestion has further been made that this point is so well established as to vitiate any value which Vital Capacity readings might have in the continuous observations of disease.

There are many sedentary workers who rarely fill their lungs to their full capacity and I can conceive that daily use of a spirometer will tend, in their case, to elevate a possibly low initial Vital Capacity reading; but the limit of elevation is a very definite one, and, if the persons have lungs free from disease, the initial depression will most certainly be a slight one.

I am convinced on several grounds that this suggestion is not a valid one.

My observations on the Vital Capacity of cases of Pulmonary Tuberculosis extended from November 1919 to June 1920 and during that period I observed my own Vital Capacity daily. I had never previously used a spirometer or indulged in any form of systematic deep breathing exercise. With the exception of a week in December and some five or six days in March my Vital Capacity maintained a constant daily figure which oscillated between 4850 and 5000-ccs, the commonest reading being about 4950-ccs, corrected to room temperature of 60°F. During the periods mentioned in December 1919 and March 1920 temporary depressions occurred which were due to coryzal attacks with mild associated bronchitis. The readings fell to between 4600 and 4700-ccs, but gradually re-attained the normal level as the attacks subsided.

The <u>Daily</u> use of a spirometer for seven months did not raise my Vital Capacity.

The majority of the patients in this series were observed at fortnightly intervals, and I cannot conceive that the practice of blowing into a spirometer at such intervals could have any effect in artificially raising the Vital Capacity.

If it had any such effect in the patients who showed rising readings, it is difficult to explain why the same effect was not obtained in the case of those who showed stationary or falling readings.

I have, in my attempts to explain rising Vital Capacity in patients who were improving under treatment, suggested that the subject is a complex one. While anxious to give due consideration to all points bearing on the validity of my conclusions, I am convinced that this particular point is a purely artificial one. It offers, however, such an apparently ready explanation of a phenomenon which I am unable toexplain fully that I deem it necessary to add these views.

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TABLES

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TABLE II.

GROUP I. TURBAN GERHARDT CLASSIFICATION I.

1 No	2 Name	3 Age	4 Date	5 VC.obs in ccs	6 Wt.in grms = W.	7 VC.Con. in W.	8 VC.Cal in W.	9 VC.Cal as % W.	10 % Dim of W.	11 Ht.in cms. = H.	12 Stem lgth = L.	13 Stem L as % H.	14 VC.Cal in L.	15 Chest meas. = Ch.	16 Expans of Ch. in cms	17 VC.Cal in Ch.	18 % Diff. between L & Ch.	19. VC.Cal in L & Ch.	20 P.F. 1	21 P.F. 2	22 P.F. 3	23 P.F. 4	24 % Dim of VC.
1	G.S.	25	27.11.19	2430	47628	.960	3382	3156	8.9	158	84	54.4	3713	82.5	3.25	3734	- 1.8	3746	1.53	1.54	1.53	1.54	35.2
2	W.B.	23	4.12.19	3620	54205	.697	3712	3592	7.8	170	87.5	51.5	4030	84	7.0	3876	- 4.0	4018	1.102	1.07	1.113	1.109	9.9
3 *	O.G.	21	26.11.19	2600	50576	.937	3532	3351	4.9	154	84	54.4	3714	83.5	1.5	3830	- 0.6	3796	1.05	1.47	1.42	1.45	31.8
4 *	T.B.	47	28.11.19	3000	91624	1.246	5418	6071	+15.3	175	94.5	54.0	4699	107	6.0	6290	+13.2	5465	.867	2.096	1.57	1.82	36.2 in L.
5	A.MCG	26	9.1.20	3760	68720	.808	4404	4553	1.1	174	92	52.9	4455	93	4.5	4752	+ 1.1	4625	1.011	1.26	1.18	1.23	18.7
6	J.F.H	22	26.11.19	2800	49442	.856	3475	3276	10.7	163.5	86	52.6	3895	80	2.0	3516	- 7.0	3719	1.123	1.256	1.39	1.32	24.8
7 *	H.W.	20	26.11.19	3000	57154	.887	3857	3787	3.2	167.5	87	51.9	3984	84	5.0	3876	- 3.5	3950	1.033	1.29	1.33	1.32	24.1
8	J.McC	19	25.11.19	2800	55340	.928	3768	3667	+5.2	161	82.5	51.2	3582	81	3.0	3605	- 1.8	3612	.950	1.28	1.27	1.29	22.5
9	H.McR	39	29.11.19	2900	61690	.969	4075	4087	16.0	181.5	96	52.9	4850	86.5	3.5	4110	-10.0	4488	1.190	1.41	1.67	1.55	35.4
10	H.D.	32	28.11.19	2250	53978	1.135	3701	3576	8.2	167.5	87.5	52.2	4030	84.5	4.5	3923	- 3.4	3996	1.09	1.74	1.79	1.77	43.7
11	J.T.	37	15.12.19	3900	51710	.634	3589	3427	17.7	174.5	91	52.2	4358	91	4.0	4550	Nil	4476	1.21	1.17	1.11	1.15	12.9
12	A.J.	39	3.6.20	3395	49442	.706	3475	3277	11.7	159.5	86.5	54.2	3937	82.5	5.5	3740	- 4.6	3857	1.13	1.12	1.18	1.14	12.0
13	J.J.	24	15.5.20	3030	52844	.830	3645	3502	+ 0.5	170	83	48.8	3626	75.5	6.5	3132	- 9.1	3387	.995	1.03	1.19	1.12	10.6
14	D.O'N	42	20.5.20	3410	46721	.675	3336	3096	8.0	153.5	83	54.1	3626	81	6.0	3605	- 2.4	3634	1.09	1.06	1.06	1.07	6.2
15	A.C.	20	4.5.20	4020	59875	.684	3988	3967	1.1	172	87.5	50.9	4030	85.5	6.5	4017	- 2.3	4044	1.01	.999	1.00	1.00	0.6

GROUP II. TURBAN GERHARDT CLASSIFICATION II.

1 No	2 Name	3 Age	4 Date	5 VC.obs in ccs	6 Wt.in grms = W.	7 VC.Con. in W.	8 VC.Cal in W.	9 VC.Cal as % W.	10 % Dim of W.	11 Ht.in cms. = H.	12 Stem lgth = L.	13 Stem L as % H.	14 VC.Cal in L.	15 Chest meas. = Ch.	16 Expans of Ch. in cms	17 VC.Cal in Ch.	18 % Diff. between L & Ch.	19. VC.Cal in L & Ch.	20 P.F. 1	21 P.F. 2	22 P.F. 3	23 P.F. 4	24 % Dim of VC.
16 *	J.M.	34	26.11.19	3000	58514	.902	3923	3877	13.8	170	93	54.7	4552	90.5	2.5	4500	- 2.7	4549	1.16	1.45	1.46	1.47	34.0
17 *	W.C.	22	26.11.19	3000	54886	.861	3746	3637	10.1	173	89	51.4	4169	85	2.0	3970	- 4.5	4089	1.11	1.29	1.35	1.33	26.7
18	C.T.	36	17.12.19	2350	45133	.955	3254	2991	25.4	161.5	91	56.3	4358	78.5	3.5	3386	-13.7	3861	1.38	1.44	1.85	1.64	39.2
19	W.McF	25	6.12.19	2610	52618	.960	3634	3487	3.9	157	85.5	54.4	3847	83	4.5	3784	- 2.9	3836	1.06	1.44	1.47	1.46	32.1
20 *	J.McA	31	25.11.19	2900	57154	.900	3857	3787	+ 2.6	166.5	84.5	50.7	3758	81.5	3.5	3649	- 3.6	3776	.974	1.26	1.29	1.30	23.2
21 *	M.F.	45	2.12.19	2900	54432	.885	3724	3607	4.4	167.5	86	51.3	3893	87	3.5	4158	+ 1.2	4044	1.04	1.43	1.34	1.38	28.3
22	J.H.	41	25.11.19	1500	57607	1.784	3879	3817	7.0	164	89	54.3	4169	85	3.0	3964	- 4.5	4089	1.07	2.64	2.77	2.72	63.4
23 *	G.E.	16	28.11.19	1260	29938	1.325	2421	1984	6.2	135.5	70	51.7	2579	66.5	3.0	2429	- 5.0	2516	1.06	1.92	2.04	1.99	50.0
24 *	T.McA	41	27.11.19	2700	55793	.968	3790	3697	+ 4.5	163	83	50.9	3626	86	2.5	4063	+ 3.6	3856	.960	1.50	1.34	1.42	30.0
25	F.M.	28	17.1.20	3410	57154	.790	3857	3787	2.0	166.5	86.5	51.9	3937	86.5	8.0	4110	0.0	4044	1.02	1.20	1.15	1.18	15.7
26	M.H.	27	26.11.19	2800	59875	.982	3988	3967	12.4	171.5	93	54.2	4552	86	4.0	4063	- 7.5	4323	1.14	1.45	1.62	1.54	35.3
27	J.S.	35	28.11.19	3130	54885	.825	3746	3636	17.7	172.5	93	53.9	4552	83.5	3.0	3830	-10.0	4197	1.12	1.22	1.45	1.34	25.5
28 *	J.K.	38	26.11.19	2900	60329	.954	4010	3997	5.9	171	90	52.6	4263	83.5	4.5	3832	- 7.2	4062	1.06	1.32	1.47	1.40	28.9
29	J.H.	42	25.11.19	2700	65772	1.090	4267	4358	4.2	171.5	92	53.6	4455	93	2.5	4724	+ 1.1	4625	1.04	1.75	1.65	1.71	41.7
30	T.P.	48	20.12.19	2420	51257	1.016	3566	3397	9.4	164	86.5	52.7	3937	86	2.0	4063	- 0.6	4021	1.10	1.68	1.63	1.66	39.9
31	W.A.	28	8.1.20	3000	55112	.864	3757	3652	5.7	168	87	51.8	3984	80.5	5.0	3560	- 7.5	4785	1.06	1.18	1.32	1.26	21.1
32 *	J.H.	23	25.11.19	2500	61009	1.111	4043	4042	4.2	166	89.5	53.9	4216	85	3.0	3964	- 5.0	4112	1.04	1.58	1.68	1.64	39.2
33 *	W.P.	17	25.11.19	2800	55793	.934	3790	3697	1.6	180.5	85.5	47.3	3847	85	3.0	3964	- 0.6	3928	1.01	1.41	1.38	1.40	28.7
34	N.L.	24	25.1.20	2830	52844	.888	3645	3502	12.6	169.5	89	52.5	4169	82	4.0	3694	- 7.8	3945	1.14	1.31	1.47	1.39	28.3
35	J.M.	30	26.11.19	2700	56473	.974	3824	3742	13.2	165.5	91.5	55.2	4406	81	3.0	3605	-11.5	4006	1.15	1.33	1.63	1.48	32.7
36	J.W.	27	23.1.20	2320	52844	1.084	3645	3502	9.6	161.5	87.5	54.2	4030	81	4.5	3605	- 7.4	3841	1.11	1.55	1.74	1.65	39.4
37	A.McG	38	27.11.19	2250	47628	1.037	3382	3156	14.1	166.5	86.5	51.9	3937	77	3.0	3257	-11.0	3600	1.16	1.45	1.75	1.60	37.5
38	D.K.	43	17.12.19	2550	64184	1.134	4193	4253	7.9	177	93	52.5	4552	85.5	2.5	4017	- 8.1	4298	1.08	1.57	1.78	1.68	40.7
39	A.S.G	20	27.11.19	2800	62597	1.014	4118	4147	5.5	172.5	91	52.8	4358	85	4.0	3964	- 6.6	4181	1.06	1.41	1.55	1.49	33.1
40	R.S.	28	17.1.20	3310	83916	1.06	5085	5560	+ 3.7	180.5	96.5	53.5	4901	97.5	5.0	5223	+ 1.0	5085	.963	1.58	1.48	1.53	34.9
41	J.J.T	40	17.1.20	3200	65545	.918	4257	4343	+4.4	180	88	48.9	4076	90.5	3.0	4500	+ 2.9	4305	.957	1.41	1.27	1.34	25.7
42	W.B.	33	20.12.19	1850	55340	1.405	3768	3667	2.1	163	85.5	52.5	3847	88	3.0	4076	+ 4.0	4067	1.02	2.20	2.07	2.20	54.6
43 *	R.T.	29	27.11.19	3930	68040	.767	4373	4508	6.9	179	94.5	52.8	4699	88.5	5.5	4303	- 6.4	4520	1.07	1.09	1.19	1.15	13.1
44	P.R.	40	14.2.20	2450	53071	1.03	3656	3517	13.3	160	89.5	55.9	4216	82.5	5.5	3740	- 7.8	3991	1.15	1.53	1.72	1.63	38.6
45	D.McD	33	6.12.19	1260	49216	1.896	3463	3262	7.9	161	84.5	52.5	3759	80.5	3.5	3560	- 4.6	3677	1.08	2.82	2.98	2.91	65.8
46 *	K.S.	20	27.11.19	3200	57834	.838	3890	3832	11.7	174.5	91.5	52.4	4406	83	3.5	3784	- 9.3	4105	1.13	1.18	1.37	1.28	22.1
47	H.McK	32	21.11.19	2600	56927	1.020	3846	3772	8.8	167.5	89.5	53.4	4216	87.5	2.5	4072	- 2.3	4233	1.09	1.56	1.62	1.63	38.6
48	W.O'F	36	10.1.20	3000	55340	.867	3768	3667	7.6	165.5	88	53.2	4076	83	3.5	3784	- 5.7	3948	1.08	1.26	1.36	1.32	24.1
49	F.McL	31	9.1.20	2480	78246	1.34	4836	5184	+ 7.4	174	92.5	53.2	4503	98.5	3.5	5333	+ 6.5	4870	.931	2.14	1.81	1.96	49.1
50	J.H.	35	24.1.20	2350	54432	1.09	3724	3607	9.7	162.5	88.5	54.4	4122	81.5	3.0	3649	- 7.9	3898	1.107	1.55	1.75	1.65	39.7
51	J.P.	22	25.11.19	2600	52164	.919	3611	3456	15.3	167	90	53.9	4263	80.5	4.5	3560	-10.6	3916	1.18	1.37	1.63	1.51	33.6
52	J.K.	19	20.12.19	2350	45133	.997	3254	2991	8.1	153	82	53.6	3539	79	2.0	3429	- 3.7	3501	1.08	1.46	1.51	1.49	32.9
53	D.McG	26	31.1.20	2340	45133	.959	3254	2991	12.4	150.5	84	55.8	3714	76.5	4.0	3215	- 9.0	3473	1.14	1.37	1.58	1.48	32.3
54	J.S.	34	24.4.20	3200	63277	.895	4150	4192	+ 7.8	166.5	85.5	51.3	3847	87	5.0	4158	+ 1.7	4020	.927	1.30	1.20	1.26	20.4
55	D.McG	40	31.1.20	2390	54659	1.078	3735	3622	10.5	165	89	53.9	4169	84	6.0	3876	- 3.7	4041	1.12	1.62	1.74	1.69	40.9
56 *	J.G.	28	27.11.19	3200	57154	.831	3857	3787	+ 2.6	159.5	84.5	52.9	3759	84	3.0	3876	- 0.6	3836	.975	1.21	1.17	1.20	16.6

TABLE II.

2 (Contd.) GROUP II. TURBAN GERHARDT CLASSIFICATION II.

2 Name	3 Age	4 Date	5 VC.obs in ccs	6 Wt.in grms = W	7 VC. Con. in W.	8 VC.Cal in W.	9 VC.Cal as % W	10 % Dim of W.	11 Ht.in cms. = H.	12 Stem lgth - L.	13 Stem L as % H.	14 VC.Cal in L.	15 Chest meas. = Ch.	16 Expans. of Ch. in cms	17 VC.Cal in Ch.	18 Diff between L & Ch.	19 V.C.Cal in L & Ch.	20 P.F. 1	21 P.F. 2	22 P.F. 3	23 P.F. 4	24 % Dim of VC
D.B.	27	15.1.20	2850	59648	.963	3977	3952	7.8	177	90.5	51.1	4311	85	4.0	3964	- 6.1	4158	1.08	1.19	1.51	1.45	31.5
H.C.	28	27.11.19	3400	61916	.829	4085	4311	5.3	174	90.5	52.0	4311	85	4.5	3964	- 6.1	4158	1.05	1.17	1.27	1.22	18.2
M.McN	24	8.1.20	2810	65092	1.04	4235	4313	1.8	171	90.5	52.9	4311	89	5.0	4352	- 0.1	4353	1.02	1.54	1.53	1.54	35.5
D.McK	28	31.1.20	3600	71442	.868	4529	4734	+2.8	176.5	91.5	51.8	4406	92	6.0	4650	+ 0.5	4550	.973	1.29	1.22	1.26	21.0
W.H.	35	26.11.19	2900	49442	.827	3745	3276	14.8	162.5	88	54.2	4076	80.5	5.0	3560	- 8.5	3829	1.17	1.23	1.40	1.32	24.3
R.R.	28	13.3.20	3010	64864	.968	4225	4298	8.2	186	93.5	50.3	4601	83	9.0	3784	-11.3	4195	1.09	1.26	1.53	1.39	28.3
A.C.	44	8.1.20	2890	49216	.827	3463	3262	17.9	161	89.5	55.6	4216	84	3.0	3876	- 6.2	4065	1.22	1.34	1.51	1.45	28.9
P.G.	31	4.5.20	3330	61236	.840	4054	4057	3.9	179	89.5	50.0	4216	82.5	6.0	3740	- 7.8	3991	1.04	1.12	1.27	1.20	16.6
W.W.	26	8.1.20	1870	40370	1.107	3003	2675	10.9	154.5	80	51.8	3368	72.5	2.5	2888	-10.0	3135	1.12	1.54	1.80	1.69	43.6
A.McC	26	25.11.19	3300	59195	.827	3955	3922	8.3	169.5	90.5	53.4	4311	87	4.5	4158	- 3.9	4256	1.08	1.26	1.31	1.29	20.2
P.H.	26	24.1.20	2900	56020	.905	3802	3712	7.8	162.5	88.5	54.5	4122	82	5.5	3694	- 7.4	3923	1.08	1.27	1.42	1.35	26.1
R.N.	40	26.1.20	2790	62143	1.013	4096	4118	2.9	174.5	89.5	51.3	4216	84.5	3.0	3923	- 5.6	4088	1.03	1.41	1.51	1.40	32.0
J.T.	27	25.11.19	1100	45814	2.063	3289	3036	16.5	155	86.5	55.8	3937	83	2.5	3784	- 4.1	3880	1.20	3.44	3.58	3.52	71.7
L.F.	30	17.5.20	3310	53071	.762	2656	3517	20.5	168.5	93.5	55.5	4601	80	5.0	3516	-14.5	4043	1.26	1.06	1.39	1.22	18.2
W.B.	20	6.12.19	3580	66226	.826	4288	4388	6.8	180.5	93.5	51.7	4601	89	5.0	4352	- 4.8	4498	1.19	1.26	1.28	1.26	20.5
L.B.	21	26.11.19	1900	48989	1.253	3452	3246	5.9	15.5	83.5	53.8	3670	83	2.5	3784	- 0.6	3746	1.06	1.99	1.93	1.97	49.3
C.J.	29	20.3.20	3720	65092	.787	4235	4313	2.9	175	91	52.0	4358	88.5	4.5	4303	- 2.7	4354	1.03	1.16	1.17	1.17	14.6
J.M.	13	14.2.20	1430	31072	1.200	2487	2059	20.0	144	77	53.4	3120	63	5.0	2181	-18.2	2622	1.25	1.52	2.18	1.83	45.5
J.M.	31	29.1.20	2500	51030	.981	3555	3382	17.6	171.5	90.5	52.8	4311	81	4.0	3605	-10.5	3962	1.21	1.44	1.72	1.58	36.9
D.C.	45	10.1.20	2590	69628	1.18	4446	4613	+13.0	170	86.5	50.9	3937	96	2.0	5064	+11.0	4488	.885	1.95	1.52	1.73	42.3
J.McK	52	27.4.20	3660	64865	.823	4225	4298	5.2	178.5	92	51.5	4455	86	5.5	4063	- 6.5	4277	1.054	1.11	1.22	1.17	14.4
R.N.	26	12.5.20	3980	61690	.706	4075	4088	2.3	167.5	89	53.2	4169	87.5	6.5	4206	- 1.7	4209	1.023	1.06	1.05	1.06	5.5
J.T.	41	10.4.20	2910	63958	.992	4182	4238	+ 2.6	175.5	88	50.1	4076	82.5	4.5	3740	- 6.3	3924	.974	1.28	1.40	1.35	25.8
L.R.	27	9.1.20	2520	45360	.894	3266	3006	17.1	170	86.5	50.9	3937	74	3.5	3009	-14.4	3460	1.205	1.19	1.56	1.37	27.0
J.L.R	36	8.5.20	2805	61690	1.002	4075	4088	7.5	167	91.5	54.8	4406	84.5	3.5	3923	- 7.8	4179	1.081	1.39	1.57	1.49	32.9
J.C.	45	3.2.20	2600	63731	1.107	4172	4223	8.4	170	93	54.7	4552	88.5	6.0	4303	- 4.8	4448	1.091	1.65	1.75	1.71	41.6
J.D.	34	28.2.20	3000	58968	.907	3945	3907	5.4	168	89	53.0	4169	86	5.0	4063	- 3.4	4137	1.056	1.35	1.38	1.37	27.5
R.C.	27	21.2.20	2680	49896	.900	3497	3307	8.1	161	85	52.8	3802	79	6.5	3429	- 5.9	3629	1.087	1.28	1.42	1.35	26.2
A.M.	39	20.3.20	2610	51711	.948	3589	3427	7.8	160	86	53.8	3893	84	3.5	4876	- 2.3	3905	1.084	1.49	1.49	1.49	33.0
J.S.	25	20.3.20	2780	57381	.960	3868	3802	4.0	160.5	87.5	54.5	4030	82.5	4.0	3740	- 5.7	3902	1.042	1.35	1.45	1.40	28.8
D.D.	13	24.5.20	1700	31525	1.020	3513	2089	10.5	138.5	73	52.7	2805	67.5	4.0	2503	- 7.5	2663	1.116	1.47	1.65	1.57	36.2
R.B.	26	25.11.19	2500	55340	1.040	3768	3667	+ 0.3	156	84.5	54.2	3758	82	3.5	3694	- 3.0	3745	.997	1.48	1.50	1.49	33.3
W.B.	16	9.12.19	2060	38556	.973	2905	2555	13.7	162.5	80	49.2	3368	68	5.0	2541	-15.0	2940	1.159	1.23	1.63	1.43	30.0
M.S.	35	29.11.19	3000	61236	.932	4053	4057	12.8	175.5	94	53.5	4650	88	2.5	4254	- 6.4	4474	1.14	1.42	1.55	1.49	32.9
J.C.	19	27.11.19	2710	52618	.925	3634	3486	15.7	165.5	90.5	54.7	4311	79.5	5.0	3472	-12.2	3889	1.18	1.28	1.59	1.43	30.3
D.McB	23	10.4.19	2810	42184	.761	3099	2795	10.3	150	81	54.0	3453	78.5	6.5	3386	- 3.0	3437	1.114	1.21	1.23	1.22	18.3
G.H.	19	21.2.20	3130	57608	.855	3879	3817	12.9	173	92	53.2	4455	82.5	7.0	3740	-10.0	4103	1.148	1.19	1.42	1.31	23.7
J.A.	19	2.4.20	2190	52618	1.15	3634	3487	10.9	165	88	53.3	4076	84.5	4.0	3923	- 5.1	4019	1.121	1.79	1.86	1.83	46.0
S.McD	42	22.5.20	2140	48535	1.105	3429	3217	6.8	155	84.5	54.5	3758	78	2.5	3543	- 7.7	3563	1.096	1.56	1.75	1.66	40.0
D.M.	30	26.11.19	3000	64638	.969	4214	4283	7.4	177	93	52.5	4552	86	5.5	4063	- 7.6	4215	1.083	1.35	1.51	1.40	29.0
O.McC	28	26.11.19	3100	55112	.836	3757	3652	2.3	168	85.5	50.9	3847	82.5	4.5	3740	- 2.9	3812	1.024	1.21	1.24	1.23	18.7
W.McA	24	2.6.20	3900	70308	.792	4477	4659	+ 0.5	182.5	92	50.4	4455	91	8.5	4550	- 1.1	4525	.995	1.17	1.14	1.16	13.8
E.McK	50	4.5.20	2750	51030	.892	3555	3382	8.7	164	86	52.4	3893	78	4.0	3343	- 9.3	3626	1.095	1.22	1.42	1.32	24.2
J.P.	49	17.5.20.	3280	54886	.786	3746	3637	7.1	162.5	87.5	53.8	4030	84	4.5	3876	- 4.0	3973	1.076	1.18	1.23	1.21	17.5
G.K.	38	19.5.20.	2370	48535	.824	3429	3217	11.9	1605	86	53.5	3893	81	5.5	3605	- 5.8	3765	1.135	1.25	1.36	1.31	23.8
W.I.	32	2.4.20	3640	73937	.880	4642	4899	8.8	171.5	90	52.5	4263	90	4.5	4450	- 0.0	4378	.918	1.22	1.17	1.20	16.9
A.McC	22	12.5.20	2735	50123	.885	3509	3322	2.1	160	82.5	51.6	3582	82	5.5	3694	- 0.6	3656	1.020	1.35	1.31	1.34	25.2
J.S.	32	7.2.20	2810	61690	1.000	4075	4088	5.7	177.5	90.5	51.0	4311	86	4.5	4063	- 5.0	4207	1.058	1.44	1.53	1.49	33.3
G.P.	45	29.5.20	2750	53071	.918	3656	3517	+ 0.8	155	83	53.5	3626	81	4.5	3605	- 2.4	3634	.992	1.31	1.32	1.32	24.4
W.R.	47	29.2.20	3000	46267	.761	3312	3066	14.9	160	85.5	53.5	3847	75.5	6.5	3132	-11.7	3489	1.161	1.044	1.28	1.16	14.1
J.D.	27	8.5.20	2680	48308	.880	3417	3202	12.3	164	86	52.4	3893	79	5.0	3429	- 8.1	3672	1.139	1.28	1.45	1.37	27.1
D.R.	44	28.12.19	2890	49442	.829	3475	3277	13.8	164.5	87.5	53.2	4030	86.5	4.5	4110	- 1.2	4091	1.160	1.42	1.39	1.41	29.4
A.McI	26	6.2.20	2750	48535	.860	3429	3217	18.7	167.5	89.5	53.4	4216	77	3.5	3258	-13.9	3740	1.229	1.18	1.53	1.36	26.5
J.McG	42	24.4.20	2625	51932	.946	3600	3442	8.6	158	86.5	54.7	3937	80.5	4.0	3560	- 6.9	3764	1.094	1.35	1.50	1.43	30.3
N.M.	32	25.5.20	3000	53978	.851	3701	3577	8.2	163.5	87.5	53.5	4030	86	7.0	4063	- 1.7	4067	1.088	1.35	1.34	1.35	26.3
T.B.	25	1.5.20	2875	57381	.928	3868	3802	13.2	172	92	53.5	4455	83.5	6.0	3830	- 9.3	4152	1.152	1.33	1.55	1.44	30.8
R.D.	39	4.6.20	3425	59648	.801	3977	3952	4.6	171	89	52.0	4169	85	5.5	3969	- 4.5	4089	1.048	1.16	1.22	1.19	16.2
J.F.	20	5.6.20	3000	46267	.728	3312	3066	8.7	154.5	83	53.7	3626	84	3.5	3784	0.0	3624	1.094	1.26	1.21	1.21	17.2
J.S.	23	25.11.19	3300	68040	.913	4373	4508	2.9	182	92.5	50.8	4503	90	3.5	4450	- 2.7	4500	1.03	1.35	1.37	1.36	26.7

3 (Contd.)

TABLE II.

GROUP III. TURBAN GERHARDT CLASSIFICATION III.

	2 Name	3 Age	4 Date	5 VC.obs in ccs	6 Wt.in grms - W	7 VC.Con. in W.	8 VC.Cal im W.	9 VC.Cal as % W	10 % Dim of W.	11 Ht.in cms. - H.	12 Stem lgth = L	13 Stem L as % H.	14 VC.Cal in L.	15 Chest Meas. = Ch.	16 Expans of Ch in cms	17 VC.Cal in Ch.	18 Diff between L & Ch	19 VC.Cal in L & Ch.	20 P.F. 1	21 P.F. 2	22 P.F. 3	23 P.F. 4	24 % Dim of VC.
*	H.H.	42	27.11.19	2860	64411	1.014	4203	4268	5.7	174	92	52.9	4455	93	2.0	4752	+ 1.1	4625	1.059	1.66	1.55	1.61	38.2
*	J.G.	48	26.11.19	1900	55340	1.368	3768	3667	8.6	166	88.5	53.3	4122	81.5	2.5	3649	- 7.9	3899	1.094	1.92	2.18	2.03	51.3
*	J.McG	26	27.11.19	900	46720	2.577	3336	3096	16.3	166.5	87	52.2	3984	82	2.0	3694	- 5.8	3856	1.194	4.10	4.42	4.28	76.7
*	P.K.	34	2.12.19	2070	55566	1.259	3779	3682	17.9	165	91	55.1	4358	85	3.5	3970	- 6.6	4180	1.15	1.91	2.10	2.02	50.5
*	T.V.	42	26.11.19	2100	61236	1.331	4053	4057	+7.6	167.5	85	48.0	3802	90	1.5	4450	+ 5.9	4135	.938	2.12	1.81	1.99	49.2
*	F.I.	32	25.11.19	1800	61236	1.553	4053	4057	0.6	163.5	88	53.8	4076	90	2.0	4450	+ 2.3	4281	1.005	2.47	2.26	2.38	58.0
	P.McC	25	10.1.20	2030	56246	1.295	3813	3727	2.1	163.5	86	52.6	3893	85	4.0	3969	- 1.2	3951	1.021	1.95	1.91	1.94	48.7
*	J.C.	19	25.11.19	1400	52618	1.791	3634	3487	12.9	166	89	53.6	4169	83	2.5	3785	- 6.7	3993	1.147	2.70	2.98	2.85	64.9
*	J.G.	17	27.11.19	1180	44906	1.895	3242	2975	6.2	154.5	81	52.4	3453	79.5	1.5	3472	- 1.8	3480	1.065	2.94	2.93	2.94	66.1
	G.G.	15	26.11.19	1500	37649	1.313	2856	2495	8.5	146.5	77	52.5	3120	74	3.0	3008	- 3.9	3080	1.091	2.00	2.08	2.05	50.0
	J.F.	44	3.12.19	1900	58514	1.424	3923	3877	+3.2	168.5	85	50.4	3802	85	1.0	3969	0.0	3905	.969	2.08	2.00	2.05	50.0
*	M.J.	29	27.11.19	2550	75751	1.278	4724	5019	+9.6	181.5	90.5	49.8	4311	95	2.0	4958	- 4.7	4648	.917	1.94	1.68	1.82	45.2
*	H.L.	16	27.11.19	1250	37195	1.562	2831	2475	+0.9	141.5	73	51.6	2805	70.5	4.0	2730	- 3.4	2782	.990	2.18	2.24	2.22	55.1
	W.McC	25	25.1.20	1700	46040	1.340	3301	3051	7.9	151.5	82.5	54.4	3582	77.5	5.0	3300	- 6.0	3456	1.085	1.94	2.107	2.03	50.8
*	R.C.	23	28.11.19	3200	80287	1.062	4926	5320	8.2	194.5	93	47.8	4552	90	3.5	4450	- 3.1	4599	.920	1.39	1.42	1.43	30.5
	A.H.	16	10.12.19	670	31752	2.60	2526	2104	13.5	150	74.5	49.0	2921	68	2.0	2541	- 8.7	2738	1.156	3.79	4.42	4.08	75.6
	W.N.	22	28.11.19	1700	48535	1.391	3432	3216	14.9	158.5	87.5	55.2	4030	80.5	3.0	3560	- 8.0	3807	1.174	2.094	2.370	2.239	55.4
*	J.McD	37	3.12.19	1500	51030	1.635	3555	3382	6.5	170.5	85	50.0	3802	82	3.5	3694	- 3.6	3767	1.069	2.46	2.54	2.51	60.0
	J.M.	41	25.11.19	1900	60329	1.456	4010	3997	3.8	166	89	53.6	4169	86	3.0	4063	- 3.4	4137	1.039	2.13	2.19	2.17	54.1
	E.M.	36	27.11.19	1950	58288	1.384	3912	3862	+ 0.5	160.5	86	53.5	3893	85	1.5	3970	- 1.2	3951	.995	2.03	1.99	2.02	50.6
*	W.McN	22	27.11.19	1200	58741	2.261	3934	3892	1.3	165.5	87	52.6	3984	86	4.0	4063	- 1.2	4044	1.01	3.38	3.32	3.37	70.4
	T.N.	33	26.11.19	2000	63504	1.435	4161	4208	2.4	172	90	52.3	4263	88	3.5	4254	- 2.3	4281	1.02	2.12	2.13	2.14	53.3
	R.B.	21	3.3.20	1490	51257	1.65	3566	3397	6.2	166	85	51.2	3802	84.5	3.5	3923	- 0.6	3882	1.066	2.63	2.55	2.60	61.6
	J.T.	39	9.2.20	2450	51257	1.004	3566	3397	10.6	161	87	54.0	3984	82	4.0	3694	- 5.8	3856	1.127	1.50	1.63	1.57	36.5
*	J.C.	35	25.11.19	1300	60329	2.135	4010	3997	5.0	175.5	89.5	51.0	4216	83	1.5	3784	- 7.3	4015	1.05	2.91	3.24	3.03	67.6
	J.D.	20	25.11.19	2500	59422	1.094	3966	3937	9.0	172	91	52.9	4358	85	3.0	3964	- 6.6	4181	1.098	1.58	1.74	1.67	40.0
	J.M.	30	25.11.19	1700	60329	1.633	4010	3997	10.0	182	92	50.0	4455	83.5	2.5	3828	- 9.2	4152	1.11	2.25	2.62	2.44	59.1
	W.H.	33	7.2.20	1780	45133	1.26	3254	2991	22.1	168	89	53.0	4169	79	3.5	3429	-11.3	3800	1.281	1.92	2.34	2.14	53.2
	J.B.	24	31.1.20	2020	47628	1.155	3382	3156	6.8	156	83	53.2	3626	82.5	3.0	3740	- 0.6	3701	1.072	1.85	1.79	1.83	45.4
	C.B.	56	9.2.20	2160	54659	1.193	3735	3622	16.2	166	92	55.4	4455	84	3.0	3876	- 8.7	4177	1.192	1.79	2.06	1.93	48.3
	F.A.	53	2.2.20	2160	54659	1.193	3735	3622	8.4	163.5	88	54.4	4076	88.5	2.0	4303	+ 0.6	4209	1.091	1.99	1.88	1.95	48.7
	L.J.	31	27.11.19	2400	58968	1.134	3945	3907	8.5	169.5	90	53.1	4263	84.5	5.0	3923	- 6.1	4110	1.082	1.63	1.77	1.71	41.6
	D.B.	20	25.11.19	3100	58515	.872	3923	3877	10.0	179	91	50.8	4358	82.5	4.5	3739	- 9.4	4058	1.113	1.20	1.40	1.39	23.7
	A.B.	39	5.3.20	2320	48762	1.023	3440	3232	16.6	165.5	88.5	53.5	4122	79.5	3.5	3472	-10.2	3803	1.198	1.49	1.77	1.64	39.0
	J.H.	23	1.3.20	2530	61009	1.102	4043	4042	10.2	179.5	92.5	51.5	4503	82.5	6.0	3740	-10.8	4125	1.113	1.48	1.78	1.63	38.7
	J.S.	28	28.2.20	2510	62597	1.132	4118	4148	+4.6	163.5	86.5	52.9	3937	89	3.5	4352	+ 2.8	4161	.956	1.73	1.57	1.66	39.7
	H.A.	40	17.1.20	2510	50803	.974	3543	3367	12.1	169.5	87.5	51.6	4030	81	4.0	3605	- 7.5	3831	1.132	1.43	1.61	1.52	35.5
	J.W.	25	5.3.20	1280	52617	1.96	3634	3487	14.8	172	90	52.3	4263	82.5	4.5	3740	- 8.4	4013	1.173	2.92	3.33	3.13	68.2
	W.B.	24	6.12.19	2520	57154	1.056	3857	3787	+ 0.3	167.5	85.5	52.9	3847	88.5	3.5	4303	+ 3.5	4090	.997	1.71	1.53	1.62	38.4
	J.McD	34	5.3.20	2140	51710	1.16	3589	3442	12.7	165.5	86.5	52.3	4110	81.5	5.0	3649	- 5.8	3810	1.145	1.70	1.92	1.78	43.8
	W.W.	28	13.3.20	1500	48762	1.58	3440	3232	20.0	170.5	90.5	53.1	4311	77	4.5	3258	-14.9	3767	1.253	2.19	2.87	2.51	60.0
	A.B.	26	26.2.20	1820	49896	1.32	3497	3307	19.8	168	91	54.2	4358	81	4.5	3605	-11.0	3983	1.246	1.98	2.39	2.18	54.0
	C.McG	25	23.2.20	2500	53071	1.01	3656	3517	16.2	168.5	91	54.0	4358	84.5	5.0	3923	- 7.2	4156	1.239	1.57	1.74	1.66	40.0
	P.McQ	30	20.5.20	2470	55793	1.06	3790	3697	3.7	166	86.5	52.1	3937	86.5	5.0	4110	0.0	4044	1.038	1.66	1.59	1.63	38.9
	J.M.	34	8.5.20	2325	53071	1.085	3656	3517	17.1	169	91.5	53.9	4406	87.5	3.5	4207	- 4.4	4328	1.205	1.81	1.89	1.86	46.3
	A.J.	10	25.5.20	1100	23360	1.27	2025	1548	21.5	124	70	56.4	2579	60.5	3.5	2011	-13.6	2289	1.273	1.83	2.34	2.08	52.0
	J.McI	11	19.4.20	625	20412	2.02	1557	1353	30.0	115.5	65	56.3	2224	61	4.0	2044	- 6.2	2143	1.428	3.27	3.56	3.43	70.9
*	W.L.	12	28.11.19	1580	31298	1.088	2500	2074	9.6	136.5	72.5	53.1	2766	69	3.5	2616	- 4.8	2704	1.606	1.65	1.75	1.71	41.6
	R.F.	18	7.2.20	1800	46948	1.28	3347	3111	17.9	160.5	88	54.8	4076	76.5	5.0	3215	-13.0	3639	1.218	1.78	2.26	2.02	50.6
*	N.McA	39	27.11.19	1850	62597	1.54	4118	4149	8.6	181.5	92.5	50.9	4503	90	2.0	4450	- 1.6	4500	1.093	2.41	2.43	2.43	58.9
*	J.D.	27	27.11.19	2900	57154	..917	3857	3787	11.5	175.5	91	53.0	4358	82.5	4.5	3740	- 9.4	4058	1.145	1.29	1.50	1.43	28.6
	J.M.	27	24.1.20	1630	49669	1.475	3486	3292	5.0	163	83.5	51.2	3670	78.5	3.5	3386	- 6.0	3543	1.053	2.07	2.25	2.17	54.0
*	W.B.	17	5.12.19	1950	52391	1.281	3623	3402	8.0	156.5	86.5	55.3	3937	79	5.5	3429	- 9.8	3694	1.086	1.76	2.02	1.89	47.2
	H.F.	33	13.3.20	2050	53525	1.23	3679	3547	12.8	179	89.5	50.0	4216	81	4.5	3605	- 9.5	3918	1.146	1.76	2.05	1.91	47.7
	J.B.	14	27.1.20	1250	41278	1.684	3051	2735	2.2	146	77	52.0	3120	72.5	3.5	2888	- 5.8	3017	1.022	2.31	2.49	2.41	58.6
	H.McL	32	20.4.20	2110	48535	1.12	3429	3217	18.7	167.5	89.5	53.4	4216	75	3.5	4091	-16.2	3617	1.229	1.46	1.99	1.71	41.7
	P.G.	17	22.3.20	1940	49442	1.23	3475	3277	20.3	168	91	54.2	4358	75	4.0	3091	-17.6	3689	1.254	1.59	2.25	1.90	47.4
	D.R.	24	26.11.19	2100	52164	1.18	3611	3456	10.4	165.5	87.5	52.8	4030	81	2.75	3605	- 7.4	3723	1.116	1.71	1.91	1.77	44.0
	J.H.	32	26.11.19	2500	60102	1.10	3999	3982	8.3	172.5	91	52.8	4358	84	4.0	3876	- 7.7	4132	1.093	1.55	1.74	1.65	39.5
	M.W.	29	26.11.19	2000	51257	1.23	3566	3396	9.4	167.5	86.5	51.6	3937	80.5	4.5	3560	- 6.9	3764	1.101	1.78	1.96	1.88	47.0
	D.H.	36	25.2.20	1860	44226	1.19	3206	2931	10.1	155	82.5	53.2	3582	80.5	4.0	3560	- 3.6	3589	1.117	1.91	1.92	1.93	48.0
	J.McN	31	24.5.19	1870	56473	1.41	3824	3742	6.2	169.5	88	51.9	4076	81.5	4.0	3649	- 7.4	3927	1.066	1.95	2.18	2.10	52.6

4 (Contd.)

TABLE II.

GROUP III. TURBAN GERHARDT CLASSIFICATION III.

2 Name	3 Age	4 Date	5 VC. obs in ccs	6 Wt. in grms - W	7 VC. Con. in W.	8 VC. Cal in W.	9 VC. Cal as % W.	10 % Dim. of W	11 Ht. in cms. = H	12 Stem lgth. - H.	13 Stem l as % H.	14 VC. Cal in L.	15 Chest Meas. = Ch.	16 Expans. of Ch. in cms.	17 VC. Cal in Ch.	18 Diff between L & Ch.	19 VC. Cal in L & Ch.	20 P.F. 1	21 P.F. 2	22 P.F. 3	23 P.F. 4	24 % Dim of VC.
J.G.	35	10.1.20.	1650	53071	1.52	3656	3517	24.6	176	96	54.5	4850	83	2.5	3784	-13.5	4306	1.326	2.29	2.94	2.61	62.0
J.B.	35	29.1.20.	2650	61236	1.05	4053	4057	8.1	177.5	91.5	51.5	4406	86.5	7.0	4110	- 5.5	4224	1.087	1.55	1.66	1.59	37.3
J.B.	55	26.11.19.	1100	43092	1.98	3147	2855	10.0	161.5	81.5	50.4	3496	75	1.0	3090	- 8.0	3304	1.110	2.80	3.17	3.00	66.8
A.McD	17	22.5.20.	2230	58061	1.21	3901	3847	8.5	173.5	90	51.8	4263	78	4.0	3516	-11.2	3892	1.093	1.58	1.91	1.75	42.7
R.H.	32	15.5.20.	2250	65772	1.31	4267	4358	2.1	173.5	91	52.5	4358	83.5	4.0	3830	- 8.2	4107	1.021	1.70	1.94	1.82	45.5
W.J.R.	32	1.5.20.	2315	46040	.984	3301	3051	23.4	165.5	90.5	54.6	4311	79.5	3.0	3472	-12.2	3889	1.306	1.50	1.86	1.68	41.0
J.C.	51	17.4.20.	2470	48989	.964	3452	3247	13.6	162	87	53.7	3984	84	4.0	3876	- 3.5	3950	1.154	1.57	1.61	1.59	37.5
G.M.	36	10.12.19.	2090	59442	1.31	3966	3937	11.0	169	92	54.4	4455	83	2.5	3784	- 9.8	4127	1.123	1.82	2.13	1.97	49.4
M.McL.	29	19.5.20.	2515	76658	1.31	4765	5079	+ 4.7	182.5	93	50.9	4552	92.5	5.5	4701	- 0.6	4653	.955	1.87	1.81	1.85	46.0
R.S.	26	27.11.19.	1900	54432	1.35	3724	3606	6.6	162	87	53.7	3984	81	3.0	3605	- 6.9	3809	1.069	1.89	2.09	2.00	50.2
E.D.	20	25.5.20.	2450	44906	.909	3242	2976	17.6	166.5	86.5	51.9	3937	77	6.0	3258	-11.0	3600	1.214	1.33	1.60	1.47	31.4
P.F.	33	29.5.20.	2710	68040	1.11	4373	4508	5.0	177.5	93.5	52.7	4601	91.5	4.5	4601	- 2.2	4624	1.052	1.69	1.69	1.70	41.4
J.McE.	25	17.4.20.	2320	57154	1.15	3857	3787	12.5	171.5	91.5	53.4	4406	84	4.5	3876	- 8.2	4154	1.142	1.67	1.90	1.79	44.2
W.J.M.	27	27.3.20.	2440	56700	1.08	3835	3757	7.0	169.5	88.5	52.2	4122	81.5	4.0	3649	- 7.9	3899	1.074	1.49	1.69	1.60	37.0
A.M.	34	17.4.20.	2310	47401	1.01	3371	3141	16.4	166	87.5	52.7	4030	75.5	4.0	3132	-13.6	3570	1.195	1.36	1.75	1.55	35.3
W.M.	24	12.4.20.	2260	57381	1.17	3868	3802	0.6	171.5	86	50.2	3893	83	6.5	3784	- 3.5	3858	1.006	1.67	1.72	1.70	41.5
D.M.	20	27.11.19.	2600	61690	1.08	4075	4087	8.6	176	92	52.3	4455	87	5.0	4158	- 5.5	4326	1.093	1.59	1.71	1.66	39.9
W.S.	44	6.3.20.	1900	46267	1.20	3312	3066	17.8	160.5	87.5	54.5	4030	79	3.0	3429	- 9.7	3737	1.217	1.80	2.12	1.96	49.2
A.A.	45	25.11.19.	2900	54432	.886	3724	3607	9.7	166	88.5	53.0	4122	85	2.0	3969	- 3.9	4066	1.106	1.37	1.42	1.40	28.7

TABLE II. GROUP IV. CASES GIVING EVIDENCE OF HILUS TUBERCULOSIS TYPE.

G.H.	10	28.11.19.	650	27443	2.41	2274	1818	20.0	134.5	73.5	54.6	2843	68.5	1.0	2567	- 6.8	2721	1.250	3.94	4.37	4.18	76.2
S.H.	13	28.11.19.	1750	35834	1.08	2756	2375	9.4	147.5	76	51.5	3040	70	3.5	2697	- 7.9	2875	1.103	1.49	1.68	1.59	39.2
W.S.	9	28.11.19.	990	23587	1.42	2039	1563	12.4	113.5	66.5	58.6	2327	61.5	4.0	2078	- 7.5	2210	1.143	2.09	2.35	2.23	55.2
G.F.	29	28.2.20.	3260	58742	.832	3934	3893	10.7	170	91.5	53.8	4406	87.5	4.5	4207	- 4.4	4327	1.119	1.29	1.35	1.32	24.7
N.H.	13	6.3.20.	1500	30618	1.13	2461	2029	12.3	135.5	73	53.8	2805	68	5.0	2541	- 6.9	2683	1.139	1.69	1.87	1.79	44.1
D.B.	13	28.12.19.	1300	30845	1.31	2474	2044	11.8	150	73	48.7	2805	64.5	4.0	2286	-11.7	2545	1.133	1.75	2.16	1.95	48.9
D.T.	10	28.11.19.	1200	23814	1.18	2053	1578	16.9	125	68.5	54.8	2470	62	2.75	2112	- 9.5	2295	1.203	1.76	2.05	1.99	47.8
J.S.	14	19.4.20.	1757	31979	.997	2539	2119	15.4	142	75.5	53.2	3000	67	5.5	2466	-11.3	2734	1.180	1.40	1.71	1.55	35.7
J.P.	12	28.11.19.	1000	24948	1.46	2123	1653	14.1	129.5	68.5	52.9	2470	62.5	2.5	2146	- 8.8	2314	1.163	2.15	2.47	2.31	56.8
E.J.	10	28.11.19.	1050	26762	1.46	2233	1773	10.9	123.5	69	55.8	2506	66	3.0	2393	- 4.4	2461	1.122	2.28	2.38	2.34	57.4
A.G.	13	27.1.20.	1220	30618	1.39	2461	2029	14.6	131.5	74	56.2	2882	66	3.0	2393	-10.8	2640	1.172	1.96	2.36	2.16	53.8
D.H.	14	1.3.20.	1330	32432	1.33	2565	2149	12.2	142	74.5	52.4	2921	64	4.5	2250	-14.1	2577	1.138	1.69	2.19	1.93	48.4
J.B.	13	28.11.19.	1490	30845	1.18	2474	2044	10.7	142	74	52.1	2882	63.5	4.0	2215	-14.2	2540	1.164	1.49	1.93	1.70	41.4
J.F.	10	20.12.19.	1610	30391	1.05	2448	2014	12.7	136.5	73	53.4	2805	65.5	3.5	2357	-10.0	2584	1.145	1.46	1.74	1.61	37.7
A.B.	10	26.4.20.	1355	25628	1.10	2165	1698	11.1	129.5	68	52.5	2434	60	5.5	1978	-11.8	2205	1.124	1.46	1.79	1.62	38.4
J.M.	18	15.1.20.	2010	43999	1.09	3195	2916	1.5	146.5	78.5	53.5	3243	76.5	3.5	3215	- 2.6	3246	1.015	1.59	1.61	1.61	38.1

TABLE II. GROUP V. CASES WHERE OUTSTANDING SIGNS WERE THOSE OF CHRONIC BRONCHITIS & WHERE THERE WAS NO DEFINITE PROOF OF THE CONDITION BEING OF TUBERCULAR ORIGIN.

J.F.	36	25.11.19.	2700	74164	1.189	4653	4914	+ 0.7	177	94	53.1	4650	92	3.0	4595	- 2.2	4676	.999	1.77	1.79	1.80	44.4
E.K.	28	25.11.19.	2000	58060	1.345	3901	3847	+10.2	163.5	82	50.2	3539	92.5	1.0	4701	+12.9	4100	.904	2.35	1.76	2.05	51.0
D.McL.	45	6.12.19.	2120	61009	1.135	4043	4042	+10.2	160	83.5	52.2	3670	86	3.5	4063	+ 3.0	3882	.907	1.92	1.73	1.83	45.4
C.K.	28	21.11.19.	1500	58288	1.77	3912	3862	12.2	173	92	53.2	4455	89	3.0	4352	- 3.3	4425	1.123	2.90	2.97	2.95	66.1
J.O'H.	38	26.1.20.	2400	50350	1.012	3520	3337	9.6	160.5	86	53.5	3893	87	2.5	4158	+ 1.2	4044	1.106	1.73	1.62	1.68	41.0

TABLE II. GROUP VI. CASES SENT FOR TREATMENT DIAGNOSED ONLY AS TUBERCULAR ADENITIS OF NECK.

R.S.	20	27.11.19.	3210	53525	.790	3679	3547	0. 9	163	84	51.5	3714	82	3.5	3694	- 2.4	3723	1.009	1.15	1.16	1116	13.8
D.F.	11	28.11.19.	1330	33113	1.350	2603	2194	8.4	132	73.5	55.6	2843	69.5	2.5	2654	- 5.5	2761	1.093	1.99	2.13	2.08	51.8
J.D.	26	27.11.19.	2650	48989	.898	3452	3244	18.8	172	89.5	52.1	4216	80	3.0	3516	-11.6	3870	1.223	1.32	1159	1.46	31.6
T.M.	14	1.12.19.	1800	33340	1.002	2616	2209	10.5	138	74.5	53.9	2921	69	5.0	2616	- 7.4	2779	1.119	1.45	1.62	1.54	35.3

TABLE VIII. (a).

Analysis of improvement or deterioration of Vital Capacity and Weight in patients whose residence in Sanatorium exceeded 25 weeks, and who were observed over that period.

I. = Improved. M.I. = Much Improved. V.M.I. = Very Much Improved.
W. = Worse. S. = Stationary.

No.	TIME OBS.	GRADE	PERIOD OF OBS WEEKS.	WEIGHT IN GMS - W.	% DIM of W.	V.CAP. in ccs - VC.	% DIM Of VC	CHANGE Of VC. %	CHANGE Of W. %	CLINICAL Cond. on Dis.
	Adm.	Tur.		59195	8.3	3300	20.2			
66	Dis.	II.	25⅛	62597	4.5	3840	7.5	+12.7	+3.8	V.M.I.
	Adm.	Tur.		55340	+0.3.	2500	33.3.			
88	Dis.	II.	27⅛	54659	-0.6	2970	20.7	+12.6	-0.9.	V.M.I.
	Adm.	Tur.		61236	12.8	3000	32.9			
90	Dis.	II.	26	61916	12.1	3740	16.8	+16.1	+0.7.	V.M.I.
	Adm.	Tur.		52618	15.7	2710	30.3			
91	Dis.	II.	26	53525	15.6	2780	28.8	+ 1.5	+0.1.	I.
	Adm.	Tur.		64638	7.4	3000	29.0			
96	Dis.	II.	26	64411	7.7	2960	31.9	-2.9	-0.3.	W.
	Adm.	Tur.		55112	2.3	3100	18.7			
97	Dis.	II.	25	57154	+0.3	3520	8.2	+10.5	+2.6.	M.I.
	Adm.	Tur.		56020	8.8	3700	10.0			
98	Dis.	II.	25	58515	5.9	3620	12.0	-2.0	+2.9.	S.
	Adm.	Tur.		54886	12.1	2940	31.0			
99	Dis.	II.	25	58969	7.5	3420	20.0	+11.0	+4.6.	I.
	Adm.	Tur.		68040	2.9	3300	26.7			
117	Dis.	II.	26	66452	4.6	3665	18.5	+ 8.2	-1.7	I.
	Adm.	Tur.		58968	7.5	2400	41.6			
149	Dis.	III.	25	58288	8.3	3175	25.5	+16.1	-0.8.	V.M.I.
	Adm.	Tur.		58515	10.0	3100	23.7.			
150	Dis.	III.	25	58742	9.8	3560	12.3	+11.4	+0.2	I.
	Adm.	Tur.		57154	+0.3	2520	38.4			
156	Dis.	III.	25	61009	+5.1	3310	19.1	+19.3	+4.8	V.M.I.
	Adm.	Tur.		31298	9.6	1580	41.6.			
165	Dis.	III.	25	35154	1.7	2230	18.7	+22.9	+7.9	V.M.I.
	Adm.	Tur.		62597	8.6	1850	58.9			
167	Dis.	III.	27⅛	61236	10.0	2455	44.8	+14.1	-1.4	I.
	Adm.	Tur.		57154	11.5	2900	28.6			
168	Dis.	III.	27⅛	56473	12.3	3040	25.1	+3.5	-0.8.	S.
	Adm.	Tur.		52164	10.4	2100	44.0			
175	Dis.	III.	25	52618	9.9	2730	26.7	+17.3	+0.5	V.M.I.
	Adm.	Tur.		60102	8.3	2500	39.5			
176	Dis.	III.	26	61236	7.0	3005	28.2	+11.3	+1.3	I.
	Adm.	Tur.		51257	9.4	2000	47.0			
177	Dis.	III.	26	52164	8.3	2880	24.0	+23.0	+1.1	V.M.I.
	Adm.	Tur.		54432	6.6	1900	50.2			
189	Dis.	III.	25	51710	9.9	1720	54.0	-3.8	-3.3	W.
	Adm.	Tur.		61690	8.6	2600	39.9			
196	Dis.	III.	26	62597	7.6	3220	24.8	+15.1	+1.0	I.
	Adm.	Tur.		54432	9.7	2900	28.7			
198	Dis.	III.	26	58061	5.4	3010	25.9	+2.8	+4.3	S.
	Adm.	Hilus		24948	14.1	1000	56.8			
207	Dis.	Type	26	27443	11.8	1690	28.6	+28.2	+2.3	V.M.I.
	Adm.	Hilus		26762	10.9	1050	57.4			
208	Dis.	Type	27	31525	3.0	1540	39.2	+18.2	+7.9	M.I.
	Adm.	Hilus		30845	10.7	1490	41.4			
211	Dis.	Type	25	34473	7.1	2040	19.7	+21.7	+3.6	V.M.I.

TABLE VIII. (b).

Analysis of Increase or Decrease of Vital Capacity and Weight in patients observed for a period of 20 weeks and less than 25 weeks.

No.	TIME Obs.	GRADE	PERIOD of Obs in wks	WEIGHT = W.	DIM. of W %	V.CAP. = VC.	DIM. of VC %	CHANGE of VC %	CHANGE of W. %	CLINICAL cond.on Disch.
56	9 Wks after Adm.	Tur.		57154	+2.6	3200	16.6			
	Dis.	II.	22½	57607	+3.2	3680	3.6	+13.0	+0.6	V.M.I.
58	Adm.	Tur.		61916	5.3	3400	18.2			
	Dis.	II.	22½	68493	+1.9	3840	11.8	+6.4	+7.2	M.I.
69	10 W. after Adm.	Tur.		45814	16.5	1100	71.7			
	Dis.	II.	23	46494	15.6	3040	21.2	+50.5	+0.9	V.M.I.
71	Adm.	Tur.		66226	6.8	3580	20.5			
	Dis.	II.	23.	71896	1.1	4320	4.0	+16.5	+5.7	V.M.I.
72	7 Wks after Adm.	Tur.		48989	5.9	1900	49.3			
	Dis.	II.	24	50123	4.4	2430	35.2	+14.1	+1.5	M.I.
80	Adm.	Tur.		45360	17.1	2520	27.0			
	Dis.	II.	20	48535	12.9	2900	17.3	+9.7	+4.2	M.I.
89	28 W. after Adm.	Tur.		38556	13.7	2060	30.0			
	Dis.	II.	24	40370	10.9	2620	10.9	+19.1	+2.8	M.I.
110	Adm.	Tur.		49442	13.8	2890	29.4			
	Dis.	II.	21	49669	13.5	3290	19.6	+9.8	+0.3	I.
170	28 W. after Adm.	Tur.		52391	8.0	1950	47.2			
	Dis.	III.	24	54659	5.1	2690	27.7	+19.5	+2.9	V.M.I.
180	Adm.	Tur.		53071	24.6	1650	62.0			
	Dis.	III.	20	55112	22.6	2410	44.1	+17.9	+2.0	M.I.
182	Adm.	Tur.		43090	10.0	1100	66.8			
	Dis.	III.	20	48989	1.3	1550	53.1	+13.7	+8.7	I.
187	Adm.	Tur.		59422	11.0	2090	49.4			
	Dis.	III.	24	60555	9.8	2080	49.6	-0.2	+1.3	S.
205	Adm.	Hilus		23814	16.9	1200	47.8			
	Dis.	Type.	21	24267	15.8	1640	28.6	+19.2	+1.1	M.I.
212	Adm.	Hilus		30391	12.7	1610	37.7			
	Dis.	Type.	23	35607	3.6	2120	22.7	+15.0	+9.1	V.M.I.

TABLE VIII. (c).

Analysis of increase or Decrease of Vital Capacity and Weight in patients observed for periods from 15 to 20 weeks.

No.	TIME Obs.	GRADE	PERIOD of Obs in wks	WEIGHT in Gms = W.	DIM. of W.%	V.CAP. in ccs = VC.	DIM. of VC.%	CHANGE of VC %	CHANGE of W. %	CLINICAL cond.on Disch.
9	Adm.	Tur.		61690	16.0	2900	35.4			
	Disch.	I.	19	64411	13.0	3575	19.1	+16.3	+3.0	I.
46	9 Wks. after Adm.	Tur.		57834	11.7	3200	22.1			
	Disch.	II.	15	59648	9.8	3600	13.9	+8.2	+1.9	M.I.

TABLE VIII. (c). (Contd).

No.	TIME Obs.	GRADE	PERIOD of Obs in wks	WEIGHT in Gms - W.	DIM. of W %	V.CAP. in ccs - VC.	DIM. of VC.%	CHANGE of Vc. %	CHANGE of W. %	CLINICAL Cond.on Disch.
51	5 Wks after Adm.	Tur.		52164	15.3	2600	33.6			
	Disch	II.	19	51257	16.4	3080	21.4	+12.2	-1.1	I.
57	Adm.	Tur.		59648	7.8	2850	31.5			
	Dis.	II.	15½	65545	1.3	3560	15.4	+16.1	+6.5	V.M.I.
59	Adm.	Tur.		65092	1.8	2810	35.5			
	Dis.	II.	16½	70535	+4.1	3650	17.1	+18.4	+5.9	V.M.I.
61	4 Wks after Adm.	Tur.		49442	14.8	2900	24.3			
	Dis.	II.	19	49669	14.5	2930	23.5	+0.8	+0.3	S.
63	Adm.	Tur.		49216	17.9	2890	28.9			
	Dis.	II.	17	50123	16.8	3155	22.4	+6.5	+1.1	S.
65	Adm.	Tur.		40370	10.9	1870	43.6			
	Dis.	II.	17½	45133	3.4	2610	17.3	+26.3	+7.5	V.M.I.
67	Adm.	Tur.		56020	7.8	2900	26.1			
	Dis.	II.	16	57154	6.5	3390	15.1	+11.0	+1.3	M.I.
75	Adm.	Tur.		51030	17.6	2500	36.9			
	Dis.	II.	16½	54432	13.6	3040	23.3	+13.6	+4.0	I.
76	Adm.	Tur.		69628	+13.0	2590	42.3			
	Dis.	II.	19½	67586	+10.5	3010	32.7	+9.6	-2.5	I.
82	Adm.	Tur.		63731	8.4	2600	41.6			
	Dis.	II.	17	65545	6.5	3150	29.6	+12.0	+1.9	M.I.
93	Adm.	Tur.		57608	12.9	3130	23.7			
	Dis.	II.	15	59422	11.0	3870	7.0	+16.7	+1.9	V.M.I.
106	Adm.	Tur.		61690	5.7	2810	33.3			
	Dis.	II.	16	62824	4.2	3440	20.0	+13.3	+1.5	M.I.
111	Adm.	Tur.		48535	18.7	2750	26.5			
	Dis.	II.	16	48762	18.4	3120	16.6	+9.9	+0.3	I.
142	Adm.	Tur.		60329	5.0	1300	67.6			
	Dis.	III.	16½	57834	7.7	1350	66.0	+1.6	-2.7	S.
143	7 Wks after Adm.	Tur.		59422	9.0	2500	40.0			
	Dis.	III.	18	62824	5.3	2200	47.4	-7.4	+3.7	S.
144	26 W. after Adm.	Tur.		60329	10.0	1700	59.1			
	Dis.	III.	19	61690	8.6	1920	53.8	+5.3	+1.4	I.
145	Adm.	Tur.		54659	8.4	2160	48.7			
	Dis.	III.	15	58515	3.8	2520	40.5	+8.2	+4.6	I.
154	Adm.	Tur.		50803	12.1	2510	35.5			
	Dis.	III.	19½	54432	7.6	2895	24.9	+10.6	+4.5	M.I.
166	Adm.	Tur.		46948	17.9	1800	50.6			
	Dis.	III	17	48762	15.6	2470	33.0	+17.6	+2.3	V.M.I.
169	Adm.	Tur.		49669	5.0	1630	54.0			
	Dis.	III.	18	51030	3.2	2220	37.8	+16.2	+1.8	V.M.I.
172	Adm.	Tur.		41278	2.2	1250	58.6			
	Dis.	III.	18	43999	+2.4	2000	34.2	+24.4	+4.6	V.M.I.
181	Adm.	Tur.		61236	8.1	2650	37.3			
	Dis.	III.	17½	64638	4.4	3510	18.5	+18.8	+3.7	V.M.I.
209	Adm.	Hilus		30618	14.6	1220	53.8			
	Dis.	Type	17	33113	10.0	1660	37.1	+16.7	+4.6	M.I.
214	Adm.	Hilus		43999	1.5	2010	38.1			
	Dis.	Type,	19	46040	+1.8	2050	38.0	+0.1	+3.3	S.
217	Adm.	Chrome		61009	+10.2	2120	45.4			
	Dis.	Bron.	16½	64184	+14.2	2220	43.4	+2.1	+4.0	M.I.
218	Adm.	Tur.		58288	12.2	1500	66.1			
	Dis.	II.	19	63731	6.4	2350	46.9	+19.2	+5.8	M.I.

TABLE VIII. (d).

Analysis of Increase or Decrease of Vital Capacity and Weight in patients observed for periods of from 10 - 15 weeks.

No.	TIME Obs.	GRADE	PERIOD obs.in Weeks.	WEIGHT in Gms - W.	DIM. of W.%.	V.CAP. in Ces - VC.	DIM. of VC %	CHANGE of VC %	CHANGE of W. %	CLINICAL Cond.on Disch.
7	7 Wks. after Adm.	Tur.		57154	3.2	3000	24.1			
	Dis.	I.	10½	57381	2.9	3430	13.2	+10.9	+0.3	M.I.
8	Adm.	Tur.		55340	+5.2	2800	22.5			
	Dis.	I.	11½	56700	+7.0	2720	24.7	-2.2	+1.8	S.
10	Adm.	Tur.		53978	8.2	2250	43.7			
	Dis.	I.	13½	58061	3.2	3200	20.0	+23.7	+5.0	V.M.I.
11	Adm.	Tur.		51710	17.7	3900	12.9			
	Dis.	I.	14½	55566	13.3	4230	5.5	+7.4	+4.4	M.I.
29	Adm.	Tur.		65772	4.2	2700	41.7			
	Dis.	II.	11	67360	2.6	2820	39.1	+2.6	+1.6	I.
35	6 Wks after Adm.	Tur.		56473	13.2	2700	32.7			
	Dis.	II.	10½	56473	13.2	2690	32.9	-0.2	0.0	S.
37	6 Wks after Adm.	Tur.		47628	14.1	2250	37.5			
	Dis.	II.	12½	48308	13.3	2510	30.3	+7.2	+0.8	I.
39	Adm.	Tur.		62597	5.5	2800	33.1			
	Dis.	II.	12½	64638	3.3	3020	27.8	+5.3	+2.2	I.
42.	Adm.	Tur.		55340	2.1	1850	54.6			
	Dis.	II	10	56246	0.9	3020	25.8	+28.8	+1.2	I.
43	26 Wks after Adm.	Tur.		68040	6.9	3930	13.1			
	Dis.	II.	14	64411	10.6	4000	11.6	+1.5	-3.7	I.
45	Adm.	Tur.		49216	7.9	1260	65.8			
	Dis.	II.	14	53978	1.5	2700	26.6	+39.2	+6.4	V.M.I.
47	Adm.	Tur.		56927	8.8	2600	38.6			
	Dis.	II.	14½	65092	+0.4	4170	25.2	+13.4	+9.2	V.M.I.
48	Adm.	Tur.		55340	7.6	3000	24.1			
	Dis.	II.	11	58288	4.1	3350	17.2	+6.9	+3.5	I.
49	Adm.	Tur.		78246	+7.4	2480	49.1			
	Dis.	II.	12	76432	+5.5	3870	20.8	+28.3	-1.9	V.M.I.
52	Adm.	Tur.		45133	8.1	2350	32.9			
	Dis.	II.	13½	48082	3.8	2970	15.7	+17.2	+4.3	V.M.I.
53	Adm.	Tur.		45133	12.4	2340	32.3			
	Dis.	II.	11½	47858	8.6	2850	19.6	+12.7	+3.8	M.I.
55	Adm.	Tur.		54659	10.5	2390	40.9			
	Dis.	II.	13	56700	8.0	2800	30.8	+10.1	+2.5	I.
60.	Adm.	Tur.		71442	+2.8	3600	21.0			
	Dis.	II.	12½	70308	+1.6	3940	13.4	+7.6	-1.2	I.
68	Adm.	Tur.		62143	2.9	2790	32.0			
	Dis.	II.	14	65772	+1.2	3345	18.7	+13.3	+4.1	I.
74	Adm.	Tur.		31072	20.0	1430	45.5			
	Dis.	II.	13½	34020	14.9	1970	26.0	+19.5	+5.1	M.I.
83	Adm.	Tur.		58968	5.4	3000	27.5			
	Dis.	II.	13½	59648	4.6	3680	11.1	+16.4	+0.8	M.I.
84	Adm.	Tur.		49896	8.1	2680	26.2			
	Dis.	II.	13½	53751	2.9	3300	10.8	+15.4	+4.2	M.I.
108	Adm.	Tur.		46267	14.9	3000	14.1			
	Dis.	II.	13½	52391	3.2	3240	8.9	+5.2	+11.7	I.
127	Adm.	Tur.		37649	8.5	1500	50.0			
	Dis.	III.	10	39010	6.2	1890	38.7	+11.3	+2.3	M.I.
134	4 Wks after Adm.	Tur.		48535	14.9	1700	55.4			
	Dis.	III.	10	47855	15.8	1800	52.3	+3.1	-0.9	S.
136	4 Wks. after Adm.	Tur.		60329	3.8	1900	54.1			

TABLE VIII. (d). (Contd).

No.	TIME Obs.	GRADE	PERIOD of obs in wks	WEIGHT in gms = W.	DIM. of W %	V.CAP. in ccs = VC.	DIM of VC %	CHANGE of VC %	CHANGE of W. %	CLINICAL. Cond.on Disch.
136	Dis.	III.	12½	63277	0.5	2130	48.5	-5.6	-3.3	I.
137	6 wks after									
	Adm.	Tur.		58288	-0.5	1950	50.6			
	Dis.	III.	12½	59195	+1.6	2290	42.1	+8.5	-1.1	M.I.
138	18 wks after									
	Adm.	Tur.		58741	1.3	1200	70.4			
	Dis.	III.	13	60556	+0.9	2600	35.8	-34.6	-2.2	M.I.
139	4.wks after									
	Adm.	Tur.		65504	2.4	2000	53.3			
	Dis.	III.	13	65092	0.7	1800	58.0	-4.7	+1.7	S.
146	Adm.	Tur.		47626	6.8	2020	45.4			
	Dis.	III.	13	50803	2.3	2670	27.9	+17.5	+4.5	V.M.I.
147	Adm.	Tur.		54659	15.2	2160	48.8			
	Dis.	III.	14	56246	14.4	2380	43.0	+5.3	+1.8	I.
151	Adm.	Tur.		48762	15.6	2320	39.0			
	Dis.	III.	11	50576	14.3	2590	31.9	+8.1	+2.3	I.
152	Adm.	Tur.		61009	10.2	2530	38.7			
	Dis.	III.	13½	61690	9.5	2870	30.5	+8.2	+0.7	I.
153	Adm.	Tur.		62597	+4.6	2510	39.7			
	Dis.	III.	13½	63504	+5.7	3420	18.7	+21.0	+1.1	M.I.
155	Adm.	Tur.		52617	14.8	1280	68.2			
	Dis.	III.	11½	54206	12.4	1720	57.4	+10.8	+2.4	I.
157	Adm.	Tur.		51710	12.7	2140	43.8			
	Dis.	III.	13	53525	10.5	3100	19.7	+24.1	+2.2	V.M.I.
159	Adm.	Tur.		49896	19.8	1820	54.0			
	Dis.	III.	13	51256	18.2	2305	42.2	+11.8	+1.6	I.
160	Adm.	Tur.		53071	16.2	2500	40.0			
	Dis.	III.	14	58288	10.2	3610	15.6	+24.4	+6.0	V.M.I.
171	Adm.	Tur.		53525	12.8	2050	47.7			
	Dis.	III.	10½	57381	8.3	2710	31.7	+16.0	+4.5	M.I.
174	Adm.	Tur.		49442	20.3	1940	47.4			
	Dis.	III.	10½	50803	18.7	2220	39.8	+7.6	+1.6	I.
178	Adm.	Tur.		44226	10.1	1860	48.0			
	Dis.	III.	13	49442	3.0	2380	34.9	+13.1	+7.1	M.I.
197	Adm.	Tur.		46267	17.8	1900	49.2			
	Dis.	III.	12	53978	8.2	2495	34.1	+15.1	+9.6	V.M.I.
204	Adm.	Hilus		30845	11.8	1300	48.9			
	Dis.	Type.	14½	37649	+0.4	1900	28.1	+20.8	+12.2	V.M.I.
210	Adm.	Hilus		32432	12.2	1330	48.4			
	Dis.	Type.	13	35834	5.7	1740	34.6	+13.8	+6.5	V.M.I.
219	Adm.	Chronic		50350	9.6	2400	41.0			
	Dis.	Bron.	11	59875	+2.4	3020	26.0	+15.0	+12.0	M.I.
223	Adm.	T.B.		33340	10.5	1800	35.3			
	Dis.	Glands of Neck	13	36061	5.3	2090	24.8	+10.5	+5.2	M.I.

TABLE VIII. (e).

Analysis of Increase or Decrease of Vital Capacity and Weight in patients observed for periods of 5 to 10 weeks.

No.	TIME Obs.	GRADE	PERIOD of Obs Weeks.	WEIGHT in Gms = W.	DIM. of W %	V.CAP. in ccs = VC	DIM. of VC. %	CHANGE of VC %	CHANGE of W. %	CLINICAL Cond.on disch.
4	11 W. after Adm.	Tur.		91624	+15.3	3000	36.2			
	Dis.	I.	5½	88905	+12.8	2960	37.0	-0.8	-2.5	S.
6	5 wks after Adm.	Tur.		49442	10.7	2800	24.8			
	Dis.	I.	7	49216	11.1	3090	16.9	+7.9	-0.4	S.
20	27 W. after Adm.	Tur.		57154	+2.6	2900	23.2			
	Dis.	II.	5½	56927	+2.3	2700	28.5	-5.3	-0.3	S.
22	6 wks after Adm.	Tur.		57607	7.0	1500	63.4			
	Dis.	II.	5	57834	6.7	2190	46.5	+16.9	+0.3	I.
23	15 W. after Adm.	Tur.		29938	6.2	1260	50.0			
	Dis.	II	5	30164	6.0	1400	44.4	+5.6	+0.2	S.
24	40 W. after Adm.	Tur		55793	+4.5	2700	30.0			
	Dis.	II.	5	55112	+3.6	2560	33.6	-3.6	-0.9	S.
26	7 Wks after Adm.	Tur.		59875	12.4	2800	35.3			
	Dis.	II.	7	59875	12.4	3050	29.5	+5.8	+0.0	I.
27	Adm.	Tur.		54885	17.7	3130	25.5			
	Dis.	II.	5½	62597	9.6	3140	25.2	+0.3	+8.1	I.
28	12 W. after Adm.	Tur		60329	5.9	2900	28.9			
	Dis.	II.	8	60329	5.9	3390	16.8	+12.1	0.0	I.
30	Adm.	Tur.		51257	9.4	2420	39.9			
	Dis.	11.	6	52618	7.7	2490	39.6	+0.3	+1.7	I.
32	7 Wks after Adm.	Tur.		61009	4.2	2500	39.2			
	Dis.	II.	9	58968	6.5	2680	34.8	+4.4	-2.3	I.
33	65 W. after adm.	Tur.		55793	1.6	2800	28.7			
	Dis.	II.	9	55566	1.8	2700	31.3	-2.6	-0.2	S.
38	Adm.	Tur.		64184	7.9	2550	40.7			
	Dis.	II.	9½	68267	3.7	2300	46.3	-5.6	+4.2	S.
40	Adm.	Tur.		83916	+3.7	3310	34.9			
	Dis.	11.	6	80287	+0.5	3720	26.9	+8.0	-3.2	I.
41	Adm.	Tur.		65545	+4.4	3200	25.7			
	Dis.	II.	6	68494	+7.8	3280	23.8	+1.9	+3.4	I.
50	Adm.	Tur.		54432	9.7	2350	39.7			
	Dis.	II.	9½	52618	11.9	2750	29.5	+10.2	-2.2	I.
62	Adm.	Tur.		64864	8.2	3010	28.3			
	Dis.	II.	8	65772	7.3	3500	17.6	+10.7	+0.9	I.
73	Adm.	Tur.		65092	2.9	3720	14.6			
	Dis.	II.	9½	66906	0.9	4170	4.3	+10.3	+2.0	M.I.
77	Adm.	Tur.		64865	5.2	3660	14.4			

TABLE VIII (e). (Contd).

No.	TIME Obs.	GRADE	PERIOD of Obs Weeks.	WEIGHT in Gms = W.	DIM of W.%	V.CAP. in ccs - VC	DIM. of VC %	CHANGE of W.%	CHANGE of W.%	CLINICAL Cond.on Disch.
	Dis.	II.	5	67360	2.6	4205	1.7	+12.7	+2.6	M.I.
79	Adm.	Tur.		63958	+2.6	2910	25.8.			
	Dis.	II.	6½	62143	+0.4	2970	24.4	+1.8	-2.2	S.
85	Adm.	Tur.		61711	7.8	2610	33.0			
	Dis.	II.	9½	63978	5.0	3395	14.1	+18.9	+2.8	M.I.
86	Adm.	Tur.		57381	4.0	2780	28.8			
	Dis.	II.	9½	58061	3.2	3310	16.2	+12.6	+0.8	M.I.
92	Adm.	Tur.		42184	10.3	2810	18.3			
	Dis.	II.	8	43319	8.5	2770	19.4	-1.1	+1.8	S.
104	Adm.	Tur.		73937	+8.8	3640	16.9			
	Dis.	II.	7½	73483	+8.4	3400	22.4	-5.9	-0.4	W.
122	27 W. after Adm.	Tur.		61236	+7.6	2100	49.2			
	Dis.	III.	6½	62824	+8.6	2210	46.6	+2.6	+1.0	S.
123	27 W. after Adm.	Tur.		61236	0.6	1800	58.0			
	Dis.	III.	6½	62370	+0.7	1550	63.8	-5.3	+1.3	W.
125	24 W. after Adm.	Tur.		52618	12.9	1400	64.9			
	Dis.	III.	7½	51710	13.9	1430	64.2	+0.7	-1.0	S.
126	23 W. after Adm.	Tur.		44906	6.2	1180	66.1			
	Dis.	III.	7½	45587	5.1	1250	63.2	+2.9	-1.1	S.
128	15 W. after Adm.	Tur.		58514	+3.2	1900	51.4			
	Dis.	III.	7	59875	+4.8	1720	56.0	-4.6	+1.6	S.
129	18 W. after Adm.	Tur.		75751	+9.6	2550	45.2			
	Dis.	III.	8½	74617	+8.4	2520	45.8	-0.6	-1.2	S.
130	34 W. after Adm.	Tur.		37195	+0.9	1250	55.1			
	Dis.	III.	8	38329	+3.1	1480	46.8	+8.3	+2.2	I.
132	23 W. after Adm.	Tur.		80287	+8.2	3200	30.5			
	Dis.	III.	9½	81648	+9.5	3330	27.6	+2.9	+1.3	I.
133	Adm.	Tur.		31752	13.5	670	75.6			
	Dis.	III.	7½	31072	14.8	800	70.8	+4.8	-1.3	S.
145	Adm.	Tur.		45133	22.1	1780	53.2			
	Dis.	III.	9	48762	17.5	2190	43.4	+9.8	+4.6	I.
164	Adm.	Tur.		20412	30.0	625	70.9			
	Dis.	III.	6	20865	16.1	880	59.0	+11.9	+13.1	M.I.
173	Adm.	Tur.		48535	18.7	2110	41.7			
	Dis.	III.	5	50576	16.2	2325	30.2	+11.5	+2.5	I.
186	Adm.	Tur.		48989	13.6	2470	37.5			
	Dis.	III.	6	51257	10.5	2300	41.8	-4.3	+3.1	S.
192	Adm.	Tur.		57154	12.5	2320	44.2			
	Dis.	III.	6	58968	10.5	2630	36.7	+7.5	+2.0	I.
193	Adm.	Tur.		56700	7.0	2440	37.0			
	Dis.	III.	9	56927	6.7	2690	31.0	+6.0	+0.3	I.
194	Adm.	Tur.		47401	16.4	2310	35.3			
	Dis.	III.	6½	48762	14.7	2625	29.3	+6.0	+1.7	I.
195	Adm.	Tur.		57381	0.6	2260	41.5			
	Dis.	III.	7	57834	0.1	2935	23.9	+17.6	+0.5	I.
201	Adm.	Hilus		23587	12.4	990	55.2			
	Dis.	Type.	7½	25175	8.2	1240	43.9	+11.3	+4.4	I.
203	Adm.	Hilus		30618	12.3	1500	44.1			
	Dis.	Type.	5	32659	8.1	1820	32.6	+11.5	+4.2	I.
213	Adm.	Hilus		25628	11.1	1355	38.6			
	Dis.	Type.	5	26535	8.8	1530	30.6	+8.0	+2.3	I.

TABLE VIII (e). (Contd).

No.	TIME Obs.	GRADE	PERIOD Obs.in Weeks.	WEIGHT in Gms = W.	DIM. of W.%	V.CAP. in ccs = VC.	DIM. of VC %	CHANGE of VC %	CHANGE of W. %	CLINICAL Cond.on Disch.
216	7 Wks. after Adm.	Chrome		58060	+10.2	2000	51.0			
	Dis.	Bron.	9	58515	+10.8	2610	35.7	+15.3	+0.6	I.
221	23 W. after Adm.	T.B.		33113	8.4	1330	51.8			
	Dis.	Glands of Neck	6	33566	7.5	1330	51.8	0.0	+0.9	S.
222	6 Wks. after Adm.	T.B.		48989	18.8	2650	31.6			
	Dis.	Glands of Neck	9	49442	17.6	2880	25.6	+6.0	+1.2	I.

TABLE VIII (f).

Analysis of Increase or Dimination of Vital Capacity or Weight in patients observed over periods of from 3 to 5 weeks.

No.	OBSER. No.	GRADE	PERIOD of Obs in Wks	WEIGHT in Gms = W.	DIM. of W %	V.CAP. in ccs = VC.	DIM. of VC %	CHANGE of VC %	CHANGE. of W. %
3	1st.	Tur.		50576	4.9	2600	31.8		
	3rd.	I.	$4\frac{1}{2}$	51257	4.0	2250	40.7	-8.9	+0.9
15	1st.	Tur.		59875	1.1	4020	0.6		
	3rd.	I.	4	61236	+0.5	3930	2.8	-2.2	+1.6
21	1st.	Tur.		54432	4.4	2900	28.3		
	3rd.	II.	4	55793	2.7	2920	27.8	+0.5	+1.7
31	1st.	Tur.		55112	5.7	3000	21.1		
	2nd.	II.	$3\frac{1}{2}$	55340	5.5	3020	20.8	+0.3	+0.2
44	1st.	Tur.		53071	13.3	2450	38.6		
	3rd.	II.	3	52617	13.8	2630	34.2	+4.2	-0.5
112	1st.	Tur.		51937	8.6	2625	30.3		
	3rd.	II.	4	53298	6.8	3010	20.0	+10.0	+1.8
114	1st.	Tur.		57381	13.2	2875	30.8		
	4th.	II.	$4\frac{1}{2}$	58061	12.5	3270	21.3	+9.5	+0.7
141	1st.	Tur.		51257	10.6	2450	36.5		
	2nd.	III.	$3\frac{1}{2}$.	51710	10.0	2190	43.2	-6.7	+0.6
158	1st.	Tur.		48762	20.0	1500	60.0		
	3rd.	III.	4	46721	22.6	2240	50.5	+9.5	-2.6
185	1st.	Tur.		46040	23.4	2315	41.0		
	3rd.	III.	$3\frac{1}{2}$	47628	21.6	2580	33.7	+7.3	+1.8

RECORD SHEETS of the 223 PATIENTS in the SERIES.

Body weight is expressed in grammes.

Body measurements are expressed in centimetres.

Vital Capacity is expressed in cubic centimetres.

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No. 1. Name G. Smillie. Age 25 yrs. Admitted 26.11.19. Admission 1st. TURBAN I.

Height 164 cms. Discharged 5.12.19.

Date.	V.Cap.	Weight in gms.	VC.Const. in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch	VC.Cal in L & Ch.	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of V.C.
27.11.19.	2430	47628	.960	3382	3156	8.9	84	3713	82½	3¼	3734	3746	1.53	1.536	1.529	1.541	35.2

Small hard glands both sides of neck. Pulmonary lesion is of Grade I. and appears quiescent. He is of poor colour and does not look fit. Cough and sputum slight. T.B. not present in sputum. Refused to stay in Sanatorium.

No. 2. Name A. Beaton. Age 23 yrs. Admitted 24.10.19. Admission 1st. TURBAN I.

Height 170 cms. Discharged 30.12.19.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Cheat Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC
4.12.19.	3620	53071	.697	3656	3517	9.3	87.5	4030	84	7	3876	4018	1.102	1.07	1.113	1.109	9.9
18.12.19.	3680	54205	.696	3712	3592	7.8	87.5	4030	84	7	3876	4018	1.085	1.05	1.095	1.092	8.4
	Incr. of 1. 5											Incr. of 1.5					

Evidence of slight apical lesion. Improved under treatment and discharged fit to resume work. T.B. not present in sputum.

No. 3. Name O. Galbraith. Age 21 yrs. Admitted 3.10.19. Admission 1st. TURBAN I.

Height 154cms. Discharged 30.12.19.

Date.	V. Cap.	Weight in gms	VC. Const in W.	VC. Cal in W.	VC. Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC. Cal in L.	Chest Meas. = Ch. in cms.	Expn. in cms.	VC. Cal in Ch.	VC. Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC
26.11.19.	2600	50576	.937	3532	3351	4.9	84	3714	83½	1½	3830	3796	1.05	1.47	1.42	1.45	31.8
4.12.19.	2450	50576	.994	3532	3351		84	3714	83½	1½	3830	3796	1.05	1.56	1.51	1.54	
25.12.19.	2250	51257	1.09	3566	3397	4.0	84	3714	83.5	1.5	3830	3796	1.04	1.70	1.66	1.69	40.7

Incr. of 0.9

Decr. of 8.9

Evidence of slight apical lesion, slight cough, no sputum, pale, and of bad general condition. His condition remained more or less stationary and he finally was discharged at his own request.
On 25th December. Fall of V.C. was apparently related to pain which he complained of in left side, and for which no cause was apparent.

No. 4. Name T. Bradie. Age 47 yrs. Admitted 2.9.19. Admission 1st. TURBAN I.

Height 175 cms. Discharged 9.1.20.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
28.11.19.	3000	91624	1.246	5418	6071	+15.3	94.5	4699	107	3.0	6290	5465	.867	2.096	1.566	1.821	36.2
8.12.19.	2990	91397	1.247	5406	6956		94.5	4699	107	3.0	6290	5465	.869	2.103	1.571	1.828	
22.12.19.	2980	91624	1.25	5418	6071		94.5	4699	107	3.0	6290	5465	.867	2.110	1.576	1.834	
5. 1.20.	2960	88905	1.23	5301	5565	+12.8	94.5	4699	107	3.0	6290	5465	.886	2.12	1.58	1.846	37.0

Decr. of 2.5 Decr. of 0.8

Very corpulent man, chest measurement grossly excessive on account of fat. Vital capacity calculated in l. taken as normal and diminution of V.C. observed expressed in terms of this. He had clinically a small, but definite, lesion of his right upper lobe. Sputum averaged 3 oz daily. T.B. were not present. His condition remained stationary and he finally was discharged at his own request.

No. 5. Name A. McGavin. Age 26 yrs. Admitted 9.1.20. Admission 1st. TURBAN I.

Height 174 cms. Discharged 14.1.20.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
9.1.20.	3760	68720	.808	4404	4553	1.1	92	4455	93	4.5	4752	4625	1.011	1.26	1.18	1.23	18.7

Slight apparently mildly active lesion at right apex. General condition not good. Refused to stay in Sanatorium. T.B. not present in sputum.

No. 6. Name J. Hunter. Age 22 yrs. Admitted 24.10.19. Admission 1st. TURBAN I.

Height 163.5 cms. Discharged 16.1.20.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
26.11.19.	2800	49442	.856	3475	3276	10.7	86	3893	80	2	3516	3719	1.123	1.256	1.390	1.328	24.8
3.12.19.	2950	50576	.826	3532	3352		86	3893	80	2	3516	3719	1.102	1.192	1.319	1.260	
17.12.19.	3150	50123	.768	3509	3322		86	3893	80	2	3516	3719	1.109	1.116	1.236	1.180	
7. 1.20.	3030	49216	.788	3463	3262		86	3893	80	2	3516	3719	1.124	1.15	1.28	1.23	
14. 1.20.	3090	49216	.773	3463	3262	11.1	86	3893	80	2	3516	3719	1.124	1.14	1.27	1.23	16.9

Decr. of 0.4

Incr. of 7.9

Old case of gun shot wounds of chest. Evidence of lesion of Turban 1 grade. Improved under treatment to a slight extent only. T.B. not present in sputum. Diagnosis was doubtful, as the condition was possibly a fibrosis due to trauma.

No. 7. Name W. Wilson. Age 20 yrs. Admitted 3.10.19. Admission 1st. TURBAN I.

Height 167.5 cms. Dismissed 3.2.20.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
26.11.19.	3000	57154	.887	3857	3787	3.2	87	3984	84	5	3876	3950	1.033	1.292	1.328	1.317	24.1
4.12.19.	3240	57154	.821	3857	3787		87	3984	84	5	3876	3950	1.033	1.196	1.229	1.219	
18.12.19.	3390	57154	.782	3857	3787		87	3984	84	5	3876	3950	1.033	1.143	1.175	1.168	
8. 1.20.	3090	57381	.863	3868	3802		87	3984	84	5	3876	3950	1.029	1.125	1.128	1.127	
23. 1.20.	3190	57381	.836	3868	3802		87	3984	84	5	3876	3950	1.029	1.120	1.125	1.24	
5. 2.20.	3430	57381	.779	3868	3802	2.9	87	3984	84	5	3876	3950	1.029	1.13	1.17	1.15	13.2
	Incr. of 0.3																Incr. of 10.9

Slight apical lesion. Cough and sputum slight. Improved considerably under treatment. T.B. present in sputum on discharge in very small numbers only. Fall of V.C. on 8.1.20 was due to a coryzal attack from which he had recovered before discharge. He was fit for work on discharge.

No. 8. Name J. McCann. Age 19 yrs. Admitted 7.11.19. Admission 1st. TURBAN I.

Height 161 cms. Dismissed 20.2.20.

Date.	V.Cap.	Weight in gms	V.C.Const in W	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
25.11.19.	2800	55340	.928	3768	3667	+5.2	82.5	3582	81	3	3605	3612	.950	1.28	1.27	1.29	22.5
1.12.19.	2590	56019	1.012	3802	3712		82.5	3582	81	3	3605	3612	.942	1.39	1.38	1.40	
15.12.19.	2820	56927	.940	3846	3772		82.5	3582	81	3	3605	3612	.931	1.27	1.26	1.28	21.9
25.12.19.	2390	56700	1.107	3835	3757		82.5	3582	81	3	3605	3612	.934	1.50	1.49	1.51	
8. 1.20.	2080	55340	1.250	3768	3667		82.5	3582	81	3	3605	3612	.950	1.73	1.72	1.74	
22. 1.20.	2080	55112	1.246	3757	3652		82.5	3582	81	3	3605	3612	.953	1.73	1.72	1.74	
29. 1.20.	2410	55566	1.082	3779	3682		82.5	3582	81	3	3605	3612	.949	1.49	1.48	1.50	
11. 2.20.	2720	56700	.973	3835	3757	+7.0	82.5	3582	81	3	3605	3612	.934	1.33	1.32	1.33	24.7

Incr. of 1.8

Decr. of 2.2

Signs in chest indicated a lesion of Turban T Grade. Cough was severe and sputum fairly copious though not containing T.B. Scars of old T.B. cervical glands removed by operation. He did not improve under treatment and was unfit on discharge. He was discharged at his own request, being anxious to resume work of hotel porter, for which he was not fit. On 8.1.20 the fall of V.C. was due to the development of an attack of bronchitis, from which he was just recovering when he left the Institution.

No. 9. Name Hugh MacRae Age 39 yrs. Admitted 28.11.19. Admission 1st. TURBAN I.

Height 181.5 cms. Dismissed 25.2.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in L.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of V.C.
29.11.19.	2900	61690	.969	4075	4087	16.0	96	4850	86½	3½	4110	4488	1.190	1.413	1.672	1.547	35.4
9.12.19.	2930	63050	.974	4140	4178		96	4850	86.5	3.5	4110	4488	1.171	1.403	1.655	1.531	
23.12.19.	2800	63504	1.025	4161	4208		96	4850	86.5	3.5	4110	4488	1.163	1.468	1.732	1.602	
13. 1.20.	2920	63731	.983	4161	4208		96	4850	86.5	3.5	4110	4488	1.163	1.41	1.66	1.54	
27. 1.20.	2990	63504	.963	4172	4223		96	4850	86.5	4.5	4110	4488	1.162	1.374	1.62	1.501	
10. 2.20.	3200	63504	.897	4161	4208		96	4850	86.5	4.5	4110	4488	1.163	1.28	1.52	1.40	
24. 2.20.	3230	63504	.888	4161	4208	14.3	96	4850	86.5	4.5	4110	4488	1.163	1.27	1.51	1.39	28.1

Incr. of 1.7 Incr. of 7.3

Signs in chest indicate a Turban I. case. He is an old G.S.W. of R. lung, wound being below angle of R. Scapula while T.B. lesion is at R. apex. Probably bad figures here are caused by trauma to lung, apart from T.B. focus. Note variation of V.C. at first, finally rising independently of W. He felt weak at first but latterly became very fit and could undertake any exertion.

Readmitted 12.3.20.
Discharged 15.5.20.

30. 3.20.	3630	63957	.794	4182	4238	13.8	96	4850	86.5	4.5	4110	4488	1.159	1.13	1.34	1.24	19.2
13. 4.20.	3450	63957	.859	4182	4238		96	4850	86.5	4.5	4110	4488	1.159	1.19	1.40	1.30	
13. 4.20.	3480	63731	.827	4172	4223		96	4850	86.5	4.5	4110	4488	1.162	1.18	1.39	1.29	
11. 5.20.	3575	64411	.811	4203	4268	13.0	96	4850	86.5	9	4110	4488	1.154	1.15	1.36	1.25	19.1

Incr. of 0.8 Dim of 0.1

Cough remained fairly severe in morning and sputum was moderately copious and frothy. T.B. were not present. He was finally discharged at his own request.

No. 10. Name J. Degnan Age 32 yrs. Admitted 26.11.19. Admission 1st. TURBAN I.

Height 167.5 cms. Discharged 12.3.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L.	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	%Dim of VC.
28.11.19.	2250	53978	1.135	3701	3576	8.2	87.5	4030	84½	4.5	3923	3996	1.09	1.74	1.79	1.77	43.7
1.12.19.	2500	54432	1.027	3724	3607		87.5	4030	84½	4.5	3923	3996	1.08	1.57	1.61	1.59	
15.12.19.	2820	56020	.930	3802	3712		87.5	4030	84.5	4.5	3923	3996	1.06	1.39	1.43	1.43	
29.12.19.	2700	57154	.985	3857	3787		87.5	4030	84.5	4.5	3923	3996	1.04	1.45	1.49	1.48	
12. 1.20.	3130	57154	.850	3857	3787		87.5	4030	84.5	4.5	3923	3996	1.04	1.25	1.28	1.27	
26. 1.20.	3090	58061	.871	3901	3847		87.5	4030	84.5	4.5	3923	3996	1.033	1.27	1.30	1.29	
9. 2.20.	3200	58742	.848	3934	3893		87.5	4030	84.5	4.5	3923	3996	1.024	1.23	1.26	1.25	20.0
23. 2.20.	2890	58061	.931	3901	3847		87.5	4030	84.5	4.5	3923	3996	1.033	1.36	1.39	1.38	
8. 3.20.	3200	58061	.841	3901	3847	3.2	87.5	4030	84.5	4.5	4923	3996	1.033	1.23	1.26	1.25	20.0
			Incr. of 5.0														Incr. of 23.7

Borderland Turban 1. case. Bad figures on admission due to his bad general condition. Improved very considerably under treatment. Disease quiescent on discharge. Cough and sputum were latterly very slight. T.B. were not detected at any time in his sputum though diagnosis was quite definite on general clinical grounds.

No. 11. Name Jas. Taylor Age 37 yrs. Admitted 12.12.19. Admission 1st. TURBAN I.

Height 174.5 cms. Discharged 1.4.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L &Ch.	P.F. 1	P.F. 2	P.F. 3	P.F. 4.	% Dim of VC.
15.12.19.	3900	51710	.634	3589	3427	17.7	91	4358	91	4	4550	4476	1.21	1.166	1.117	1.147	12.9
29.12.19.	3600	53978	.709	3701	3577		91	4358	91	4	4550	4476	1.18	1.27	1.21	1.26	
15. 1.20.	3600	53525	.705	3679	3547		91	4358	91	4	4550	4476	1.25	1.27	1.21	1.26	
29. 1.20.	3690	55112	.702	3757	3652		91	4358	91	4	4550	4476	1.159	1.23	1.18	1.22	
11. 2.20.	3760	54205	.681	3712	3592		91	4358	91	6	4550	4476	1.174	1.21	1.16	1.20	
26. 2.20.	3720	55566	.701	3779	3682		91	4358	91	6	4550	4476	1.153	1.22	1.17	1.21	
11. 3.20.	4040	56020	.649	3802	3712		91	4358	91	6	4550	4476	1.146	1.12	1.08	1.11	
25. 3.20.	4230	55566	.616	3779	3682	13.3	91	4358	91	6	4550	4476	1.153	1.08	1.03	1.06	5.5

Incr. of 4.4. Incr. of 7.4

Evidence of mild and restricted disease of left lung. T.B. not present in sputum. He improved greatly under treatment and had only slight cough and no sputum on discharge. He resumed work as a miner.

No. 12. Name A. Johnston. Age 39 yrs. Admitted 3.6.20. Admission 1st. TURBAN I.

Height 159.5 cms. Discharged – Still in residence.

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Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L.	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
4.6.20.	3395	49442	.706	3475	3277	11.7	86.5	3937	82.5	5.5	3740	3857	1133	1.116	1.16	1.14	12.0

Man of good physique, but pale and looking ill. He complained of severe cough. Sputum was not copious. T.B. were not found but abundant elastic tissue was present. Physical signs indicated a lesion of undoubted activity at his left apexof Turban I extent. This man was still in residence when the observations were closed down. Although he looked ill he was very active and showed no definite clinical signs of toxaemia. His small Vital Capacity reduction was quite in keeping with the restricted area of disease, determinable by clinical means.

No. 13. Hame J. Jameson. Age 24 yrs. Admitted 14.5.20. Admission 1st. TURBAN I.

Height 170 cms. Discharged – Still in residence.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
15.5.20.	3030	52844	.830	3645	3502	+0.5	83	3626	75.5	6.5	3132	3387	.995	1.034	1.19	1.12	10.6
25.5.20.	2930	53978	.872	3701	3577		83	3626	75.5	6.5	3132	3387	.979	1.069	1.23	1.16	

Youth of bad physique with narrow thorax and marked supra-clavicular hollows. He complained of occasional cough accompanied by scanty clear sputum. T.B. were not found in sputum. Signs were equivocal – but suggested a small area of disease of the left apex. He remained in residence when these observations were concluded.

No. 14. Name D. O'Neil. Age 42 yrs. Admitted 18.5.20. Admission 1st. TURBAN I.

Height 153.5 cms. Discharged - Still in residence.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch.	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC
20.5.20.	3410	46721	.675	3336	3096	8.0	83	3626	81	6	3605	3634	1.087	1.057	1.063	1.066	6.2

Man of good physique and good general condition. He complained of feeling languid and easily tired. He has very slight morning cough and very scanty sputum which did not contain tubercle bacilli. Signs indicated restricted disease of apparently a mild degree of activity at his right apex. He was still in residence when these notes were taken.

No.15. Name A. Christie. Age 20 yrs. Admitted 3.5.20. Admission 1st. TURBAN I.

Height 172 cms. Discharged – Still in residence.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
4.5.20.	4020	59875	.684	3988	3967	1.1	87.5	4030	85.5	6.5	4017	4044	1.011	.999	1.0002	1.006	0.6
18.5.20.	3895	61690	.722	4075	4088		87.5	4030	85.5	6.5	4017	4044	.988	1.03	1.04	1.04	
1.6.20.	3930	61236	.712	4053	4057	+0.5	87.5	4030	85.5	6.5	4017	4044	.994	1.02	1.03	0.03	2.8

Incr. of 1.6 Decr. of 2.2

This patient was of good physique and of good general condition. He had very slight morning cough and scanty sputum not containing T.B. Signs indicated definite restricted disease of R. upper lobe of a mild degree of activity. Note fall of V.C. which was rising again when his observations were concluded.

No. 16. Name J. Montgomery. Age 24 yrs. Admitted 19.9.19. Admission 11nd. TURBAN II.

Height 170 cms. Discharged 5.12.19.

Date.	V. Cap.	Weight in gms	VC. Const in W.	VC. Cal in W.	VC. Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC. Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC. Cal in Ch.	VC. Cal in L &Ch.	P.F. 1	P.F. 2	P.F. 3	P.F. 4	%Dim of VC
26.11.19.	3000	58514	.902	3923	5.126	13.8	93	4552	90.5	2.5	4500	4549	1.30	1.50	1.52	1.51	34.0
2.12.19.	3100	58514	.873	3923	5.297	13.8	93	4552	90.5	2.5	4500	4549	1.26	1.452	1.469	1.468	31.9

Stationary. Incr. of 2.1

This man had been 10 weeks in residence before his observations were begun. He suffered from fairly severe morning cough. Sputum averaged ½ oz daily. T.B. were not present. His physical signs indicated extensive, but moderately quiescent, disease of R. upper lobe. No change was detectable during his short period of observation. He was finally discharged at his own request.

No. 17. Name Wm. Clark. Age 22 yrs. Admitted 16.9.19. Admission 1st. TURBAN II.

Height 173 cms. Discharged 12.12.19.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
26.11.19.	3000	54886	.861	3746	3637	10.1	89	4169	85	2	3970	2.52	1.113	1.32	1.38	1.36	26.7
3.12.19.	3070	56020	.854	3802	3712	8.8	89	4169	85	2	3970	2.46	1.115	1.29	1.36	1.33	24.9
	Incr. of 1.3																Incr. of 1.8

This patient had been 10 weeks in residence when his observations were begun. He suffered from disease of R. upper lobe of Turban 11. grade. Cough was of moderate severity occurring largely in the morning. Sputum averaged 3 oz daily and contained T.B. in small numbers. He was thin but fairly active. No change was detectable in his condition during his short period of ~~residence~~ OBSERVATION. He was finally discharged at his own request.

No. 18. Name C. Toland. Age 36 yrs. Admitted 16.12.19. Admission 1st. TURBAN II.

Height 161.5 cms. Discharged 30.12.19.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
17.12.19.	2350	45133	.955	3254	2991	25.4	91	4358	78.5	3.5	3386	3861	1.385	1.440	1.854	1.643	39.2

This patient had definite tubercular disease involving the whole of his right upper lobe, but apparently in a fairly quiescent condition. He was thin, and sallow, and did not look well. Cough was only slight and occasional. Sputum was scanty and clear, and did not contain T.B. He refused to remain in the Sanatorium. His bad general condition was largely due to very extensive gingivitis caused by Vincent's bacillus and the associated spirochaetes.

No. 19. Name W. McFadyen. Age 25 yrs. Admitted 5.12.19. Admission 11nd. TURBAN II.

Height 157 cms. Discharged 19.12.19.

Date.	V.Cap.	Weight in gms	VC.Const inW.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
6.12.19.	2610	52618	.960	3634	3487	3.9	85.5	3847	83	4.5	3784	3836	1.06	1.449	1.474	1.469	32.1
17.12.19.	2580	52618	.971	3634	3487	3.9	85.5	3847	83	4.5	3784	3836	1.408	1.466	1.491	1.486	32.8

Stationary. Decr. of 0.7

This patient had a chronic fibroid lesion of his right upper lobe of Turban 11 grade. He had slight morning cough, and slight sputum, which contained abundant tubercle bacilli. His general condition was good and he was fit and active, and had worked as a hotel attendant until the date of his admission. He refused to remain in the Sanatorium.

No. 20. Name J. McArthur Age 31 yrs. Admitted 30.5.19. Admission 1st. TURBAN II.

Height 166.5 cms. Discharged 30.12.19.

Date,	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W.	VC.Cal as % W	% Dim of W	Stem Lgth = L in cms.	VC.Cal in L.	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
25.11.19.	2900	57154	.900	3857	3787	+2.6	84.5	3758	81.5	3.5	3649	3776	.974	1.258	1.295	1.302	23.2
7.12.19.	2830	57154	.940	3857	3787		84.5	3758	81.5	3.5	3649	3776	.974	1.29	1.30	1.31	
22.12.19.	2860	56927	.896	3846	3772		84.5	3758	81.5	3.5	3649	3776	.977	1.274	1.314	1.320	
29.12.19.	2700	56927	.982	3846	3772	+2.3	84.5	3758	81.5	3.5	3649	3776	.977	1.352	1.392	1.398	28.5

Decr. of 0.3 Decr. of 5.3

This man was 6 months in residence before his observations were begun. His original condition was genital tuberculosis. Left testicle had been excised and right epididymis had been removed, a small discharging sinus remaining over the body of the right testicle. A pulmonary lesion of Turban 11. grade was present in his right upper lobe. Activity was very mild. He had slight cough and scanty mucoid sputum which did not contain T.B. He made no improvement during his period of observation and was discharged finally at his own request, slight cough and scanty sputum remaining.

The fall of Vital Capacity on 29.12.19 was associated with feelings of malaise consequent upon excessive exertion which he had undertaken while enjoying a surreptitious dance on the occasion of Christmas festivities.

No. 21. Name M. Fagan. Age 45 yrs. Admitted 10.10.19. Admission 1st. TURBAN II.

Height 167.5 cms. Discharged 30.12.19.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W	VC.Cal as % W	% Dim of VC.	Stem Lgth = L in cms.	VC.Cal in L.	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
2.12.19.	2900	54432	.885	3724	3607	4.4	86	3893	87	3.5	4158	4044	1.04	1.43	1.34	1.38	28.3
15.12.19.	3410	55793	.767	3790	3697		86	3893	87	3.5	4158	4044	1.02	1.22	1.14	1.18	15.7
29.12.19.	2920	55793	.895	3790	3697	2.7	86	3893	87	3.5	4158	4044	1.02	1.42	1.33	1.37	27.8
						Incr. of 1.7											Incr. of 0.5

This man was 7½ weeks in residence before his observations were begun. His general condition was bad. He was of good physique but was pale and had evidently lost weight recently. He had severe morning cough. Sputum was moderate and purulent. T.B. were present in small numbers. A tubercular ulcer was present on left vocal cord. His physical signs revealed active disease of moderate extent at both apices. He improved only slightly under treatment, and ultimately was discharged at his own request, tubercle bacilli being still present in sputum and condition of larynx being unchanged.

No. 22. Name J. Hilley. Age 41 yrs. Admitted 17.10.19. Admission 1st. TURBAN II.

Height 164 cms. Discharged 30.12.19.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in L	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC
25.11.19.	1500	57607	1.784	3879	3817	7.0	89	4169	85	3	3964	4089	1.074	2.642	2.778	2.726	63.4
9.12.19.	1930	57607	1.386	3879	3817		89	4169	85	3	3964	4089	1.074	2.054	2.160	2.118	
23.12.19.	2190	57834	1.225	3890	3832	6.7	89	4169	85	3	3964	4089	1.071	1.810	1.903	1.867	46.5
	Incr. of 0.3																Incr. of 16.9

This man had been 5⅓ weeks in residence when his observations were begun. He was thin and of bad general condition. Signs showed emphysema and presumptive evidence of disease of Turban 11. extent. Cough was severe and sputum scanty and frothy. T.B. not found. He improved slightly during his period of observation and was finally discharged at his own request.

No. 23. Name G. Ewart. Age 16 yrs. Admitted 15.8.19. Admission 1st. TURBAN II.

Height 135.5 cms. Discharged 9.1.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L &Ch.	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC
28.11.19.	1260	29938	1.325	2421	1984	6.2	70	2579	66.5	3	2429	2516	1.06	1.92	2.04	1.99	50.0
10.12.19.	1390	29030	1.175	2368	1923		70	2579	66.5	3	2429	2516	1.09	1.74	1.85	1.81	
24.12.19.	1500	29484	1.101	2395	1954		70	2579	66.5	3	2429	2516	1.07	1.61	1.71	1.67	
31.12.19.	1400	30164	1.19	2434	1999	6.1	70	2579	66.5	3	2429	2516	1.060	1.73	1.84	1.80	44.4
		Incr. of 0.1															Incr. of 5.6

Thin undersized and undeveloped boy who, even at age of 16 yrs, was showing no evidence of the onset of puberty. He had slight cough and very scanty sputum which did not contain T.B. His condition remained stationary during his period of observation. He had been 3½ months in the Institution before his observations were commenced. He was finally discharged at his father's request. Disease in this case was of Turban 11. extent, his physical signs indicating undoubted fairly quiescent disease of R. upper pulmonary lobe.

No. 24. Name T. McAllister. Age 41 yrs. Admitted 17.1.19. Admission 1st. TURBAN II.

Height 163 cms. Discharged 14.1.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L &Ch.	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
27.11.19.	2700	55793	.968	3790	3697	+4.5	83	3626	86	2.5	4063	3856	.96	1.50	1.34	1.42	30.0
10.12.19.	2650	56246	.992	3813	3727		83	3626	86	2.5	4063	3856	.95	1.53	1.36	1.45	
24.12.19.	2580	55566	1.01	3779	3682		83	3626	86	2.5	4063	3856	.95	1.57	1.40	1.48	
31.12.19.	2560	55112	1.012	3757	3652	+3.6	83	3626	86	2.5	4063	3856	.965	1.58	1.41	1.49	33.6

Decr. of 0.9 Decr. of 3.6

This man had been 11 months in the Sanatorium before his observarions were begun. His primary disease was tubercular disease of the left kidney. Abundant T.B. were present in the urine. He had double apical pulmonary lesions of Turban 11. extent. Cough was slight and sputum scanty. T.B. were not present. His nutrition and general condition were fair but showed no change during his period of observation.. He was ultimately dismissed for serious infringement of the Institution Rules.

No. 25. Name F. Miles. Age 28 yrs. Admitted 16.1.20. Admission 1st. TURBAN II.

Height 166.5 cms. Discharged 17.1.20.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
17.1.20.	3410	37154	.790	3857	3787	2.0	86.5	3937	86.5	8	4110	4044	1.020	1.205	1.15	1.18	15.7

This man suffered from a very definite chronic fibroid lesion of his left upper lobe. Cough was not severe. Sputum was purulent and averaged, according to his statement, 1 oz daily. He was of good physique and good general condition. T.B. were found in sputum in small numbers. He refused to stay in the Institution. This case illustrates fairly extensive quiescent disease with a good Vital Capacity - a favourable sign.

No. 26. Name M. Harkin. Age 27 yrs. Admitted 10.10.19. Admission 1st. TURBAN II.

Height 171.5 cms. Discharged 16.1.20.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch.	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
26.11.19.	2800	59875	.982	3988	3967	12.4	93	4552	86	4	4063	2.85	1.141	1.451	1.618	1.543	35.3
9.12.19.	3170	59875	.868	3988	3967		93	4552	86	4	4063	2.52	1.141	1.281	1.435	1.363	
16.12.19.	3240	60329	.853	4010	3997		93	4552	86	4	4063	2.46	1.135	1.254	1.405	1.334	25.1
13. 1.20.	3050	59875	.902	3988	3967	12.4	93	4552	86	4	4063	2.62	1.141	1.33	1.49	1.41	29.5

Stationary. Incr. of 5.8.

This man was 6½ weeks in the Institution before his observations were begun. His physical signs indicated disease of Turban 11. extent present in both upper lobes. Cough was fairly severe. Sputum was not copious. T.B. were not found, but elastic tissue was present. He was pale, of fair physique and only moderately fit. He improved slightly while under observation. The fall of V.Cap on 13th Jan. was due to a coryzal attack associated with increase of cough. He was finally discharged at his own request.

No. 27. Name J. Stewart. Age 35 yrs. Admitted 26.11.19. Admission 1st. TURBAN II.

Height 172.5 cms. Discharged 30.12.19.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in L	VC.Cal in L & Ch.	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
28.11.19.	3130	54885	.825	3746	3636	17.7	93	4552	83.5	3	3830	4197	1.12	1.223	1.454	1.340	25.5
9.12.19.	3320	62370	.853	4107	4132		93	4552	83.5	3	3830	4197	1.02	1.153	1.371	1.264	20.9
23.12.19.	3140	62597	.906	4118	4148	9.6	93	4552	83.5	3	3830	4197	1.016	1.219	1.449	1.336	25.2

Incr. of 8.1

Incr. of 0.3

This man was a case of gas poisoning during the w ar. He complained of slight cough and expectoration. He was of fair nutrition, but did not look fit. T.B. were not present in sputum. Signs indicated lesions of right upper and lower lobes, of only moderate activity. He improved slightly during his short stay, and finally took his own discharge.

No. 28. Name J. Kelly. Age 38 yrs. Admitted 2.9.19. Admission IInd. TURBAN II.

Height 171 cms. Discharged 23.1.20.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
26.11.19.	2900	60329	.954	4010	3997	5.9	90	4263	83.5	4.5	3830	2.59	1.063	1.320	1.470	1.400	28.9
2.12.19.	3100	60329	.892	4010	3997		90	4263	83.5	4.5	3830	2.42	1.063	1.235	1.375	1.310	
16.12.19.	2680	60329	1.03	4010	3997		90	4263	83.5	4.5	3830	2.81	1.063	1.429	1.590	1.518	
6. 1.20.	3090	60102	.893	3999	3982		90	4263	83.5	4.5	3830	2.43	1.066	1.24	1.38	1.32	
20. 1.20.	3380	60329	.818	4010	3997	5.9	90	4263	83.5	4.5	3830	2.00	1.063	1.13	1.26	1.20	16.8

Stationary. Incr. of 12.1

This man had been 2½ months in residence when his observations were begun. He was of poor general condition. Cough was severe especially in the morning. Sputum was not copious, but streaked with blood on occasions. T.B. were not present, though they had been detected in small numbers in May 1916. Physical signs indicated active double lung disease of Turban 11. extent. He improved during his period of observation and was finally discharged at his own request.
Fall of V.C. on 16th December was associated with a mild febrile coryza which had confined him to bed for four days in the preceding week.

No. 29. Name J. Hamill. Age 42 yrs. Admitted 14.11.19. Admission 1st. TURBAN II.

Height 171.5 cms. Discharged 30.1.20.

Date.	V. Cap.	Weight in gms	VC.Const in W	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L.	Chest Meas. = Ch in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	%Dim of VC
25.11.19.	2700	65772	1.090	4267	4358	4.2	92	4455	93	2.5	4724	4625	1.044	1.749	1.650	1.713	41.7
8.12.19.	2870	66226	1.031	4288	4388		92	4455	93	2.5	4724	4625	1.039	1.646	1.552	1.611	
22.12.19.	2900	66679	1.025	4309	4418		92	4455	93	2.5	4724	4625	1.034	1.629	1.536	1.595	
12. 1.20.	2950	66679	1.008	4309	4418		92	4455	93	2.5	4724	4625	1.034	1.601	1.51	1.57	36.3
26. 1.20.	2820	67360	1.062	4341	4463	2.6	92	4455	93	2.5	4724	4625	1.026	1.675	1.58	1.64	39.1

Incr. of 1.6

Incr. of 2.6

Man of good physique and fair nutrition. Cough was slight and occurred mostly in the morning. Sputum was not copious, averaging 1½ oz daily. T.B. were present in large numbers. His signs indicated an extensive fibroid lesion of his right upper lobe. He improved during his period of residence, though T.B. remained in sputum. He was finally discharged at his own request. Fall of V.C. on 26th January was associated with a coryzal attack.

No. 30. Name T. Porter. Age 48 yrs. Admitted 19.12.19. Admission 1st. TURBAN II.

Height 164 cms. Discharged 30.1.20.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
20.12.19.	2420	51257	1.016	3566	3397	9.4	86.5	3937	86	2	4063	4021	1.104	1.679	1.627	1.661	39.9
13. 1.20.	2190	52164	1.138	3611	3457		86.5	3937	86	2	4063	4021	1.090	1.85	1.79	1.83	
27. 1.20.	2490	52618	1.007	3634	3487	7.7	86.5	3937	86	2	4063	4021	1.083	1.63	1.58	1.61	39.6

Incr. of 1.7

Incr. of 0.3

This man was thin and of poor general condition. Cough was of moderate severity and sputum averaged 1 oz daily. T.B. were present in small numbers and remained so on discharge. Signs showed disease of moderate activity involving greater part of R. upper lobe. He improved slightly during his brief period of residence; he refused to wait longer.

No. 31. Name D. Armstrong. Age 28 yrs. Admitted 7.1.20. Admission 1st. TURBAN II.

Height 168 cms. Discharged 30.1.20.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch.	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
8.1.20.	3000	55112	.864	3757	3652	5.7	87	3984	80.5	5	3560	3785	1.060	1.186	1.328	1.261	21.1
19.1.20.	3020	55340	.861	3768	3667	5.5	87	3984	80.5	5	3560	3785	1.057	1.17	1.31	1.25	20.8
			Incr. of 0.2														Incr. of 0.3

This man was thin, but of good general condition. He felt fit and active. Cough was not severe and sputum averaged 1 Oz daily. Signs indicated disease of both upper lobes of moderate activity. T.B. were not found in sputum. He refused to remain in the Institution.

No. 32. Name J. Hyslop. Age 23 yrs. Admitted 3.10.19. Admission 1st. TURBAN II.

Height 166 cms. Discharged 30.1.20.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch.	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC
25.11.19.	2500	61009	1.111	4043	4042	4.2	89.5	4216	85	3	3964	4112	1.04	1.58	1.68	1.64	39.2
4.12.19.	2780	58742	.976	3934	3893		89.5	4216	85	3	3964	4112	1.07	1.42	1.51	1.48	32.4
18.12.19.	2650	59195	1.03	3955	3922		89.5	4216	85	3	3964	4112	1.06	1.49	1.59	1.55	
8. 1.20.	2720	59422	1.006	3966	3937		89.5	4216	85	3	3964	4112	1.063	1.45	1.55	1.51	
22. 1.20.	2720	58968	1.0006	3945	3907		89.5	4216	85	5	3964	4112	1.068	1.45	1.55	1.51	
29. 1.20.	2680	58968	1.015	3945	3907	6.5	89.5	4216	85	5	3964	4112	1.068	1.48	1.57	1.53	34.8

Decr. of 2.3

Incr. of 4.4

This patient had been 7 weeks in residence when his observations were begun. Cough and sputum were slight. T.B. were present in small numbers in sputum on admission; but were not found in the discharge sample. Physical signs indicated disease of left lung of Turban 11. extent and of moderate degree of activity. He improved during his period of observation and was finally discharged to resume his occupation of commercial traveller. Fall of V.C. on 18th December was associated with pain of obscure origin in the right side of chest.

No. 33. Name Wm. Price. Age 17 yrs. Admitted 26.8.18. Admission 1st. TURBAN II.

Height 180.5 cms. Discharged 6.2.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L.	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
25.11.19.	2800	55793	.934	3790	3697	1.6	85.5	3847	85	3	3964	3928	1.01	1.41	1.38	1.40	28.7
11.12.19.	2590	56020	1.012	3802	3712		85.5	3847	85	3	3964	3928	1.01	1.53	1.49	1.51	
25.12.19.	2810	55112	.922	3757	3652		85.5	3847	85	3	3964	3928	1.03	1.40	1.37	1.39	
15. 1.20.	2680	56020	.978	3802	3712		85.5	3847	85	3	3964	3928	1.01	1.48	1.44	1.46	
29. 1.20.	2700	55566	.965	3779	3682	1.8	85.5	3847	85	3	3964	3928	1.08	1.46	1.42	1.44	31.3

Decr. of 0.2

Decr. of 2.6.

This patient had been in the Institution for 15 months when his observations were begun. By that time his condition was approaching arrest. When admitted he had extensive disease of his right upper lobe with severe cough but scanty sputum not containing T.B. When observations were begun disease was approaching arrest and there was extensive collapse of the upper half of the right side of his chest. "Arrest" became complete and he was finally discharged as fit for work.

No. 34. Name N. Lambe. Age 24 yrs. Admitted 23.1.20. Admission 1st. TURBAN II.

Height 169,5 cms. Discharged 6.2.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
25.1.20.	2830	52844	.888	3645	3502	12.6	89	4169	82	4	3694	3945	1.143	1.305	1.47	1.39	28.3
4.2.20.	2900	54432	.886	3724	3607	10.7	89	4168	82	4	3694	3945	1.119	1.27	1.44	1.36	26.5
	Incr. of 1.9																Incr. of 1.8

This man was in very poor general condition when admitted. He was very thin, of sallow facies, and looked ill. He had very bad carious teeth and much foul gingivitis. He had slight cough and sputum which averaged ½ oz daily. T.B. were not found, but much elastic tissue was present. Signs indicated double lung disease of apparently a moderate degree of activity. He refused to remain in the Institution. In this case the Vital Capacity readings supported the clinical findings of only moderately active disease. Much of his bad general condition was due to the foul condition of his mouth.

No. 35. Name J. Morland. Age 30 yrs. Admitted 17.10.19. Admission 11nd TURBAN II.

Height 165.5 cms. Discharged 9.2.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch.	P.F. 1	P.F. 2	P.F. 3	P.F. 4	%Dim of VC
26.11.19.	2700	56473	.974	3824	3742	13.2	91.5	4406	81	3	3605	4006	1.152	1.33	1.63	1.48	32.7
9.12.19.	2710	57154	.981	3857	3787		91.5	4406	81	3	3605	4006	1.14	1.32	1.61	1.46	
24.12.19.	2800	56700	.945	3835	3757		91.5	4406	81	3	3605	4006	1.12	1.28	1.57	1.43	
7. 1.20.	2750	57381	.970	3868	3802		91.5	4406	81	3	3605	4006	1.139	1.31	1.60	1.45	
22. 1.20.	2810	56473	.903	3824	3742		91.5	4406	81	3	3605	4006	1.152	1.282	1.57	1.43	29.9
5. 2.20.	2690	56473	.981	3824	3742	13.2	91.5	4406	81	3	3605	4006	1.152	1.34	1.64	1.49	32.9
					Stationary.												Decr. of 02

This man had been 6 weeks under treatment when his readings were commenced. Cough was fairly severe. Sputum averaged 1 oz daily. T.B. were not detected. Physical signs indicated double active apical disease of Turban 11. extent. He underwent no improvement during his period of residence and was ultimately dismissed on account of serious infringement of Institution rules.

No. 36. Name J. White. Age 27 yrs. Admitted 23.1.20. Admission 11nd. TURBAN II.

Height 161.5 cms. Discharged 13.2.20.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L.	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	%Dim ofVC
24.1.20.	2320	52844	1.084	3645	3502	9.6	87.5	4030	81	4.5	3605	3831	1.106	1.55	1.74	1.63	39.4
3.2.20.	2280	53525	1.113	3679	3547	8.7	87.5	4030	81	4.5	3605	3831	1.095	1.58	1.77	1.68	40.5

Incr. of 0.9 Decr. of 1.1

This patient was an old case of G.S.W. of lower part of R. lung which had been followed by empyema. He had had recurring haemoptysis for 3 or 4 months in 1915, after the wound was received. On admission he complained of persistent dry cough. General condition was not good. A sample of scanty sputum obtained did not reveal the presence of T.B. His physical signs indicated extensive fibrosis of the right lower lobe. In the absence of T.B. in the sputum the diagnosis of tuberculosis was doubtful; the condition possibly being merely the result of trauma.

No. 37. Name A. McGowan. Age 38 yrs. Admitted 17.10.19. Admission 1st. TURBAN II.

Height 166.5 cms. Discharged 20. 2.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L.	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L &Ch.	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
27.11.19.	2250	47628	1.037	3382	3156	14.1	86.5	3937	77	3	3257	3600	1.164	1.447	1.749	1.600	37.5
3.12.19.	2350	48762	1.010	3440	3232		86.5	3937	77	3	3257	3600	1.144	1.386	1.675	1.531	
17.12.19.	2920	48762	.812	3440	3232		86.5	3937	77	3	3257	3600	1.144	1.115	1.348	1.234	
14. 1.20.	2500	47628	.933	3382	3156		86.5	3937	77	3	3257	3600	1.164	1.302	1.57	1.44	
28. 1.20.	2630	47855	.890	3394	3172		86.5	3937	77	3	3257	3600	1.60	1.24	1.49	1.36	27.9
11. 2.20.	2350	48762	1.010	3440	3232		86.5	3937	77	3	3257	3600	1.44	1.39	1.67	1.53	
18. 2.20.	2510	48308	.939	3417	3202	13.3	86.5	3937	77	3	3257	3600	1.152	1.29	1.56	1.43	30.3

Incr. of 0.8

Incr. of 7.2

This man had been six weeks under treatment when his observations were begun. He was very ill on admission, but by this time he had begun to improve. Cough was severe in morning. Sputum averaged 3 oz daily. T.B. were not found, but elastic tissue was present. Signs indicated definite double lung disease of Turban 11. extent. He improved under treatment and finally was discharged at his own request. Cough was by this time less and sputum averaged 2 oz daily, T.B. still not being detectable.

Fall of V.C. on 14th Jan. was due to a coryzal attack.

Fall of V.C. on 11th Feb. was associated with increase of cough, general lassitude and sensation of tightness in chest. A week later he was feeling much fitter. Note rise of V.C. then.

No. 38. Name Duncan Kerr. Age 43 yrs. Admitted 16.12.19. Admission 1st. TURBAN II

Height 177 cms. Discharged 20.2.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L.	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch.	P.F. 1	P.F. 2	P.F. 3	P.F. 4	%Dim of VC
17.12.19.	2550	64184	1.134	4193	4253	7.9	93	4552	85.5	2.5	4017	4298	1.085	1.575	1.785	1.685	40.7
13. 1.20.	2390	66906	1.24	4320	4433		93	4552	85.5	2.5	4017	4298	1.053	1.67	1.904	1.79	
27. 1.20.	2670	67360	1.122	4341	4463		93	4552	85.5	2.5	4017	4298	1.048	1.504	1.705	1.609	37.9
10. 2.20.	2300	68267	1.31	4383	4523	3.7	93	4552	85.5	2.5	4017	4298	1.038	1.75	1.98	1.87	46.3

Increase of 4.2

Decr. of 5.6

Bad general condition on admission when he waspale and thin. He complained of slight morning cough associated with scanty sputum which averaged ½ oz daily. T.B. were not found. Signs indicated double apical disease of Turban 11. extent, and apparently moderate activity. He did not make any perceptible progress during his stay, and was finally discharged at his own request.
Fall of V.C. on 13.1.20 appeared to be associated with a mild catarrhal coryza.
Fall on 10.2.20 was unexplainable.

No. 39. Name A. S. Goudie. Age 20 yrs. Admitted 24.10.19. Admission 1st. TURBAN II.

Height 172.5 cms. Discharged 21.2.20.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L.	Chest Meas. - Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	%Dim ofVC
27.11.19.	2800	62597	1.014	4118	4147	5.5	91	4358	85	4	3970	4181	1.058	1.41	1.55	1.49	33.1
11.12.19.	2980	63277	.960	4150	4192		91	4358	85	4	3970	4181	1.050	1.33	1.46	1.41	
25.12.19.	2800	63731	1.02	4172	4223		91	4358	85	4	3970	4181	1.04	1.31	1.55	1.49	
15. 1.20.	2870	64411	1.010	4203	4268		91	4358	85	4	3970	4181	1.036	1.38	1.52	1.45	
29. 1.20.	3000	64184	.964	4193	4253		91	4358	85	4	3970	4181	1.039	1.32	1.45	1.39	
11. 2.20.	3020	64638	.962	4214	4283	3.3	91	4358	85	4	3970	4181	1.034	1.31	1.44	1.38	27.8
			Increase of		2.2											Incr. of	5.3

This man was on admission, pale but of fair physique. He complained of slight cough and scanty sputum which finally disappeared. T.B.were not present on admission, but had been present in Sept. 1919. Signs indicated extensive dry fibroid disease of the right upper lobe. He improved under treatment. Sputum disappeared and cough was only occasionally present. He was transferred to Polton Farm Colony for training.

No. 40. Name R. Stevens. Age 28 yrs. Admitted 16.1.20. Admission 1st. TURBAN II.

Height 180.5 cms. Discharged 27.2.20.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L.	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
17.1.20.	3310	83916	1.06	5085	5560	+ 3.7	96.5	4901	97.5	5	5223	5085	.963	1.58	1.48	1.53	34.9
28.1.20.	3220	81875	1.07	4996	5435		96.5	4901	97.5	5	5223	5085	.981	1.62	1.52	1.57	
11.2.20.	3330	81875	1.05	4996	5435		96.5	4901	97.5	5	5223	5085	.981	1.57	1.47	1.52	
25.2.20.	3720	80287	1.13	4926	5320	+ 0.5	96.5	4901	97.5	5	5223	5085	.995	1.40	1.31	1.37	26.9

Decr. of 3.2 Incr. of 8.0

Man of very powerful physique. He had a history of severe haemoptysis on two occasions prior to admission. He stated that cough was slight, but sputum copious. During his stay it averaged 3½ oz daily. T.B. were not detectable. Signs indicated fairly extensive mildly active disease of left upper lobe. He lost weight during his stay, but felt much fitter as a result of treatment. He was finally discharged at his own request.

No. 41. Name J. Tallent. Age 40 yrs. Admitted 16.1.20. Admission 1st. TURBAN II.

Height 180 cms. Discharged 27.2.20.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L.	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch.	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
17.1.20.	3200	65545	.918	4257	4343	+4.4	88	4076	90.5	3	4500	4305	.957	1.406	1.27	1.34	25.7
27.1.20.	3050	67133	.979	4331	4448		88	4076	90.5	3	4500	4305	.941	1.47	1.34	1.41	
10.2.20.	3100	67133	.964	4331	4448		88	4076	90.5	3	4500	4305	.941	1.45	1.32	1.39	
24.2.20.	3280	68494	.924	4394	4538	+7.8	88	4076	90.5	3	4500	4305	.927	1.37	1.24	1.31	23.8

Incr. of 3.4

Incr. of 0,9

Bad general condition on admission largely due to extensive dental caries, and extensive foul gingivitis. He was sallow and of toxic aspect. Cough was not severe. Sputum was 1 oz daily on admission and finally disappeared. T.B. were not found. Signs indicated pulmonary disease of Grade 11. extent and of apparently mild activity. He improved under treatment. Cough decreased, sputum disappeared and his discharge was given at his own request.

No. 42. Name Wm. Bolton. Age 33 yrs. Admitted 19.12.19. Admission 1st. TURBAN II.

Height 163 cms. Discharged 27. 2.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth - L in cms.	VC.Cal in L	Chest Meas. - Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
20.12.19.	1850	55340	1.405	3768	3667	2.1	85.5	3847	88	3	4076	4067	1.020	2.203	2.079	2.198	54.6
30.12.19.	1510	55112	1.71	3757	3652		85.5	3847	88	3	4076	4067	1.024	2.69	2.54	2.69	
6. 1.20.	2160	55340	1.203	3768	3667		85.5	3847	88	3	4076	4067	1.020	1.887	1.78	1.882	
20. 1.20.	2600	55340	1.250	3768	3667		85.5	3847	88	3	4076	4067	1.020	1.57	1.48	1.56	
3. 2.20.	2740	55112	.946	3757	3652		85.5	3847	88	3	4076	4067	1.024	1.48	1.40	1.48	
24. 2.20.	3020	56246	.871	3813	3727	0.9	85.5	3847	88	3	4076	4067	1.008	1.35	1.27	1.34	25.8

Incr. of 1.2

Incr. of 28.8

This man was of sturdy physique, but looked ill on admission. He complained of severe cough. Sputum averaged 2 oz daily. T.B. were not found at any time. Signs suggested double pulmonary disease of Grade II. extent. No change was noted in the signs as a result of treatment, but his cough improved greatly and dyspnoea which had been a prominent symptoms was much relieved. Sputum remained fairly copious. He felt much fitter and more active. He was discharged at his own request.

No. 43. Name R. Thorpe. Age 29 yrs. Admitted 23.5.19. Admission 1st. TURBAN II.

Height 179 cms. Discharged 5.3.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem VC.Cal Lgth = L in cms.	in L.	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F., 3	P.F. 4	% Dim of VC.
27.11.19.	3930	68040	.767	4373	4508	6.9	94.5	4699	88.5	5.5	4303	4520	1.074	1.094	1.195	1.150	13.1
5.12.19.	4000	68267	.756	4383	4523		94.5	4699	88.5	5.5	4303	4520	1.072	1.076	1.175	1.130	
19.12.19.	3960	68040	.761	4373	4508		94.5	4699	88.5	5.5	4303	4520	1.074	1.086	1.186	1.144	
9. 1.20.	3550	66452	.835	4299	4403		94.5	4699	88.5	5.5	4303	4520	1.093	1.21	1.32	1.28	
23. 1.20.	3780	65545	.777	4257	4343		94.5	4699	88.5	5.5	4303	4520	1.103	1.14	1.24	1.20	
7. 2.20.	4000	64638	.727	4214	4283		94.5	4699	88.5	5.5	4303	4520	1.115	1.08	1.17	1.13	
20. 2.20.	4000	64411	.725	4203	4268	10.6	94.5	4699	88.5	5.5	4303	4520	1.118	1.08	1.17	1.13	11.6

Decr. of 3.7.

Incr. of 1.5

Man of good physique.He had been six months in the Sanatorium on the second occasion of admission, when readings were begun. He had originally been a Turban 11. case with disease in both upper lobes, but when observations were begun his condition was approaching arrest. He was finally discharged as an arrested case and took up work as an assistant gardener.

No. 44. Name Patrick Rooney. Age 40 yrs. Admitted 13.2.20. Admission IInd. TURBAN II.

Height 160 cms. Discharged 5.3.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC. Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
14.2.20.	2450	53071	1.03	3656	3517	13.3	89.5	4216	82.5	5.5	3740	3991	1.153	1.53	1.72	1.63	38.6
24.2.20.	2500	53525	1.01	3679	3547		89.5	4216	82.5	5.5	3740	3991	1.146	1.48	1.68	1.59	
2.3.20.	2630	52617	.953	3634	3487	13.8	89.5	4216	82.5	5.5	3740	3991	1.237	1.42	1.61	1.52	34.2

Decr. of 0.5 Incr. of 4.2

Very bad general condition on admission. He was very thin and pale. Cough was of moderate severity and sputum was not copious. Physical signs indicated disease of both upper lobes apparently very active in right upper lobe. T.B. were not found in sputum. He refused to remain in the Sanatorium.

No. 45. Name D. McDonald. Age 33 yrs. Admitted 5.12.19. Admission 1st. TURBAN II.

Height 161 cms. Discharged 12.3.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	%Dim ofVC.
6.12.19.	1260	49216	1.896	3463	3262	7.9	84.5	3759	80.5	3.5	3560	3677	1.085	2.825	2.983	2.918	65.8
16.12.19.	2210	50350	1.098	3520	3337		84.5	3759	80.5	3.5	3560	3677	1.067	1.610	1.700	1.663	
13. 1.20.	2210	51710	1.120	3589	3427		84.5	3759	80.5	3.5	3560	3677	1.047	1.610	1.700	1.663	
30. 1.20.	2390	53071	1.05	3656	3517		84.5	3759	80.5	3.5	3560	3677	1.028	1.49	1.57	1.54	
11. 2.20.	2260	53525	1.12	3679	3547		84.5	3759	80.5	3.5	3560	3677	1.022	1.57	1.66	1.62	
27. 2.20.	2520	53298	1.004	3668	3532		84.5	3759	80.5	3.5	3560	3677	1.024	1.41	1.49	1.46	
5. 3.20.	2700	53978	.945	3701	3577	1.5	84.5	3759	80.5	3.5	3560	3677	1.016	1.32	1.39	1.36	26.6
	Incr. of 6.4.																Incr. of 39.2

Thin and of poor general condition on admission. Cough was moderately severe and sputum averaged 1½ oz daily. T.B. were not present. Physical signs indicated definite, apparently moderately active, disease of both upper lobes of Turban ¼ extent. He made very great improvement during his stay and disease appeared to be approaching quiescence. He was finally discharged at his own request.

No. 46. Name K. Sharp. Age 20 yrs. Admitted 19.9.19. Admission 1st. TURBAN II.

Height 174.5 cms. Discharged 12.3.20.

Date.	V.Cap.	Weight in gms	VC. Const in W.	VC. Cal in W.	VC. Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC. Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC. Cal in Ch.	VC. Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC
27.11.19.	3200	57834	.838	3890	3832	11.7	91.5	4406	83	3.5	3784	4105	1.132	1.182	1.377	1.283	22.1
4.12.19.	3180	58742	.855	3934	3893		91.5	4406	83	3.5	3784	4105	1.118	1.193	1.385	1.290	
18.12.19.	3190	59195	.855	3955	3922		91.5	4406	83	3.5	3784	4105	1.114	1.186	1.380	1.286	
8. 1.20.	3110	59648	.882	3977	3952		91.5	4406	83	3.5	3784	4105	1.107	1.21	1.41	1.31	
23. 1.20.	3400	59422	.805	3966	3937		91.5	4406	84.5	3.5	3923	4179	1.110	1.15	1.29	1.23	
5. 2.20.	3300	58968	.825	3945	3907		91.5	4406	84.5	3.5	3923	4179	1.117	1.19	1.34	1.27	
19. 2.20.	3310	59195	.824	3955	3922		91.5	4406	84.5	3.5	3923	4179	1.114	1.18	1.33	1.26	
4. 3.20.	3600	59648	.762	3977	3952	9.8	91.5	4406	84.5	3.5	3923	4179	1.107	1.09	1.22	1.16	13.9

Incr. of 1.9.

Incr. of 8.2

Very pale and thin on admission. Complained of slight cough and scanty sputum which contained T.B. in small numbers. Physical signs indicated disease of moderate activity of R. upper lobe. He improved greatly during his period of residence. Cough became slight and occasional, and sputum disappeared. His colour became good and he felt fit and well. He was discharged as fit to resume work.

No. 47. Name. H. McCormack. Age 32 yrs. Admitted 20.11.19. Admission 11nd. TURBAN II.

Height 167.5 cms. Discharged 12.3.20.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
21.11.19.	2600	56927	1.020	3846	3772	8,8	89.5	4216	87.5	2.5	4072	4233	1.096	1.56	1.62	1.63	38.6
21. 1.20.	2680	58288	1.007	3912	3862		89.5	4216	87.5	2.5	4072	4233	1.077	1.52	1.57	1.58	
28. 1.20.	2910	60782	.955	4032	4027		89.5	4216	87.5	2.5	4072	4233	1.045	1.39	1.45	1.45	
11. 2.20.	3000	63731	.906	4172	4223		89.5	4216	87.5	2.5	4072	4233	1.010	1.35	1.40	1.41	
25. 2.20.	3170	65092	.922	4235	4313	0.4	89.5	4216	87.5	2.5	4072	4233	.995	1.28	1.33	1.34	25.2

Incr. of 9.2

Incr. of 13.4 "

This man was of moderate physique but in a very poor general condition on admission. He was thin and very pale. He complained of slight cough and scanty sputum. T.B. were not found in sputum. A few days after admission he had severe haematemesis from a gastric ulcer and was confined to bed for 6 weeks on treatment. Melaena continued for four weeks. His chest signs indicated only moderately active double apical disease. With the cessation of the melaena he began to improve rapidly. Cough and sputum disppeared and disease passed into an apparently quiescent condition. He left the institution in a very much improved condition. No readings of V.C. were taken between 21st November and 21st January on account of his physical condition.

No. 48. Name W. O'Flaherty. Age 36 yrs. Admitted 9.1.20. Admission 1st. TURBAN II.

Height 165.5 cms. Discharged 26.3.20.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L.	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F 4	% Dim of VC
10.1.20.	3000	55340	.867	3768	3667	7.6	88	4076	83	3.5	3784	3948	1.082	1.26	1.36	1.316	24.1
19.1.20.	3120	56473	.845	3824	3742		88	4076	83	3.5	3784	3948	1.066	1.21	1.31	1.26	
2.2.20.	3300	56246	.828	3813	3727		88	4076	83	3.5	3784	3948	1.068	1.15	1.24	1.19	
17.2.20.	3130	56927	.847	3846	3772		88	4076	83	3.5	3784	3948	1.059	1.21	1.30	1.26	
1.3.20.	3290	58288	.820	3912	3862		88	4076	83	3.5	3784	3948	1.042	1.15	1.24	1.19	
15.3.20.	2910	58288	.927	3912	3862		88	4076	85	3.5	3969	4043	1.042	1.36	1.40	1.39	
25.3.20.	3350	58288	.805	3912	3862	4.1	88	4076	85	3.5	3969	4043	1.042	1.18	1.42	1.21	17.2

Incr. of 3.5. Incr. of 6.9

Man of indifferent physique but fair general condition on admission. Complained of slight cough. Sputum averaged 1 oz daily. T.B. were not present. Signs indicated mild disease of both apices. He improved during his period of residence. Cough and sputum decreased and he felt fitter. No cause detectable for falls of V.C. on 17th Feb. and 15th March.

No. 49. Name F.McLean. Age 31 yrs. Admitted 7.1.20. Admission 11nd. TURBAN II.

Height 174 cms. Discharged 1.4.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L.	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
9.1.20.	2480	78246	1.34	4836	5184	+7.4	92.5	4503	98.5	3.5	5333	4870	.931	2.14	1.81	1.96	49.1
21.1.20.	2660	79607	1.260	4896	5275		92.5	4503	98.5	3.5	5333	4870	.919	2.005	1.69	1.83	
3.2.20.	2700	78926	1.24	4866	5230		92.5	4503	98.5	3.5	5333	4870	.925	1.97	1.66	1.80	
19.2.20.	2580	77339	1.28	4795	5124		92.5	4503	98.5	3.5	5333	4870	.938	2.06	1.74	1.88	
12.3.20.	2780	76658	1.28	4765	5079		92.5	4503	98.5	3.5	5333	4870	.945	1.92	1.62	1.76	
26.3.20.	3870	76432	.847	4755	5064	+5.5	92.5	4503	98.5	3.5	5333	4870	.947	1.38	1.16	1.26	20.8

Decr. of 1.9

Incr. of 28.3

Huge stout man of unhealthy appearance. W is well above normal. He complained of severe cough and sputum of moderate amount. T.B. were not present. Physical signs indicated extensive but mildly active disease of right upper lobe. He made very considerable improvement during his period of stay. Cough practically disappeared, sputum disappeared completely and he felt very fit and well. Signs in chest indicated only quiescent disease. Note fall of W. and rise of V.C. He was discharged at his own request with a recommendation to try to find more suitable occupation than that of fireman, which he had previously follwed.
No cause was evident for fall of V.C. on 19.2.20. Note huge rise on 26.3.20 prior to discharge.

No. 50. Name J. Hunter. Age 35 yrs. Admitted 23.1.20. Admission IInd. TURBAN II.

Height 162.5 cms. Discharged 1.4.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal of W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
24.1.20.	2350	54432	1.093	3724	3607	9.7	88.5	4122	81.5	3	3649	3898	1.107	1.55	1.75	1.65	39.7
2.2.20.	2220	51484	1.112	3577	3412		88.5	4122	81.5	3	3649	3898	1.152	1.64	1.85	1.75	
17.2.20.	2400	51710	1.03	3589	3427		88.5	4122	81.5	3	3649	3898	1.148	1.52	1.72	1.62	
2.3.20.	2580	52391	.968	3623	3472		88.5	4122	81.5	3	3649	3898	1.137	1.41	1.59	1.51	
16.3.20.	2580	52618	.971	3634	3487		88.5	4122	81.5	3	3649	3898	1.134	1.41	1.59	1.51	
30.3.20.	2750	52618	.912	3634	3487	11.9	88.5	4122	81.5	4	3649	3898	1.134	1.33	1.50	1.42	29.5

Decr. of 2.2

Incr. of 10.2

This man on admission was thin, but looked well. He complained of moderate cough and expectoration, which was often copious in the morning. T.B. were present in small numbers. Physical signs indicated dise ase of both upper lobes of only a moderate degree of activity. He improved during his period of residence. Cough becamr less severe, sputum was less copious and he felt more active. He was finally dismissed for committing a breach of Institution rules. Note fall of W and rise of V.C.

No. 51. Name J. Paterson. Age 22 yrs. Admitted 10.10.19. Admission 1st. TURBAN II.

Height 167 cms. Discharged 9.4.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch.	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
25.11.19.	2600	52164	.919	3611	3456	15.3	90	4263	80.5	4.5	3560	3916	1.180	1.369	1.636	1.506	33.6
2.12.19.	2450	51937	1.014	3600	3442		90	4263	80.5	4.5	3560	3916	1.184	1.453	1.74	1.60	
18.12.19.	2720	51937	.913	3600	3442		90	4263	80.5	4.5	3560	3916	1.184	1.308	1.57	1.44	
8. 1.20.	2480	51937	1.001	3600	3442		90	4263	80.5	4.5	3560	3916	1.184	1.44	1.72	1.58	
22. 1.20.	2490	51710	.994	3589	3427		90	4263	80.5	4.5	3560	3916	1.187	1.43	1.71	1.57	
5. 2.20.	2570	51484	.960	3577	3412		90	4263	80.5	4.5	3560	3916	1.192	1.38	1.66	1.52	
19. 2.20.	2700	51937	.920	3600	3442		90	4263	80.5	4.5	3560	3916	1.184	1.32	1.58	1.45	
4. 3.20.	2650	51484	.931	3577	3412		90	4263	80.5	4.5	3560	3916	1.192	1.34	1.60	1.47	
18. 3.20.	2720	51484	.907	3577	3412		90	4263	80.5	4.5	3560	3916	1.192	1.31	1.57	1.44	
1. 4.20.	3080	51257	.799	3566	3397		90	4263	80.5	6	3560	3916	1.195	1.16	1.38	1.27	
8. 4.20.	3080	51257	.799	3566	3397	16.4	90	4263	80.5	6	3560	3916	1.195	1.16	1.38	1.27	21.4

Decr. of 1.1 Incr. of 12.2

This man was pale and thin and looked ill on admission. Cough was of moderate severity and sputum averaged 3 oz. daily. T.B. were present in great profusion. Physical signs indicated extensive active disease of left upper lobe. His weight actually fell during his residence, but his condition improved. Signs in lungs became more dry in character, cough diminished in intensity, and sputum fell to 1½ oz daily. T.B. remained numerous, but apparently fewer than on admission. His colour became good and he felt well.
Note rise of V.C. and fall of W.
Falls of V.C. on 8.1.20 and 22.1.20 were associated with general indisposition consequent upon a coryzal attack leading to increase of cough and sputum.

No. 52. Name Joseph Keegan. Age 19 yrs. Admitted 19.12.19. Admission 1st TURBAN II.

Height 153 cms. Discharged 20.4.20.

Date.	V.Cap.	Weight in gms	VC.Const. in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L.	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
20.12.19.	2350	45133	.997	3254	2991	8.1	82	3539	79	2	3429	3501	1.087	1.459	1.506	1.489	32.9
13. 1.20.	2350	46721	.979	3336	3096		82	3539	79	2	3429	3501	1.061	1.459	1.506	1.489	
20. 1.20.	2290	46721	1.005	3336	3096		82	3539	79	2	3429	3501	1.061	1.49	1.54	1.52	
5. 2.20.	2620	47401	.887	3371	3141		82	3539	79	2	3429	3501	1.049	1.31	1.35	1.33	
19. 2.20.	2280	47855	1.03	3394	3172		82	3539	79.5	5	3472	3523	1.042	1.53	1.55	1.54	
4. 3.20.	2450	48082	.959	3405	3187		82	3539	79.5	5	3472	3523	1.039	1.42	1.44	1.43	
18. 3.20.	2660	47174	.871	3359	3126		82	3539	79.5	5	3472	3523	1.053	1.30	1.33	1.32	
1. 4.20.	2900	48082	.810	3405	3187		82	3539	79.5	5	3472	3523	1.039	1.19	1.22	1.21	17.7
15. 4.20.	2970	48082	.791	3405	3187	3.8	82	3539	79.5	5	3472	3523	1.039	1.17	1.19	1.18	15.7

Incr. of 4.3 Incr. of 17.2

Bad general condition on admission. Thin and pale and feeling unfit. He complained of slight cough and occasional expectoration. T.B. not present in sputum. Signs indicated only apparently healed disease of R. upper lobe. He underwent very considerable improvement during his stay in Sanatorium and was finally discharged as fit for work – he was an apprentice coppersmith, but was recommended to pick a healthier occupation,
Fall of V.C. on 19.2.20 was due to coryza from which he recovered quickly.

No. 53. Name D. McGuire. Age 26 yrs. Admitted 30.1.20. Admission 1st. TURBAN II.

Height 150.5 cms. Discharged 20.4.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L.	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L &Ch.	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC
31.1.20.	2340	45133	.959	3254	2991	12.4	84	3714	76.5	4	3215	3473	1.141	1.37	1.58	1.48	32.3
9.2.20.	2480	46948	.931	3347	3111		84	3714	76.5	4	3215	3473	1.109	1.29	1.49	1.40	
23.2.20.	2460	48308	.954	3417	3202		84	3714	76.5	4	3215	3473	1.086	1.30	1.51	1.41	
4.3.20.	2850	48308	.827	3417	3202		84	3714	76.5	4	3215	3473	1.086	1.13	1.30	1.22	19.6
18.3.20.	2720	48308	.867	3417	3202		84	3714	76.5	4	3215	3473	1.086	1.18	1.35	1.28	
8.4.20.	2850	47858	.822	3394	3172	8.6	84	3714	78	4	3343	3473	1.094	1.17	1.30	1.24	19.6

Incr. of 3.8 Incr. of 12.7

Thin and of poor physique. Complained of moderate degree of cough. Sputum was 1 oz. daily on admission, T.B. were not found. Physical signs indicated double apical disease of Turban II. extent and apparently of mild activity. He improved greatly during his stay. Cough improved and sputum fell to ¼ oz. daily while physical signs improved. He was ultimately dismissed from the Institution in a much improved condition.

No. 54. Name J. Sellar. Age 34 yrs. Admitted 23.4.20. Admission 1st. TURBAN II.

Height 166.5 cms. Discharged 24.4.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
24.4.20.	3200	63277	.895	4150	4192	+7.8	85.5	3847	87	5	4158	4020	.927	1.30	1.20	1.26	20.4

Man of good physique. Cough slight and sputum scanty, though blood-streaked. Physical signs showed double apical disease of Turban 11. extent and apparently mild activity. T.B. not found in sputum. He refused to remain in the Sanatorium.

No. 55. Name D. McGowan. Age 40 yrs. Admitted 30.1.20. Admission 1st. TURBAN II.

Height 165 cms. Discharged 30.4.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
31.1.20.	2390	54659	1.078	3735	3622	10.5	89	4169	84	6	3876	4041	1.116	1.62	1.74	1.69	40.9
10.2.20.	2300	56700	1.15	3835	3757		89	4169	84	6	3876	4041	1.087	1.68	1.81	1.76	
24.2.20.	2400	56700	1.10	3835	3757		89	4169	84	6	3876	4041	1.087	1.61	1.73	1.68	
9.3.20.	2500	56473	1.05	3824	3742		89	4169	84	6	3876	4041	1.090	1.55	1.66	1.62	
23.3.20.	2720	56700	.972	3835	3757		89	4169	84	6	3876	4041	1.087	1.42	1.53	1.49	
6.4.20.	3090	56700	.856	3835	3757		89	4169	84	6	3876	4041	1.087	1.25	1.35	1.31	23.6
20.4.20.	3005	56700	.880	3835	3757		89	4169	84	6	3876	4041	1.087	1.29	1.38	1.34	
27.4.20.	2800	56700	.945	3835	3757	8.0	89	4169	84	6	3876	4041	1.087	1.38	1.49	1.44	30.8
			Incr. of 2.5														Incr. of 10.1

Man of good physique, but looked ill on admission. He complained of lassitude, severe cough, and sputum which averaged 2 oz daily. T.B. were not found at any time. Extensive dental caries and gingivitis were present. Physical signs indicated double pulmonary disease, apparently of fairly active nature. He improved during his stay in sanatorium and was finally discharged at his own request, feeling much fitter.
Fall of V.C. on 27th April was unexplainable.

No. 56. Name J. Gribbon. Age 28 yrs. Admitted 19.9.19. Admission IInd. TURBAN II.

Height 159.5cms. Discharged 30.4.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	%Dim of VC
27.11.19.	3200	57154	.831	3857	3787	+2.6	84.5	3758	84	3	3876	3836	.974	1.21	1.17	1.198	16.6
4.12.19.	3140	57834	.854	3890	3832		84.5	3758	84	3	3876	3836	.966	1.234	1.19	1.22	
18.12.19.	3510	55793	.745	3790	3697		84.5	3758	84	3	3876	3836	.991	1.104	1.070	1.09	
15. 1.20.	3000	56020	.877	3802	3712		84.5	3758	84	3	3876	3836	.988	1.29	1.25	1.27	
29. 1.20.	3530	56700	.749	3835	3757		84.5	3758	84	3	3876	3836	.979	1.098	1.06	1.08	
11. 2.20.	3530	57154	.754	3857	3787		84.5	3758	84	3	3876	3836	.974	1.098	1.06	1.08	
26. 2.20.	3500	57607	.764	3879	3817		84.5	3758	84	3	3876	3836	.968	1.107	1.07	1.09	
11. 3.20.	3510	57834	.764	3890	3832		84.5	3758	84	3	3876	3836	.966	1.104	1.07	1.09	
25. 3.20.	3610	57607	.741	3879	3817		84.5	3758	84	5	3876	3836	.968	1.074	1.041	1.063	
8. 4.20.	3620	57607	.739	3879	3817		84.5	3758	84	5	3876	3836	.968	1.074	1.041	1.063	5.6
22.4. 20.	3580	57154	.743	3857	3787		84.5	3758	84	5	3876	3836	.974	1.082	1.050	1.071	
29.4. 20.	3680	57607	.727	3879	3817	+3.2	84.5	3758	84	5	3876	3836	.968	1.053	1.021	1.042	3.6

Incr. of 0.6

Incr. of 13.0.

He was pake but of good physique on admission. Cough and slight morning sputum were present. T.B. not found. Obervations were begun two months after admission. Signs in lungs showed double pulmonary disease of Turban II. type. He improved very much under treatment and finally was recommended for admission to Hairmyres Colony. Disease quiescent on discharge. No cough or spit. Fall of V.C. on 15th Jan. due to an attack of myalgia of right side of chest.

No. 57. Name D. Bett. Age 27 yrs. Admitted 14.1.20. Admission 1st. TURBAN II.

Height 177 cms. Discharged 30.4.20.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L &Ch.	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
15.1.20.	2850	59648	.963	3977	3952	7.8	90.5	4311	85	4	3969	4158	1.084	1.39	1.51	1.45	31.5
26.1.20.	2710	60329	1.021	4010	3997		90.5	4311	85	4	3969	4158	1.075	1.46	1.59	1.534	
9.2.20.	2990	62143	.945	4096	4118		90.5	4311	85	4	3969	4158	1.052	1.33	1.44	1.39	
23.2.20.	2820	63504	1.018	4161	4208		90.5	4311	85	4	3969	4158	1.036	1.41	1.53	1.47	
8.3.20.	3050	63731	.943	4172	4223		90.5	4311	85	4	3969	4158	1.033	1.30	1.41	1.36	
22.3.20.	3080	64184	.939	4193	4253		90.5	4311	86	7	4063	4207	1.028	1.31	1.40	1.36	
1.4.20.	3420	64638	.850	4214	4283		90.5	4311	86	7	4063	4207	1.023	1.19	1.26	1.23	18.7
15.4.20.	3440	64638	.845	4214	4283		90.5	4311	86	7	4063	4207	1.023	1.18	1.25	1.22	
29.4.20.	3560	65545	.825	4257	4343	1.3	90.5	4311	86	7	4063	4207	1.013	1.14	1.21	1.18	15.4
			Incr. of 6.5														Incr. of 16.1

Very bad general condition on admission. Thin and pale with flat narrow thorax. Cough was not very severe. Sputum averaged 2 oz daily. T.B. not present. Physical signs indicated disease of both upper lobes of Turban 11. extent. He made very great improvement during his stay here. Cough and sputum disappeared and disease appeared to become quiescent. He was discharged to his occupation of tramway motorman.
Fall of V.C. on 23rd February was not explainable.

No. 58. Name H. Conner. Age 28 yrs. Admitted 26.11.19. Admission 1st. TURBAN II.

Height 174 cms. Discharged 3. 5.20.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch.	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC
27.11.19.	3400	61916	.829	4085	4102	5.3	90.5	4311	85	4.5	3970	4158	1.05	1.167	1.267	1.223	18.2
9.12.19.	3200	64411	.906	4203	4268		90.5	4311	85	4.5	3970	4158	1.02	1.240	1.347	1.29	
23.12.19.	3200	65772	.920	4267	4358		90.5	4311	85	4.5	3970	4158	1.01	1.240	1.347	1.29	
13. 1.20.	3000	66226	.986	4288	4388		90.5	4311	85	4.5	3970	4158	1.005	1.32	1.43	1.38	27.8
27. 1.20.	3040	66679	.978	4309	4418		90.5	4311	86.5	5.5	4110	4231	1.0004	1.35	1.41	1.39	
10. 2.20.	3100	67813	.970	4362	4493		90.5	4311	86.5	5.5	4110	4231	.988	1.33	1.39	1.37	
24. 2.20.	3370	69628	.910	4446	4613		90.5	4311	86.5	5.5	4110	4231	.969	1.22	1.27	1.25	
9. 3.20.	3400	69854	.904	4456	4628		90.5	4311	86.5	5.5	4110	4231	.967	1.21	1.26	1.24	
23. 3.20.	3450	69854	.891	4456	4628		90.5	4311	86.5	5.5	4110	4231	.967	1.19	1.25	1.23	
1. 4.20.	3680	69401	.832	4435	4598		90.5	4311	88	6.5	4254	4305	.972	1.16	1.17	1.17	14.5
15. 4.20.	3810	69401	.803	4435	4598		90.5	4311	88	6.5	4254	4305	.972	1.12	1.13	1.13	
29. 4.20.	3840	68493	.789	4394	4538	+1.9	90.5	4311	88	6.5	4254	4305	.935	1.11	1.12	1.12	11.8
					Incr. of 7.2												Incr. of 6.4

Bad general condition on admission. He was pale and looked ill and complained of feeling very easily tired. Cough was harsh but not severe. Sputum averaged ¾ oz daily. T.B. were present in small numbers. Signs indicated disease of both upper lobes of apparently mild activity. He made much improvement during his stay in Sanatorium. Cough and sputum became very slight and occasional and T.B. were no longer detectable. He was finally discharged at his own request. Note falling V.C. up till 24th Feb. His condition had not been satisfactory. Cough and dyspnoea were severe and Blood streaking had been present on several occasions. Thereafter rapid and continuous improvement set in.
W. rose until 23rd March and then fell for no apparent reason.

No. 59. Name J. McNeil. Age 24 yrs. Admitted 7.1.20. Admission 1st. TURBAN II.

Height 171 cms. Discharged 3.5.20.

Date.	V. Cap.	Weight in gms	VC. Const in W	VC. Cal in W	VC. Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC. Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC. Cal in Ch.	VC. Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC
18.1.20.	2810	65092	1.04	4235	4313	1.8	90.5	4311	89	5	4352	4353	1.017	1.54	1.53	1.54	35.5
20.1.20.	3090	68267	.979	4383	4523		90.5	4311	89	5	4352	4353	.991	1.40	1.39	1.40	
3.2.20.	3200	69174	.954	4425	4583		90.5	4311	89	5	4352	4353	.974	1.36	1.35	1.36	
19.2.20.	3290	70535	.941	4487	4674		90.5	4311	89	5	4352	4353	.961	1.32	1.31	1.32	
4.3.20.	3500	70762	.886	4498	4689		90.5	4311	89	5	4352	4353	.954	1.24	1.23	1.24	
18.3.20.	3530	69401	.867	4435	4598		90.5	4311	90	5.5	4450	4403	.924	1.26	1.22	1.25	
1.4.20.	3640	71215	.856	4519	4719		90.5	4311	90	5.5	4450	4403	.954	1.22	1.18	1.21	18.2
15.4.20.	3550	71442	.880	4529	4734		90.5	4311	90	5.5	4450	4403	.952	1.25	1.21	1.24	
29.4.20.	3650	70535	.849	4487	4674	+4.1	90.5	4311	90	5.5	4450	4403	.961	1.22	1.18	1.21	17.1
			Incr. of 5.9														Incr. of 18.4

Big powerful man of almost normal weight. Cough was not severe. Sputum averaged ½ oz daily. T.B. were not present. Signs were those of double mildly active pulmonary disease. He underwent very great improvement, and cough and sputum practically disappeared. He felt fit and well. He was finally dismissed from the Institution fit for work.

No. 60. Name D. McKinstrey. Age 28 yrs. Admitted 30.1.20. Admission IInd. TURBAN II.

Height 176.5 cms. Discharged 30.4.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch.	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC
30.1.20.	3600	71442	.868	4529	4734	+2.8	91.5	4406	92	6	4650	4550	.973	1.29	1.22	1.26	21.0
9.2.20.	3580	72122	.878	4560	4779		91.5	4406	92	6	4650	4550	.966	1.30	1.23	1.27	
23.2.20.	3680	70535	.841	4487	4674		91.5	4406	92	6	4650	4550	.982	1.26	1.19	1.23	
3.3.20.	3700	71669	.846	4539	4749		91.5	4406	92	6	4650	4550	.970	1.25	1.19	1.23	
17.3.20.	3520	70308	.878	4477	4659		91.5	4406	92	6	4650	4550	.945	1.32	1.25	1.29	
30.3.20.	3910	71215	.797	4519	4719		91.5	4406	92	6	4650	4550	.975	1.19	1.13	1.16	14.0.
21.4.20.	3940	70308	.784	4477	4659	+1.6	91.5	4406	92	6.5	4650	4550	.945	1.18.	1.12	1.15	13.4

Decr of 1.2

Incr. of 7.6

This man was transferred from a Tuberculosis Hospital and was in good condition on admission. He had slight morning cough and sputum which averaged ½ oz daily. T.B. were not detected but much elastic tissue was present. Signs in chest indicated a moderately active lesion of the right upper lobe. He improved during his period of residence, and cough and sputum practically disappeared' He felt fitter on discharge. There was no explanation for the fall of V.C. on 17th March.

No. 61. Name Wm. Hailstones. Age 35 yrs. Admitted 24.10.19. Admission 1st. TURBAN II.

Height 162.5 cms Discharged 6. 5.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	%Dim of VC
26.11.19.	2900	49442	.827	3475	3276	14.8	88	4076	80.5	5.0	3560	3829	1.173	1.23	1.40	1.32	24.3
3.12.19.	2710	50123	.894	3509	3322		88	4076	80.5	5.0	3560	3829	1.163	1.31	1.50	1.41	
7. 1.20.	2480	49216	.963	3463	3262		88	4076	80.5	5.0	3560	3829	1.177	1.43	1.64	1.55	
21. 1.20.	2680	48989	.888	3452	3247		88	4076	80.5	5.0	3560	3829	1.180	1.32	1.52	1.43	
2. 2.20.	2900	49442	.827	3475	3276		88	4076	80.5	5.0	3560	3829	1.173	1.23	1.40	1.32	
16. 2.20.	3040	49669	.791	3486	3292		88	4076	80.5	5.0	3560	3829	1.169	1.17	1.34	1.26	20.6
1. 3.20.	3000	49896	.804	3497	3307		88	4076	80.5	8.0	3560	3829	1.165	1.18	1.35	1.27	
15. 3.20.	3000	49442	.799	3475	3276		88	4076	80.5	8.0	3560	3829	1.173	1.18	1.35	1.27	
29. 2.20.	3030	49216	.788	3463	3262		88	4076	80.5	8.0	3560	3829	1.177	1.17	1.34	1.26	
12. 4.20.	2930	49669	.821	3486	3292	14.5	88	4076	80.5	8.0	3560	3829	1.169	1.22	1.39	1.31	23.5

Incr. of 0.3

Incr. of 0.8

Man of poor physique and in bad general condition. Cough severe and harassing. Sputum 3 oz daily, thick and mucoid, and containing T.B. in small numbers. Physical signs showed double lung disease of both upper lobes and apparently not great activity. He made little improvement during his stay and latterly became worse. Cough was severe and sputum latterly reached 4 oz daily. T.B. became numerous. Discharged at his own request - not improved.

No. 62. Name R. Ross. Age 28 yrs. Admitted 12.3.20. Admission IInd. TURBAN II.

Height 186 cms. Discharged 6.5.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in D & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC
13.3.20.	3010	64864	.968	4225	4298	8.2	93.5	4601	83	9	3784	4195	1.089	1.26	1.53	1.39	28.3
22.3.20.	3500	64411	.829	4203	4268		93.5	4601	83	9	3784	4195	1.094	1.08	1.31	1.19	
30.3.20.	3580	65999	.824	4278	4373		93.5	4601	83	9	3784	4195	1.075	1.06	1.28	1.17	
6.4.20.	3560	66225	.831	4288	4388		93.5	4601	83	9	3784	4195	1.073	1.06	1.29	1.18	
13.4.20.	3460	65092	.845	4235	4313		93.5	4601	83	9	3784	4195	1.086	1.09	1.33	1.21	
20.4.20.	3560	65772	.827	4267	4358		93.5	4601	83	9	3784	4195	1.078	1.06	1.29	1.18	
27.4.20.	3545	65772	.830	4267	4358		93.5	4601	83	9	3784	4195	1.078	1.07	1.29	1.18	
4.5.20.	3500	65772	.841	4267	4358	7.3	93.5	4601	84	9	3786	4245	1.078	1.11	1.31	1.21	17.6

Incr. of 0.9 Incr. of 10.7

Tall thin man of fairly healthy aspect transferred from a Tuberculosis Hospital. Cough was slight. Sputum averaged ¼ oz daily. T.B. present in small numbers. Signs indicated disease in both upper lobes of moderate activity only. He improved during his period of stay. Sputum practically disappeared and T.B. were no longer detectable. Disease passed into a condition of apparent quiescence. Left to resume work as a joiner. Feeling fitter.
No apparent cause for fall of V.C. on 13th April.

No. 63. Name A. Chapman. Age 44 yrs. Admitted 7.1.20. Admission 11nd. TURBAN II.

Height 161 cms. Discharged 6.5.20.

Date,	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in dms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC
8.1.20.	2890	49216	.827	3463	3262	17.9	89.5	4216	84	3	3876	4065	1.217	1.34	1.46	1.406	28.9
19.1.20.	2800	49216	.885	3463	3262		89.5	4216	84	3	3876	4065	1.217	1.38	1.506	1.45	
2.2.20.	2900	59896	.832	3497	3307		89.5	4216	84	3	3876	4065	1.205	1.33	1.45	1.401	
16.2.20.	3000	49669	.802	3486	3292		89.5	4216	84	3	3876	4065	1.209	1.29	1.41	1.35	
1.3.20.	3000	50123	.807	3509	3322		89.5	4216	84	3	3876	4065	1.201	1.29	1.41	1.35	
15.3.20.	3000	50350	.801	3520	3337		89.5	4216	84	3	3876	4065	1.197	1.29	1.41	1.35	
29.3.20.	3140	50350	.773	3520	3337		89.5	4216	84	3	3876	4065	1.197	1.23	1.34	1.29	22.8
12.4.20.	3000	50350	.801	3520	3337		89.5	4216	84	3	3876	4065	1.197	1.29	1.41	1.35	
26.4.20.	3190	49896	.756	3497	3307		89.5	4216	84	3	3876	4065	1.205	1.21	1.32	1.27	
3.5.20.	3155	50123	.767	3509	3322	16.8	89.5	4216	84	5	3876	4065	1.201	1.23	1.34	1.29	22.4

Incr. of 1.1 Incr. of 6.5

Thin badly developed man. Cough was severe. Sputum averaged 1½ oz daily. T.B. were not present, but much elastic tissue was in evidence. Signs indicated very definite disease of both upper lobes of apparently mild activity. He made no improvement during his period of Cough and sputum remained unchanged and no change was detectable in the physical signs.
Note slight increase of W. and V.C.

No. 64. Name P. Grant. Age 31 yrs. Admitted 3.5.20. Admission 1st. TURBAN II.

Height 179 cms. Discharged 5.5.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal. in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	%Dim of VC
4.5.20.	3330	61236	.840	4053	4057	3.9	89.5	4216	82.5	6	3740	3991	1.040	1.12	1.27	1.20	16.6

Pale man of good nutrition and poor physique. Masses of T.B. cervical glands and moderately quiescent pulmonary lesions of Turban 11. extent. Cough slight. No sputum present. He felt fairly fit. Refused to remain in Sanatorium.

No. 65. Name W. Walker. Age 26 yrs. Admitted 7.1.20. Admission 1st. TURBAN II.

Height 154.5 cms. Discharged 10.5.20.

Date.	V. Cap.	Weight in gms	VC. Const in W.	VC. Cal in W	VC. Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC. Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC. Cal in Ch.	VC. Cal in L & Ch.	P.F. 1	P.F. 2	P.F. 3	P.F. 4	%Dim of VC
8.1.20.	1870	40370	1.107	3003	2675	10.9	80	3368	72.5	2.5	2888	3135	1.121	1.54	1.801	1.69	43.6
20.1.20.	1980	42184	1.080	3099	2795		80	3368	72.5	2.5	2888	3135	1.086	1.46	1.70	1.58	
3.2.20.	2020	43092	1.075	3147	2855		80	3368	72.5	2.5	2888	3135	1.070	1.43	1.66	1.55	
17.2.20.	2040	43999	1.080	3195	2916		80	3368	72.5	2.5	2888	3135	1.054	1.41	1.64	1.53	
2.3.20.	2250	45360	1.001	3266	3006		80	3368	72.5	2.5	2888	3135	1.031	1.28	1.49	1.39	
29.3.20.	2430	43092	.893	3147	2855		80	3368	73	6	2928	3156	1.070	1.21	1.38	1.30	
8.4.20.	2460	44453	.902	3218	2946		80	3368	73	6	2928	3156	1.046	1.19	1.36	1.28	22.1
22.4.20.	2480	45133	.904	3254	2991		80	3368	73	6	2928	3156	1.034	1.18	1.35	1.27	
6.5.20.	2610	45133	.860	3254	2991	3.4	80	3368	73	6	2928	3156	1.034	1.12	1.29	1.21	17.3
	Incr. of 7.5.																Incr. of 26.3

Very pale thin specimen of a man. Cough was severe and sputum averaged 1 Oz daily. T.B. were not found but abundant elastic tissue was present. Signs indicated double lung disease of moderate activity. He underwent very great improvement during his stay. Cough became much less. Sputum disappeared and he felt fit and active. He left to resume work as an Engineers' Storeman.
Note constant rise of V.C. and oscillating but rising W.

No. 66. Name A. McCuish Age 26 yrs. Admitted 14.11.19. Admission 1st. TURBAN II.

Height 168.5 cms Discharged 13. 5.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC
25.11.19.	3300	59195	.827	3955	3922	8.3	90.5	4311	87	4.5	4158	4256	1.08	1.26	1.306	1.29	20.2
1.12.19.	3300	60329	.838	4010	3997		90.5	4311	87	4.5	4158	4256	1.07	1.26	1.306	1.29	
15.12.19.	3600	61009	.774	4043	4042		90.5	4311	87	4.5	4158	4256	1.06	1.15	1.197	1.18	
29.12.19.	3320	60782	.837	4032	4027		90.5	4311	87	4.5	4158	4256	1.06	1.25	1.29	1.28	
12. 1.20.	3550	60556	.781	4021	4012		90.5	4311	87	4.5	4158	4256	1.072	1.17	1.214	1.20	
26. 1.20.	3620	62143	.780	4096	4118		90.5	4311	87	4.5	4158	4256	1.052	1.15	1.19	1.18	
2. 2.20.	3700	60782	.752	4032	4027		90.5	4311	87	4.5	4158	4256	1.069	1.12	1.17	1.15	
16. 2.20.	3790	61463	.739	4064	4072		90.5	4311	87	4.5	4158	4256	1.060	1.09	1.14	1.12	
1. 3.20.	3700	62824	.769	4129	4162		90.5	4311	87	4.5	4158	4256	1.044	1.12	1.17	1.15	
15. 3.20.	3620	62824	.787	4129	4162		90.5	4311	87	7	4158	4256	1.044	1.15	1.19	1.18	
29. 3.20.	3810	63731	.755	4172	4223		90.5	4311	87	7	4158	4256	1.033	1.09	1.13	1.12	10.5
12. 4.20.	3720	63957	.776	4182	4238		90.5	4311	87	7	4158	4256	1.030	1.12	1.16	1.14	
3. 5.20.	3840	62597	.740	4118	4148	4.5	90.5	4311	87	8	4158	4256	1.046	1.08	1.12	1.11	7.5

Incr. of 3.8 Incr. of 12.7.

Poor general condition on admission. Cough was largely confined to the morning. Sputum was purulent and averaged 1½ oz daily. T.B. were present in small numbers. Physical signs indicated moderately active disease of both upper pulmonary lobes. He underwent very great improvement during his stay and became fit and active. Cough became slight and occasional. Sputum fell to ¼ oz daily. T.B. however remained in small numbers. Physical signs in chest showed undoubted improvement.
Fall of V.C. on 29th December was due to coryza. A similar cause was responsible for fall on 15th March.

No. 67 Name P. Hagerty. Age 26 yrs. Admitted 23.1.20. Admission 1st. TURBAN II.

Height 167,5 cms. Discharged 13.5.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L.	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	%Dim of VC
24.1.20.	2900	56020	.905	3802	3712	7.8	88.5	4122	82	5.5	3694	3923	1.084	1.27	1.42	1.35	26.1
5.2.20.	3130	56473	.843	3824	3742		88.5	4122	82	5.5	3694	3923	1.078	1.18	1.32	1.25	
19.2.20.	3130	56473	.843	3824	3742		88.5	4122	82	5.5	3694	3923	1.078	1.18	1.32	1.25	
4.3.20.	3100	56700	.853	3835	3757		88.5	4122	82	5.5	3694	3923	1.074	1.19	1.33	1.26	
18.3.20.	3270	56927	.811	3846	3772		88.5	4122	82	5.5	3694	3923	1.072	1.13	1.26	1.20	
1.4.20.	3370	57381	.792	3868	3802		88.5	4122	82.5	6	3740	3946	1.065	1.109	1.22	1.17	15.6
15.4.20.	3410	57381	.782	3868	3802		88.5	4122	82.5	6	3740	3946	1.065	1.096	1.21	1.16	
29.4.20.	3460	57154	.769	3857	3787		88.5	4122	82.5	6	3740	3946	1.068	1.083	1.19	1.14	
13.5.20.	3390	57154	.785	3787	3787	6.5	88.5	4122	82.5	6	3740	3946	1.068	1.10	1.21	1.16	15.1

Incr. of 1.3 Incr. of 11.0.

Fair general condition on admission. Cough and sputum very slight. T.B. not found in sputum. Physical signs indicated quiescent disease of both apices. He improved greatly during his stay and became fit and active. He ultimately left to resume his unsuitable occupation of steel saw maker.
Fall of V.C. on 13th May was due to slight afebrile coryza.

No. 68. Name R. Newton. Age 40 yrs. Admitted 23.1.20. Admission 1st. TURBAN II.

Height 174.5 cms. Discharged 13.5.20.

Date.	V.Cap.	Weight in gms	VC. Const in W	VC. Cal in W	VC. Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC. Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC. Cal in Ch.	VC. Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
26.1.20.	2790	62143	1.013	4096	4118	2.9	89.5	4216	84.5	3	3923	4088	1.029	1.406	1.51	1.46	32.0
11.2.20.	3080	64411	.942	4203	4268		89.5	4216	84.5	3	3923	4088	1.003	1.27	1.37	1.32	
25.2.20.	2910	64865	1.002	4225	4298		89.5	4216	84.5	3	3923	4088	.997	1.35	1.45	1.40	
10.3.20.	3050	65545	.963	4257	4343		89.5	4216	84.5	3	3923	4088	.996	1.28	1.38	1.34	
17.3.20.	2910	66226	1.02	4288	4388		89.5	4216	84.5	3	3923	4088	.983	1.35	1.45	1.40	
30.3.20.	3270	65991	.902	4278	4373		89.5	4216	85.	5	3969	4112	.985	1.21	1.29	1.26	20.0
21.4.20.	3320	65772	.886	4267	4358		89.5	4216	85	5	3969	4112	.988	1.19	1.27	1.24	
5.5.20.	3345	65772	.880	4267	4358	+1.2	89.5	4216	85	5	3969	4112	.988	1.18	1.26	1.23	18.7

Incr. of 4.1

Incr. of 13.3

Very bad general condition on admission. He was thin and looked ill. Cough was of moderate severity. Sputum averaged ¾ oz daily. Physical signs indicated disease of both upper lobes of only mild activity. He improved during his period of residence. Cough became less severe, but sputum remained unchanged. T.B. remained present in small numbers. He however looked better and was more fit and active. He was discharged at his own request, still not very fit, but undoubtedly improved.

No. 69. Name J. Thomson. Age 27 yrs. Admitted 10.10.19. Admission 1st. TURBAN II.

Height 155 cms. Discharged 21. 5.20.

Date.	V.Cap.	Weight in gms	VC. Const in W	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch in cms.	Expn. in cms.	VC.Cal in Ch.	VC. Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	%Dim of VC
25.11.19.	1100	45814	2.063	3289	3036	16.5	86.5	3937	83	2.5	3784	3880	1.197	3.440	3.579	3.527	71.7
2.12.19.	1800	46040	1.265	3301	3051		86.5	3937	83	2.5	3784	3880	1.189	2.102	2.18	2.16	
16.12.19.	1810	46494	1.267	3324	3081		86.5	3937	83	2.5	3784	3880	1.184	2.09	2.17	2.14	
30.12.19.	1850	46721	1.24	3336	3096		86,5	3937	83	2.5	3784	3880	1.183	2.04	2.12	2.09	
6. 1.20.	1800	46494	1.27	3324	3081		86.5	3937	83	2.5	3784	3880	1.184	2.10	2.18	2.16	
20. 1.20.	2030	45360	1.110	3266	3006		86.5	3937	83	2.5	3784	3880	1.206	2.86	1.94	1.92	
4. 2.20.	1900	44453	1.17	3218	2946		86.5	3937	83	2.5	3784	3880	1.224	1.99	2.07	2.04	
19. 2.20.	1830	45133	1.22	3254	2991		86.5	3937	83	2.5	3784	3880	1.209	2.06	2.15	2.12	
4. 3.20.	2270	45133	.989	3254	2991		86.5	3937	83	2.5	3784	3880	1.209	1.67	1.74	1.71	
18.3.20.	2570	44680	.867	3230	2961		86.5	3937	83	2.5	3784	3880	1.218	1.47	1.53	1.51	
1. 4.20.	2780	45587	.813	3277	3021		86.5	3937	82.5	5	3740	3857	1.201	1.35	1.42	1.39	27.9
15. 4.20.	2820	45814	.805	3289	3036		86.5	3937	82.5	5	3740	3857	1.197	1.33	1.39	1.37	
29. 4.20.	2920	46267	.783	3312	3066		86.5	3937	82.5	5	3740	3857	1.189	1.28	1.35	1.32	
13. 5.20.	2950	46267	.775	3312	3066		86.5	3937	82.5	5	3740	3857	1.189	1.27	1.34	1.31	
30. 5.20.	3040	46494	.754	3324	3081	15.6	86.5	3937	82.5	5.5	3740	3857	1.184	1.23	1.29	1.26	21.2
			Incr. of 0.9														Incr. of 50.5

This patient had been 7 weeks in residence when his readings were begun. His condition by then had made no improvement. Cough was severe and sputum averaged 2 oz. daily. T.B. were not found but elastic tissue was present. Physical signs indicated only moderately active double pulmonary disease with a moderate degree of collateral bronchitis. He improved very greatly during his period of residence. Cough and sputum diminished. Dyspnoea disappeared and he felt fit and well. He left to resume work as an outdoor labourer. Note huge rise of V.C. and stationary W.

No. 70. Name L. Freeman Age 30 yrs. Admitted 14.5.20. Admission 1st. TURBAN II.

Height 168.5 cms. Discharged 21.5.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC
17.5.20.	3310	53071	.762	3656	3517	20.5	93.5	4601	80	5	3516	4043	1.259	1.06	1.39	1.22	18.2

Thin man of fair physique. Cough and sputum slight. T.B. present in sputum in small numbers. Disease of R. upper lobe of mild activity. Refused to stay in Sanatorium.

No. 71. Name Wm. Boyce Age 20 yrs. Admitted 5.12.19. Admission 1st. TURBAN II.

Height 180.5 cms. Discharged 21. 5.20.

Date.	V. Cap.	Weight in gms	VC. Const in W.	VC. Cal in W	VC. Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC. Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC. Cal in Ch.	VC. Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC
6.12.19.	3580	66226	.826	4288	4388	6.8	93.5	4601	89	5	4352	4498	1.197	1.257	1.279	1.256	20.5
22.12.19.	3560	67133	.840	4331	4448		93.5	4601	89	5	4352	4498	1.214	1.263	1.292	1.262	
12. 1.20.	4010	69174	.761	4425	4583		93.5	4601	89	5	4352	4498	1.04	1.08	1.15	1.12	
29. 1.20.	4010	68947	.759	4414	4568		93.5	4601	89	5	4352	4498	1.04	1.08	1.15	1.12	
23. 2.20.	3700	66452	.802	4299	4403		93.5	4601	89	6	4352	4498	1.070	1.17	1.24	1.21	
9. 3.20.	4010	67813	.750	4362	4493		93.5	4601	89	6	4352	4498	1.054	1.08	1.15	1.12	
23. 3.20.	4110	68947	.741	4414	4568		93.5	4601	89	6	4352	4498	1.04	1.06	1.12	1.09	
5. 4.20.	4160	70081	.741	4467	4643		93.5	4601	89	7	4352	4498	1.030	1.05	1.11	1.08	7.5
19. 4.20.	4215	70988	.738	4508	4704		93.5	4601	89	7	4352	4498	1.020	1.03	1.09	1.06	
3. 5.20.	4275	71442	.731	4529	4734		93.5	4601	89	7	4352	4498	1.016	1.02	1.08	1.05	
17. 5.20.	4320	71896	.726	4550	4764	1.1	93.5	4601	89	7	4352	4498	1.011	1.01	1.07	1.04	4.0
		Incr. of 5.7															Incr. of 16.5

Good general condition on admission. Slight cough and sputum averaging ¼ oz daily. Physical signs indicated quiescent disease of both upper lobes. He made very great improvement during his period of residence and was finally transferred to a Tuberculosis Colony. T.B. were not present in sputum; which finally disappeared, disease becoming quiescent. He was very fit and active. Laid up on 31st January with ~~pyrtitis~~ PYELITIS of R. kidney. Fall of V.C. on 23rd Feb. was a result of this.

No. 72. Name L. Bolland. Age 21 yrs. Admitted 3.10.19. Admission 1st. TURBAN II.

Height 155 cms. Discharged 21.5.20.

Date.	V.Cap.	Weight in gms	VC. Const in W	VC.Cal in W	VC.Cal as% W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	%Dim ofVC
26.11.19.	1900	48989	1.253	3452	3246	5.9	83.5	3670	83	2.5	3785	3746	1.063	1.992	1.931	1.971	49.3
4.12.19.	1610	48535	1.469	3432	3217		83.5	3670	83	2.5	3785	3746	1.069	2.351	1.279	1.326	
18.12.19.	1950	48308	1.209	3417	3202		83.5	3670	83	2.5	3785	3746	1.073	1.941	1.882	1.921	
8. 1.20.	1780	48535	1.32	3432	3217		83.5	3670	83	2.5	3785	3746	1.069	2.13	2.06	2.104	
22. 1.20.	1860	48989	1.28	3452	3217		83.5	3670	83	3.5	3785	3746	1.063	2.03	1.97	2.014	
5. 2.20.	1790	49216	1.33	3463	3262		83.5	3670	83	3.5	3785	3746	1.059	2.11	2.05	2.09	
19. 2.20.	1860	48989	1.28	3452	3217		83.5	3670	83	3.5	3785	3746	1.063	2.03	1.97	2.014	
5. 3.20.	2040	49216	1.17	3463	3262		83.5	3670	83	3.5	3785	3746	1.059	1.85	1.79	1.83	
18. 3.20.	2040	49216	1.17	3463	3262		83.5	3670	83	3.5	3785	3746	1.059	1.85	1.79	1.83	
1. 4.20.	2250	49669	1.07	3486	3292		83.5	3670	83	3.5	3785	3746	1.052	1.67	1.63	1.66	40.0
15. 4.20.	2280	50350	1.06	3520	3337		83.5	3670	83	3.5	3785	3746	1.042	1.66	1.61	1.64	
29. 4.20.	2330	50123	1.04	3509	3322		83.5	3670	83	3.5	3785	3746	1.046	1.63	1.58	1.61	
13. 5.20.	2430	50123	.996	3509	3322	4.4	83.5	3670	83	3.5	3785	3746	1.046	1.56	1.50	1.54	35.2
			Incr of 1.5														Incr. of 14.1

Thin and of poor condition on admission. He complained of slight cough and slight morning sputum. T.B. were present in small numbers. Physical signs indicated fairly quiescent disease of the R. upper lobe of Turban 11. extent. He improved greatly during his period of stay. Cough became slight and occasional. Sputum became fractional, T.B. however remaining in small numbers. He was finally transferred to a Tuberculosis Colony.

No. 73. Name Charles Johnston. Age 29 yrs. Admitted 19.3.20. Admission 1st. TURBAN II.

Height 175 cms. Discharged 28.5.20.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	%Dim of VC
20.3.20.	3720	65092	.787	4235	4313	2.9	91	4358	88.5	4.5	4303	4354	1.029	1.16	1.17	1.17	14.6
29.3.20.	3730	65092	.783	4235	4313		91	4358	88.5	4.5	4303	4354	1.029	1.16	1.17	1.17	
5.4.20.	3750	66679	.793	4309	4418		91	4358	88.5	4.5	4303	4354	1.011	1.15	1.16	1.16	
12.4.20.	3780	66906	.788	4320	4433		91	4358	88.5	4.5	4303	4354	1.008	1.14	1.15	1.15	13.2
19.4.20.	3840	67360	.780	4341	4463		91	4358	88.5	4.5	4303	4354	1.004	1.12	1.13	1.13	
26.4.20.	3960	67360	.756	4341	4463		91	4358	88.5	4.5	4303	4354	1.004	1.09	1.10	1.10	
10.5.20.	4010	68040	.752	4373	4508		91	4358	88.5	4.5	4303	4354	.996	1.07	1.08	1.08	
17.5.20.	4100	67813	.736	4362	4493		91	4358	88.5	4.5	4303	4354	.999	1.05	1.06	1.06	
24.5.20.	4170	66906	.715	4320	4433	0.9	91	4358	88.5	4.5	4303	4354	1.008	1.03	1.04	1.04	4.3
			Incr. of 2.0														Incr. of 10.3

Pale man of fair physique. He had moderately severe morning cough and sputum which averaged 1 oz daily. T.B. were not detected. Physical signs indicated restricted disease of both apices of mild activity. He improved greatly during his period of residence. Cough diminished in severity and sputum fell to ¼ oz daily. T.B. were not found on discharge. Physical signs showed definite improvement. He was discharged at his own request and in a much improved condition.
Note constant rise of V.C. and rise of W. for first 8 weeks of residence.

No. 74. Name John Maxwell. Age 13 yrs. Admitted 13.2.20 . Admission IInd. TURBAN II.

Height 144 cms. Discharged 28.5.20.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
14.2.20.	1430	31072	1.200	2487	2059	20.0	77	3120	63	5	2181	2622	1.254	1.52	2.18	1.83	
26.2.20.	1610	31752	1.144	2526	2104		77	3120	63	5	2181	2622	1.235	1.35	1.94	1.63	45.5
11.3.20.	1970	31979	.889	2539	2119		77	3120	63	5	2181	2622	1.228	1.11	1.58	1.33	
25.3.20.	1850	31979	.947	2539	2119		77	3120	63	5	2181	2622	1.228	1.18	1.69	1.42	
8.4.20.	1760	32659	1.01	2578	2164		77	3120	63	5	2181	2622	1.210	1.24	1.77	1.49	
22.4.20.	1885	32659	.943	2578	2164		77	3120	64	5.5	2250	2660	1.210	1.19	1.65	1.41	
6.5.20.	2120	32886	.843	2591	2179		77	3120	64	5.5	2250	2660	1.204	1.06	1.47	1.25	20.3
20.5.20.	1970	34020	.929	2655	2254	14.9	77	3120	64	5.5	2250	2660	1.175	1.14	1.58	1.35	26.0
		Incr. of 5.1.															Incr. of 19.5

Thin badly developed boy. Slight cough. No sputum. Signs showed apparently quiescent apical disease of both lungs. He improved greatly during his stay. Cough completely disappeared. Note oscillating V.C. rising gradually, and constant rise of W.

No. 75. Name J. Matheson. Age 31 yrs. Admitted 28.1.20. Admission 1st. TURBAN II.

Height 171.5 cms Discharged 25.5.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L.	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC
29.1.20.	2500	51030	.981	3555	3382	17.6	90.5	4311	81	4	3605	3962	1.212	1.44	1.72	1.58	36.9
10.2.20.	2530	52164	.984	3611	3457		90.5	4311	81	4	3605	3962	1.193	1.42	1.70	1.56	
24.2.20.	2710	53752	.939	3690	3562		90.5	4311	81	4	3605	3962	1.169	1.33	1.59	1.46	
9.3.20.	2800	54432	.917	3724	3607		90.5	4311	81	4	3605	3962	1.157	1.29	1.54	1.42	
23.3.20.	3030	54432	.848	3724	3607		90.5	4311	81	4	3605	3962	1.157	1.19	1.43	1.31	23.6
13.4.20.	2780	54886	.929	3746	3637		90.5	4311	81	5	3605	3962	1.151	1.29	1.55	1.43	
27.4.20.	3000	53978	.851	3701	3577		90.5	4311	81	5	3605	3962	1.163	1.20	1.44	1.32	
11.5.20.	3030	54205	.845	3712	3592		90.5	4311	81	5	3605	3962	1.161	1.19	1.43	1.31	
20.5.20.	3040	54432	.845	3724	3607	13.6	90.5	4311	81	5	3605	3962	1.157	1.18	1.42	1.30	23.3

Incr. of 4.0

Incr. of 13.6.

Very thin man of bad general condition. Cough was severe and sputum averaged 2 oz daily. Physical signs showed extensive active disease of left upper lobe. T.B. present in small numbers with much elastic tissue. He improved during his period of residence. Cough diminished slightly and sputum fell to 1½ oz. He looked better, was more active, and felt fitter,. T.B. and elastic tissue persisted in sputum. He was finally discharged at his own request in an improved condition.
Fall of V.C. on 13th April was as associated with a temporary exacerbation of cough.

No. 76. Name D. Campbell. Age 45 yrs. Admitted 9.1.20. Admission 1st. TURBAN II.

Height 170 cms. Discharged 3.5.20.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W.	VC.Cal in °/₀W.	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC
10.1.20.	2590	69628	1.18	4446	4613	13.0	86.5	3937	96	2	5064	4488	.885	1.95	1.52	1.73	42.3
21.1.20.	2530	69401	1.209	4435	4598		86.5	3937	96	2	5064	4488	.887	2.000	1.56	1.77	
4.2.20.	2790	69174	1.095	4425	4583		86.5	3937	96	2	5064	4488	.889	1.82	1.41	1.60	
21.2.20.	2770	69174	1.102	4425	4583		86.5	3937	96	2	5064	4488	.889	1.83	1.42	1.61	
3.3.20.	2500	68947	1.218	4414	4568		86.5	3937	96	2	5064	4488	.892	2.02	1.57	1.79	
16.3.20.	2750	69174	1.110	4425	4583		86.5	3937	96	3.5	5064	4488	.889	1.84	1.43	1.62	
30.3.20.	2940	68947	1.04	4414	4568		86.5	3937	96	3.5	5064	4488	.892	1.72	1.36	1.53	
13.4.20.	3140	68493	.965	4394	4538		86.5	3937	96	3.5	5064	4488	.896	1.61	1.25	1.42	30.1
27.4.20.	2910	67813	1.034	4362	4493		86.5	3937	96	3.5	5064	4488	.902	1.74	1.35	1.54	
11.5.20.	3045	67586	.986	4352	4478		86.5	3937	96	3.5	5064	4488	.904	1.66	1.29	1.47	
25.5.20.	3010	67586	.990	4352	4478	10.5	86.5	3937	96	3.5	5064	4488	.904	1.68	1.31	1.48	32.7
			Decr. of 2.5														Incr. of 9.6

Man of powerful physique. Cough severe and sputum 2 oz daily. T.B. not found. History of copious haemoptysis in May 1916. Physical signs were indefinite, but suggested areas in R. and L. upper lobes of only moderate activity. These signs showed no change during his period of residence. Cough improved and he was more fit and active. He was finally discharged at his own request.
Fall of V.C. on 3rd March was associated with aggravation of cough.
There was no explanation for fall on 27th April.

No. 77. Name J. McKee Age 52 yrs. Admitted 26.4.20. Admission 1st. TURBAN II.

Height 178.5 cms. Discharged 17.6.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC
27.4.20.	3660	64865	.823	4225	4298	5.2	92	4455	86	5.5	4063	4277	1.054	1.11	1.22	1.17	14.4
3.5.20.	3930	66226	.753	4288	4388		92	4455	86	5.5	4063	4277	1.039	1.034	1.134	1.088	
10.5.20.	3775	66679	.788	4309	4418		92	4455	86	5.5	4063	4277	1.034	1.076	1.18	1.13	
24.5.20.	4000	67360	.747	4341	4463		92	4455	86	5.5	4063	4277	1.026	1.015	1.11	1.07	
31.5.20.	4205	67360	.712	4341	4463	8.6	92	4455	86	5.5	4063	4277	1.026	.966	1.06	1.02	1.7

Incr. of 2.6 Incr. of 12.7

Tall pale thin man. Slight cough. Sputum ½ oz daily. T.B. present in small numbers. Physical signs indicated mildly active disease of both upper lobes of Turban 11 extent. He improved greatly during his period of residence and finally was discharged at his own request, feeling fitter and stronger. He resumed his occupation of labourer. T.B. not present in sputum on discharge. There was no explanation of fall of V.C. on 10th May.

No. 78. Name R. Hamilton. Age 26 yrs. Admitted 11.5.20. Admission 1st. TURBAN II.

Height 167.5 cms. Discharged 16.6.20,

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC
12.5.20.	3980	61690	.706	4075	4088	2.3	89	4169	87.5	6.5	4206	4209	1.023	1.06	1.05	1.06	5.5
25.5.20.	3610	61916	.781	4085	4102	2.1	89	4169	87.5	6.5	4206	4209	1.020	1.11	1.10	1.11	14.2
			Incr. of 0.2														Decr. of 8.7

Pale man of good physique. Cough and sputum slight. Physical signs indicated inactive double apical disease. No change took place in his condition and he finally left at his own request. T.B. were not present in sputum but abundant elastic tissue was easily detected.

No. 79. Name James Thomson. Age 41 yrs. Admitted 9.4.20. Admission 1st. TURBAN II.

Height 175.5 cms. Discharged 20.6.20.

Date.	V.Cap.	Weight in gms	VC. Const in W	VC. Cal in W	VC. Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC. Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC. Cal in L.	VC. Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
10.4.20.	2910	63958	.992	4182	4238	+2.6	88	4076	82.5	4.5	3740	3924	.974	1.28	1.40	1.35	25.8
20.4.20.	2765	63504	1.038	4161	4208		88	4076	82.5	4.5	3740	3924	.989	1.35	1.47	1.42	
27.4.20.	2880	63730	.999	4172	4223		88	4076	82.5	4.5	3740	3924	.977	1.30	1.42	1.37	
4.5.20.	2980	63504	.963	4161	4208		88	4076	82.5	4.5	3740	3924	.988	1.25	1.37	1.32	
11.5.20.	2995	63050	.953	4139	4178		88	4076	82.5	4.5	3740	3924	.984	1.24	1.36	1.31	
25.5.20.	2970	62143	.952	4096	4118	+0.4	88	4076	82.5	4.5	3740	3924	.995	1.25	1.37	1.32	24.4

Decr. of 2.2 Incr. of 1.8

Bad colour, but good physique. Teeth very carious. Cough severe. Sputum 2½ oz daily. T.B. not present. Physical signs indicated only quiescent disease of both apices. He suffered from persistent gastric symptoms suggestive of pyloric obstruction and was finally transferred to a Tuberculosis Hospital in a stationary condition.

No..80. Name L. Robertson. Age 27 yrs. Admitted 8.1.20. Admission 1st. TURBAN II.

Height 170 cms. Discharged 11 6.20.

Date.	V. Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC. Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
9.1.20.	2520	45360	.894	3266	3006	17.1	86.5	3937	74	3.5	3009	3460	1.205	1.19	1.56	1.37	27.0
19.1.20.	2820	46267	.810	3312	3066		86.5	3937	74	3.5	3009	3460	1.188	1.07	1.39	1.23	
4.2.20.	2960	47174	.783	3359	3126		86.5	3937	74	3.5	3009	3460	1.172	1.016	1.33	1.17	
17.2.20.	2780	47174	.841	3359	3126		86.5	3937	74	3.5	3009	3460	1.172	1.08	1.41	1.25	
3.3.20.	2930	47628	.796	3382	3156		86.5	3937	74	3.5	3009	3460	1.167	1.04	1.34	1.17	
17.3.20.	2870	48082	.818	3405	3187		86.5	3937	74	7	3009	3460	1.156	1.08	1.37	1.20	
30.3.20.	3010	48082	.780	3405	3187		86.5	3937	74	7	3009	3460	1.156	1.03	1.31	1.14	13.0
14.4.20.	2820	48535	.838	3429	3217		86.5	3937	75	7	3091	3506	1.148	1.09	1.39	1.24	
28.4.20.	2865	48082	.820	3405	3187		86.5	3937	75	7	3091	3506	1.156	1.08	1.37	1.20	
12.5.20.	2755	48082	.853	3405	3187		86.5	3937	75	7	3091	3506	1.156	1.12	1.43	1.27	
26.5.20.	2865	48082	.820	3405	3187		86.5	3937	75	7	3091	3506	1.156	1.08	1.37	1.20	
2.6.20.	2900	48535	.815	3429	3217	12.9	86.5	3937	75	7	3091	3506	1.148	1.07	1.36	1.19	17.3

Incr. of 4.2. Incr. of 9.7.

Pale emaciated man. Slight cough and scanty sputum. T.B. not present. Signs indicated only moderately active ~~quiescent~~ double apical disease. He improved greatly during his period of residence. Morning cough persisted, but sputum disappeared. He felt much fitter as the result of his stay.
He was finally discharged at his own request to resume his occupation of traveller.
Fall of V.C. on 17th Feb. was associated with sensation of fatigue. He was frankly not so well.
Fall of V.C. on 14th April was associated with increase of cough.

No. 81. Name J. L. Robertson. Age 36 yrs. Admitted 7,5.20. Admission 1st. TURBAN II.

Height 167 cms Discharged 25.6.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC
8.5.20.	2805	61690	1.002	4075	4088	7.5	91.5	4406	84.5	3.5	3923	4179	1.081	1.39	1.57	1.49	32.9
19.5.20.	2755	61690	1.02	4075	4088	7.5	91.5	4406	84.5	3.5	3923	4179	1.081	1.42	1.60	1.52	34.1

Stationary. Decr. of 1.2

Man of good physique and nutrition. Slight cough and sputum, which did not contain T.B. Signs revealed double, fairly quiescent, apical disease. No change during his period of observation. He was finally discharged at his own request.

No. 82. Name J. Campbell. Age 45 yrs. Admitted 2.2.20. Admission 1st. TURBAN II.

Height 170 cms. Discharged 11.6.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
3.2.20.	2600	63731	1.107	4172	4223	8.4	93	4552	88.5	6	4303	4448	1.091	1.65	1.75	1.71	41.6
16.2.20.	2920	65318	1.003	4246	4328		93	4552	88.5	6	4303	4448	1.072	1.47	1.56	1.52	
1.3.20.	2730	65999	1.08	4278	4373		93	4552	88.5	6	4303	4448	1.064	1.57	1.67	1.63	
15.3.20.	2580	66679	1.15	4309	4418		93	4552	88.5	6	4303	4448	1.056	1.67	1.76	1.72	
29.3.20.	3170	65772	.929	4267	4358		93	4552	88.5	6	4303	4448	1.067	1.35	1.43	1.40	28.8
12.4.20.	3000	66679	.909	4309	4418		93	4552	89	7	4352	4474	1.056	1.45	1.52	1.49	
26.4.20.	2875	66452	1.032	4299	4403		93	4552	89	7	4352	4474	1.059	1.51	1.58	1.55	
6.5.20.	2945	65772	1.00	4267	4358		93	4552	89	7	4352	4474	1.067	1.48	1.55	1.52	
20.5.20.	3150	66226	.939	4288	4388		93	4552	89	7	4352	4474	1.061	1.38	1.44	1.42	
3.6.20.	3150	65545	.932	4257	4343	6.5	93	4552	89	7	4352	4474	1.069	1.38	1.44	1.42	29.6
		Incr. of 1.9															Incr. of 12.0.

Poor condition on admission. Very thin and pale. Cough of moderate severity. Sputum ½ oz daily. T.B. not present. Teeth were deficient, dirty and carious. Signs indicated extensive dry fibroid disease of R. upper lobe. He improved considerably during his period of treatment and felt much fitter on discharge, in every way. Note oscillation of V.C. with tendency to rise.

No. 83. Name John Duff. Age 34 yrs. Admitted 27.2.20. Admission 111rd. TURBAN II.

Height 168 cms. Discharged 17.6.20.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	%Dim of VC
28.2.20.	3000	58968	.907	3945	3907	5.4	89	4169	86	5	4063	4137	1.056	1.35	1.38	1.37	27.5
8.3.20.	3080	59422	.888	3966	3937		89	4169	86	5	4063	4137	1.051	1.32	1.35	1.34	
22.3.20.	3080	59422	.888	3966	3937		89	4169	86	5	4063	4137	1.051	1.32	1.35	1.34	
5.4.20.	3220	60102	.857	3999	3982		89	4169	86	5	4063	4137	1.042	1.26	1.29	1.28	22.2
19.4.20.	3220	60329	.857	4010	3997		89	4169	86	5	4063	4137	1.039	1.26	1.29	1.28	
3.5.20.	3490	60329	.792	4010	3997		89	4169	86	5	4063	4137	1.039	1.16	1.19	1.18	
17.5.20.	3660	59422	.748	3966	3937		89	4169	86	5	4063	4137	1.051	1.11	1.14	1.13	
3.6.20.	3680	59648	.745	3977	3952	4.6	89	4169	86	5	4063	4137	1.048	1.10	1.13	1.12	11.1

Incr. of 0.8

Incr. of 16.4

Pale man of good physique. Cough slight and mostly during night. Sputum ½ oz daily. T.B. not found. Signs indicated only healed double apical disease of Turban 11. extent. He improved greatly during his period of observation and was finally transferred to a Tuberculosis Colony as an arrested case. Cough and sputum were practically absent, he felt fit and well, and all disease appeared healed.

No. 84. Name R. Clinton. Age 27 yrs. Admitted 20.2.20. Admission IInd. TURBAN II.

Height 161 cms. Discharged 11.6.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
21.2.20.	2680	49896	.900	3497	3307	8.1	85	3802	79	6.5	3429	3629	1.087	1.28	1.42	1.35	26.2
2.3.20.	2910	51484	.848	3577	3412		85	3802	79	6.5	3429	3629	1.062	1.18	1.31	1.25	
16.3.20.	2860	52844	.879	3645	3502		85	3802	79	6.5	3429	3629	1.043	1.19	1.33	1.27	
30.3.20.	3010	52844	.835	3645	3502		85	3802	79	6.5	3429	3629	1.043	1.14	1.26	1.20	17.1
15.4.20.	2880	53298	.878	3668	3532		85	3802	79	6.5	3429	3629	1.036	1.18	1.32	1.26	
29.4.20.	3040	53298	.832	3668	3532		85	3802	80	6.5	3516	3676	1.036	1.16	1.25	1.21	
13.5.20.	3040	53298	.832	3668	3532		85	3802	80	6.5	3516	3676	1.036	1.16	1.25	1.21	
27.5.20.	3300	53751	.771	3690	3562	2.9	85	3802	80	6.5	3516	3676	1.030	1.07	1.15	1.11	10.8
	Incr. of 5.2																Incr. of 15.4

Bad physique and bad general condition on admission. Cough fairly severe' Sputum 1½ oz daily. T.B. not found. Physical signs indicated moderately active disease of both apices. He improved greatly during treatment. Cough and sputum practically disappeared and he felt very fit and well. Discharged at his own request. No cause was apparent for fall of V.C. on 15th April.

No. 85. Name A. Marshall. Age 39 yrs. Admitted 19.3.20. Admission 1st. TURBAN II.

Height 160 cms. Discharged 11.6.20 .

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
20.3.20.	2610	51711	.948	3589	3427	7.8	86	3893	84	3.5	3876	3905	1.084	1.49	1.49	1.49	33.0
29.3.20.	2590	53071	.974	3656	3517		86	3893	84	3.5	3876	3905	1.064	1.50	1.50	1.50	
19.4.20.	2630	53525	.965	3679	3547		86	3893	84	3.5	3876	3905	1.058	1.48	1.48	1.49	
3.5.20.	3010	54432	.853	3724	3607		86	3893	84	3.5	3876	3905	1.045	1.29	1.27	1.30	
10.5.20.	3420	54205	.749	3712	3592		86	3893	84	3.5	3876	3905	1.048	1.13	1.13	1.14	
17.5.20.	3395	53978	.752	3701	3577		86	3893	85	5.5	3969	3951	1.052	1.17	1.14	1.16	
27.5.20.	3395	53978	.752	3701	3577	5.0	86	3893	85	5.5	3969	3951	1.052	1.17	1.14	1.16	14.1
		Incr. of 2.8															Incr. of 18.9

Bad physique and bad general condition on admission. Cough severe. Sputum 1 oz daily. T.B. not present. Physical signs indicated fairly quiescent double disease of Turban 11. extent. He improved greatly under treatment. Cough diminished in intensity and sputum fell to ¼ oz daily. He felt much fitter on discharge.

No. 86. Name J. Stevenson. Age 25 yrs. Admitted 19.3.20. Admission 1st. TURBAN II.

Height 160.5 cms. Discharged 17.6.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
20.3.20.	2780	57381	.960	3868	3802	4.0	87.5	4030	82.5	4	3740	3902	1.042	1.35	1.45	1.40	28.8
30.3.20.	2980	58288	.906	3912	3862		87.5	4030	82.5	4	3740	3902	1.030	1.26	1.35	1.31	
6.4.20.	3130	58742	.867	3934	3893		87.5	4030	82.5	4	3740	3902	1.024	1.19	1.29	1.24	
13.4.20.	3200	59422	.858	3966	3937		87.5	4030	82.5	4	3740	3902	1.016	1.17	1.26	1.22	18.0
20.4.20.	3110	59422	.880	3966	3937		87.5	4030	82.5	4	3740	3902	1.016	1.20	1.29	1.25	
27.4.20.	3055	58515	.885	3923	3877		87.5	4030	82.5	4	3740	3902	1.027	1.22	1.32	1.27	
4.5.20.	3060	58061	.881	3901	3847		87.5	4030	82.5	4	3740	3902	1.033	1.22	1.32	1.27	
11.5.20.	3075	58288	.877	3912	3862		87.5	4030	82.5	4	3740	3902	1.030	1.21	1.31	1.26	
18.5.20.	3195	58515	.847	3923	3877		87.5	4030	83.5	5	3830	3950	1.027	1.19	1.26	1.24	
27.5.20.	3310	58061	.813	3901	3847	3.2	87.5	4030	83.5	5	3830	3950	1.033	1.16	1.22	1.20	16.2
			Incr. of 0.8														Incr. of 12.6

Fairly well nourished man of good physique, but very pale. Slight cough. Sputum 1 oz daily. T.B. not present. Signs indicated fairly quiescent double apical disease. He improved greatly under treatment. Cough and sputum disappeared, and signs in chest indicated quiescence of disease. He was finally discharged at his own request feeling much fitter.
Fall of V.C. on 27th April due to coryza.

No. 87. Name D. Dorris. Age 13 yrs. Admitted 21.5.20. Admission 1st. TURBAN II.'
Height 138.5 cms. Discharged – in residence.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
24.5.20.	1700	31525	1.02	2513	2089	10.5	73	2805	67.5	4	2503	2663	1.116	1.47	1.65	1.57	36.2

Boy of healthy aspect. Complains of slight cough, not accompanied by sputum. Signs in chest indicate fairly extensive disease of R. upper lobe of a moderate degree of activity. W is far reduced.

No. 88. Name A. Broadhurst Age 26 yrs. Admitted 14.10.19. Admission 1st. TURBAN II.
Height 156 cms. Discharged – in residence.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of V.C.
25.11.19.	2500	55340	1.040	3768	3667	0.3	84.5	3758	82	3.5	3694	3745	.997	1.477	1.503	1.498	33.3
2.12.19.	2500	54886	1.033	3746	3637		84.5	3758	82	3.5	3694	3745	1.003	1.477	1.503	1.498	
16.12.19.	2710	54659	.951	3735	3622		84.5	3758	82	3.5	3694	3745	1.006	1.363	1.386	1.381	
6. 1.20.	2640	56246	.996	3813	3727		84.5	3758	82	3.5	3694	3745	.985	1.39	1.423	1.41	
20. 1.20.	2590	55793	1.009	3790	3697		84.5	3758	82	3.5	3694	3745	.991	1.42	1.45	1.44	
3. 2.20.	2770	55793	.944	3790	3697		84.5	3758	82	3.5	3694	3745	.991	1.33	1.35	1.35	
17. 2.20.	2680	55566	.973	3779	3682		84.5	3758	82	3.5	3694	3745	.994	1.38	1.40	1.39	
2. 3.20.	2740	55793	.954	3790	3697		84.5	3758	82	3.5	3694	3745	.991	1.35	1.37	1.36	
19. 3.20.	2770	54659	.930	3735	3622		84.5	3758	82	3.5	3694	3745	1.006	1.33	1.35	1.35	
26. 3.20.	2770	54659	.930	3735	3622		84.5	3758	82	3.5	3694	3745	1.006	1.33	1.35	1.35	
2. 4.20.	2790	54886	.926	3746	3637		84.5	3758	82	3.5	3694	3745	1.003	1.32	1.34	1.34	
9. 4.20.	2790	54886	.926	3746	3637		84.5	3758	82	4	3694	3745	1.003	1.32	1.34	1.34	25.5
24. 4.20.	2740	55339	.946	3768	3667		84.5	3758	82	4	3694	3745	.997	1.35	1.37	1.36	
7. 5.20.	2970	55112	.873	3757	3652		84.5	3758	82		3694	3745	1.00	1.25	1.27	1.26	
21. 5.20.	2930	53978	.872	3701	3577		84.5	3758	82		3694	3745	1.015	1.26	1.28	1.27	
4. 6.20.	2970	54659	.868	3735	3622	0.6	84.5	3758	82		3694	3745	1.006	1.25	1.27	1.26	20.7

Decr. of 0.9 Incr. of 12.6

Pale man of good physique. Slight morning cough. Sputum ½ oz daily. T.B. present in small numbers. Signs indicated fairly quiescent disease of Turban 11. extent in L. upper lobe and healed disease of R. apex. He improved very greatly under treatment. Cough and sputum disappeared and he is awaiting transfer to Tuberculosis Colony, feeling very fit and well. Signs in chest indicate quiescent disease. Note fall of W. and increase of V.C.

No..89. Name Wm. Brown. Age 16 yrs. Admitted 30.5.19. Admission 1st. TURBAN II.

Height 162.5 cms. Discharged – in residence.

Date.	V. Cap.	Weight in gms	VC. Const in W.	VC. Cal in W	VC. Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC. Cal in W.	Chest Meas. = Ch. in cms.	Expn. in cms.	VC. Cal in Ch.	VC. Cal in L & Ch.	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
9.12.19.	2060	38556	.793	2905	2555	13.7	80	3368	68	5	2541	2940	1.159	1.233	1.635	1.427	30.0
22.12.19.	2010	38783	1.001	2917	2570		80	3368	68	5	2541	2940	1.154	1.264	1.675	1.462	
12. 1.20.	2200	38556	.911	2905	2555		80	3368	68	5	2541	2940	1.159	1.15	1.53	1.336	
26. 1.20.	2210	38329	.903	2893	2540		80	3368	68	5	2541	2940	1.164	1.15	1.52	1.330	
11. 2.20.	2240	38783	.898	2917	2570		80	3368	68	5	2541	2940	1.154	1.13	1.50	1.31	
26. 2.20.	2210	39237	.918	2942	2600		80	3368	68	5	2541	2940	1.144	1.15	1.52	1.33	
11. 3.20.	2300	39917	.893	2978	2645		80	3368	68	5	2541	2940	1.131	1.105	1.46	1.28	
25. 3.20.	2390	40144	.863	2991	2660		80	3368	68	5	2541	2940	1.126	1.07	1.41	1.23	
8. 4.20.	2380	40144	.866	2991	2660		80	3368	68	5	2541	2940	1.126	1.07	1.41	1.23	
22. 4.20.	2390	40144	.863	2991	2660		80	3368	68	6	2541	2940	1.126	1.07	1.41	1.23	18.7
6. 5.20.	2450	40370	.845	3003	2675		80	3368	68	6	2541	2940	1.121	1.04	1.38	1.20	
20. 5.20.	2620	40370	.791	3003	2675	10.9	80	3368	68	6	2541	2940	1.121	.970	1.29	1.14	10.9

Incr. of 2.8 Incr. of 19.1

This boy had been 8 months in residence when readings were begun. His admission condition was tubercular disease of the R. kidney. Very abundant T.B. in urine occasional cough, but no sputum. Physical signs suggested healed disease of Turban 11. extent in both upper lobes. He was of very bad physique. He underwent considerable general improvement while under Tuberculin treatment. Cough complete disappeared. T.B. much less numerous in urine. Note big rise of V.C.

No. 90 Name M. Samson. Age 35 yrs. Admitted 28.11.19. Admission 1st. TURBAN II.

Height 175.5 cms. Discharged - in residence.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
29.11.19.	3000	61236	.932	4053	4057	12.8	94	4650	88	2	4254	4474	1.14	1.418	1.55	1.491	32.9
9.12.19.	2980	62597	.953	4118	4148		94	4650	88	2	4254	4474	1.129	1.427	1.560	1.501	
23.12.19.	2920	62597	.973	4118	4148		94	4650	88	2	4254	4474	1.129	1.457	1.59	1.532	
13. 1.20.	3190	62597	.890	4118	4148		94	4650	88	2	4254	4474	1.129	1.33	1.45	1.402	
27. 1.20.	3290	63050	.868	4139	4178		94	4650	88.5	2.5	4303	4496	1.123	1.31	1.41	1.37	
10. 2.20.	3190	63277	.897	4150	4192		94	4650	88.5	2.5	4303	4496	1.120	1.35	1.45	1.41	
24. 2.20.	3290	62370	.861	4107	4132		94	4650	88.5	2.5	4303	4496	1.120	1.31	1.41	1.37	
11. 3.20.	3250	61916	.867	4085	4102		94	4650	88.5	2.5	4303	4496	1.138	1.32	1.43	1.38	
25. 3.20.	3660	61690	.768	4075	4088		94	4650	88.5	2.5	4303	4496	1.141	1.17	1.27	1.23	
8. 4.20.	3670	61916	.768	4085	4102		94	4650	88.5	5	4303	4496	1.138	1.17	1.27	1.23	18.4
22. 4.20.	3700	61690	.759	4075	4088		94	4650	88.5	5	4303	4496	1.141	1.16	1.26	1.22	
6. 5.20.	3800	62143	.744	4096	4118		94	4650	88.5	5	4303	4496	1.135	1.13	1.22	1.18	
13. 5.20.	3700	61690	.759	4075	4118		94	4650	88.5	5	4303	4496	1.141	1.16	1.26	1.22	
27. 5.20.	3740	61916	.751	4085	4102	12.1	94	4650	88.5	5	4303	4496	1.138	1.15	1.25	1.21	16.8

Incr. of 0.7 Incr. of 16.1

Thin and of poor general condition on admission. Cough was severe. Sputum 3 oz daily. T.B. were not found. Elastic tissue present. Signs indicated extensive fibrotic disease of R. upper lobe. He improved very greatly under treatment. Cough diminished in severity and frequency. Sputum fell to 1½ oz daily, much of this coming from the naso-pharynx. He looked much better and felt very fit and well. Note slight increase of W and big increase of V.C. Fall of V.C. on 13th May was due to coryza.

No. 91 Name J. Corbett. Age 18 yrs. Admitted 21.3.19. Admission 1st. TURBAN II.

Height 165.5cms. Discharged 23.7.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
27.11.19.	2710	52618	.925	3634	3486	15.7	90.5	4311	79.5	5	3472	3889	1.18	1.28	1.59	1.43	30.3
11.12.19.	2790	53298	.907	3667	3532		90.5	4311	79.5	5	3472	3889	1.175	1.24	1.55	1.39	
25.12.19.	2690	53071	.938	3656	3517		90.5	4311	79.5	5	3472	3889	1.179	1.29	1.60	1.44	
1. 1.20.	2760	53071	.914	3656	3517		90.5	4311	79.5	5	3472	3889	1.179	1.26	1.56	1.40	
15. 1.20.	2780	53071	.904	3656	3517		90.5	4311	79.5	5	3472	3889	1.179	1.25	1.55	1.39	
29. 1.20.	2700	53071	.934	3656	3517		90.5	4311	79.5	5	3472	3889	1.179	1.28	1.59	1.43	
11. 2.20.	2820	52844	.892	3645	3502		90.5	4311	79.5	5	3472	3889	1.180	1.23	1.53	1.37	
26. 2.20.	2800	53071	.901	3656	3517		90.5	4311	79.5	5	3472	3889	1.179	1.24	1.54	1.38	
18. 3.20.	2900	53071	.869	3656	3517		90.5	4311	79.5	5	3472	3889	1.179	1.20	1.49	1.34	
1. 4.20.	2920	53071	.864	3656	3517		90.5	4311	79.5	5	3472	3889	1.179	1.19	1.48	1.33	
15. 4.20.	2920	53298	.866	3668	3532		90.5	4311	79.5	7	3472	3889	1.175	1.19	1.48	1.33	25.9
29. 4.20.	2640	53978	.967	3701	3577		90.5	4311	79.5	7	3472	3889	1.165	1.32	1.63	1.47	
13. 5.20.	2780	53525	.913	3679	3547		90.5	4311	79.5	7	3472	3889	1.172	1.25	1.55	1.40	
27. 5.20.	2780	53525	.913	3679	3547	15.6	90.5	4311	79.5	7	3472	3889	1.172	1.25	1.55	1.40	28.8

Incr. of 0.1

Incr. of 1.5

This lad had been 8 months in the institution when observations were begun. He had been a case of extensive scrofulosis with a pulmonary lesion of Turban II extent. By the time the readings were begun his condition had become healed. All scrofulous lesions had healed and pulmonary condition was perfectly quiescent. His diminution of V.C. is thus a permanent one. He is fit for hard work and is now 27.7.20 employed as paid stoker in the Sanatorium.

No. 92. Name D. McBride. Age 23 yrs. Admitted 9.4.20. Admission 1st. TURBAN II.

Height 150 cms. Discharged – Still in residence.

Date	V.Cap. in ccs.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W	Stem Lgth = L in cms	VC.Cal in L.	Chest Meas. = Ch in cms.	Expn. in cms	VC.Cal in Ch	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
10.4.20.	2810	42184	.761	3099	2795	10.3	81	3453	78.5	6.5	3386	3437	1.114	1.21	1.23	1.22	18.3
20.4.20.	2600	43092	.835	3147	2855		81	3453	78.5	6.5	3386	3437	1.097	1.30	1.33	1.32	
27.4.20.	2660	43545	.822	3171	2896		81	3453	78.5	6.5	3386	3437	1.089	1.27	1.30	1.29	
4.5.20.	2865	43319	.761	3160	2871		81	3453	78.5	6.5	3386	3437	1.092	1.18	1.21	1.20	
11.5.20.	2660	43319	.820	3160	2871		81	3453	78.5	6.5	3386	3437	1.092	1.27	1.30	1.29	
20.5.20.	2895	43546	.755	3171	2886		81	3453	78.5	6.5	3386	3437	1.089	1.17	1.19	1.18	
3.6.20.	2770	43319	.751	3160	2871	8.5	81	3453	78.5	6.5	3386	3437	1.092	1.22	1.25	1.24	19.4

Incr. of 1.8 Decr. of 1.1

Thin poorly developed man. Cough severe. Sputum 1 oz daily. T.B. not present. Physical signs indicated only quiescent double apical disease. He made no improvement during his period of observation.

No. 93. Name G. Howells. Age 19 yrs. Admitted 20.2.20. Admission 1st. TURBAN II.

Height 173 cms. Discharged - Still in residence.

Date	VCap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth - L in cms	VC.Cal in L.	Chest Meas. = Ch in cms	Expn. in cms	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
21.2.20.	3130	57608	.855	3879	3817	12.9	92	4455	82.5	7	3740	4103	1.148	1.19	1.42	1.31	23.7
1.3.20.	3290	58061	.818	3901	3847		92	4455	82.5	7	3740	4103	1.142	1.14	1.35	1.25	
15.3.20.	3460	58515	.782	3923	3847		92	4455	82.5	7	3740	4103	1.136	1.08	1.29	1.19	
29.3.20.	3750	59195	.727	3955	3922		92	4455	82.5	7	3740	4103	1.127	.997	1.19	1.094	8.6
12.4.20.	3510	59422	.779	3966	3937		92	4455	82.5	7	3740	4103	1.123	1.06	1.27	1.17	
6.5.20.	3740	58741	.726	3934	3893		92	4455	83.5	7	3830	4160	1.132	1.02	1.19	1.11	
20.5.20.	3920	59422	.698	3966	3937		92	4455	83.5	7	3830	4160	1.123	.977	1.14	1.06	
3.6.20.	3870	59422	.705	3966	3937	11.0	92	4455	83.5	7	3830	4160	1.123	.989	1.15	1.07	7.0

Incr. of 1.9 Incr. of 16.7

Pale youth of good nutrition. Slight morning cough. Sputum 1 oz daily. T.B. present in small numbers. Signs indicated quiescent double apical disease. He improved very greatly during his period of observation. Fall of V.C. on 12th April due to coryza. Cough and sputum diminished and he felt much fitter and stronger.

No. 94. Name John Allan. Age 19 yrs. Admitted 1.4.20. Admission 1st. TURBAN II.

Height 165 cms. Discharged – Still in residence.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. – Ch in cms	Expn. in cms.	VC.Cal in Ch	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
2.4.20.	2190	52618	1.15	3634	3487	10.9	88	4076	84.5	4	3923	4019	1.121	1.79	1.86	1.83	46.0

Thin and of bad general condition. Signs indicated extensive active disease of left upper lobe. Cough was severe and sputum copious containing a few T.B. Readings were not repeated as on 10.4.20 he developed a spontaneous pneumathorax.

No. 95. Name Stephen McDonough Age 42 yrs. Admitted 21.5.20. Admission IVth. TURBAN II.

Height 155 cms. Discharged 2.7.20.

Date	V.Cap.	Weight in gms	VC. Const in W.	VC. Cal in W.	VC. Cal as % W	% Dim of W.	Stem Lgth = L in cms	VC. Cal in L	Chest Meas. = Ch. in cms	Expn. in cms	VC. Cal in Ch	VC. Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
22.5.20.	2140	48535	1.105	3429	3217	8.8	84.5	3758	78	2.5	3343	3563	1.096	1.56	1.75	1.66	40.0

Thin poor specimen of a man. Cough severe. Sputum 1 oz daily. T.B. not present. Signs indicated extensive active disease of R. upper lobe. Initial observation only made.

No. 96 Name D. May Age 30 yrs. Admitted 24.10.19. Admission 1st. TURBAN II.

Height 177 cms. Discharged - Still in residence.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
26.11.19.	3000	64638	.969	4214	4283	7.4	93	4552	86	5.5	4063	4215	1.08	1.35	1.51	1.405	29.0
10.12.19.	2930	65318	.999	4246	4328		93	4552	86	5.5	4063	4215	1.072	1.39	1.55	1.44	
30.12.19.	2960	64184	.977	4193	4253		93	4552	86	5.5	4063	4215	1.09	1.37	1.53	1.42	
14. 1.20.	2930	64865	.994	4225	4298		93	4552	86	5.5	4063	4215	1.077	1.39	1.55	1.44	
28. 1.20.	3060	64865	.952	4225	4298		93	4552	86	5.5	4063	4215	1.077	1.32	1.48	1.37	
11. 2.20.	3000	63958	.961	4182	4238		93	4552	86	5.5	4063	4215	1.088	1.35	1.51	1.405	
25. 2.20.	3150	65092	.927	4235	4313		93	4552	86	5.5	4063	4215	1.075	1.29	1.44	1.34	
10. 3.20.	2800	65772	1.05	4267	4358		93	4552	86.5	8	4110	4348	1.067	1.47	1.64	1.55	
24. 3.20.	3280	65318	.893	4246	4328		93	4552	86.5	8	4110	4348	1.072	1.26	1.39	1.33	25.0
14. 4.20.	3310	65092	.883	4235	4313		93	4552	86.5	8	4110	4348	1.075	1.24	1.37	1.31	
12.5. 20.	3010	64865	.968	4225	4298		93	4552	86.5	8	4110	4248	1.077	1.36	1.51	1.44	
26. 5.20.	2960	64411	.980	4203	4268	7.7	93	4552	86.5	8	4110	4348	1.083	1.38	1.53	1.47	31.9
			Decr. of 0.3														Decr. of 2.9

Tall thin man of bad general condition. He had been one month in residence before readings were begun. Cough was severe. Sputum 3 oz daily. T.B. present in small numbers. Physical signs indicated extensive fairly active disease of R. upper lobe. He made no improvement during his period of residence, from any point of view. He is still in residence.

No. 97 Name O. McLure Age 28 yrs. Admitted 24.10.19. Admission 1st. TURBAN II.

Height 168 cms. Discharged - Still in residence.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W	VC.Cal as % W	% Dim of W,	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of V.C.
26.11.19.	3100	55112	.836	3757	3652	2.3	85.5	3847	82.5	8	3740	3812	1.024	1.207	1.241	1.23	18.7
3.12.19.	3000	55340	.866	3768	3667		85.5	3847	82.5	8	3740	3812	1.021	1.247	1.282	1.271	
18.12.19.	2430	55340	1.07	3768	3667		85.5	3847	82.5	8	3740	3812	1.021	1.54	1.58	1.57	
8. 1.20.	2830	55112	.916	3757	3652		85.5	3847	82.5	8	3740	3812	1.024	1.32	1.36	1.35	
18. 2.20.	3060	56700	.864	3835	3757		85.5	3847	82.5	8	3740	3812	1.003	1.22	1.26	1.24	
10. 3.20.	2750	57381	.970	3868	3802		85.5	3847	83	8	3784	3812	.994	1.38	1.39	1.38	
24. 3.20.	3280	56927	.809	3846	3772		85.5	3847	83	8	3784	3812	1.000	1.15	1.17	1.17	15.0
7. 4.20.	3360	57835	.798	3890	3832		85.5	3847	83	8	3784	3812	.989	1.13	1.15	1.14	
21. 4.20.	3320	58742	.817	3934	3893		85.5	3847	83	8	3784	3812	.977	1.14	1.16	1.15	
5. 5.20.	3180	57607	.841	3879	3817		85.5	3847	83	8	3784	3812	.991	1.19	1.21	1.21	
19. 5.20.	3520	57154	.756	3857	3787	0.3	85.5	3847	83	8	3784	3812	.997	1.07	1.09	1.09	8.2

Incr. of 2.6 Incr. of 10.5

Case of G.S.W. of chest. Piece of shrapnel in diaphragm and rifle bullet in pericardium. Cough slight but harsh. Sputum is scanty. T.B. not detected but elastic tissue present. Signs indicated a fibrosis of R. lower lobe not necessarily tubercular. He improved greatly under treatment though he still has tendency to blood staining of sputum. Cough is easier and he is stronger and fitter in every way.

No. 98 Name J. Gardner. Age 46 yrs. Admitted 5.12.19. Admission 1st. TURBAN II.

Height 171.5 cms. Discharged - Still in residence.

Date.	V. Cap.	Weight in gms.	VC. Const in W.	VC. Cal in W.	VC. Cal. as % W	%Dim of W	Stem Lgth = L in cms.	VC. Cal in L	Chest Meas. = Ch in cms.	Expn. in cms.	VC. Cal in Ch.	VC. Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
6.12.19.	3700	56020	.709	3802	3712	8.8	89	4169	85.5	5	4017	4113	1.027	1.085	1.126	1.112	10.0
22.12.19.	3490	56700	.758	3835	3757		89	4169	85.5	5	4017	4113	1.096	1.151	1.194	1.178	
5. 1.20.	3410	57381	.782	3868	3802		89	4169	85.5	5	4017	4113	1.078	1.178	1.223	1.206	
19. 1.20.	3140	57608	.852	3879	3817		89	4169	85.5	5	4017	4113	1.079	1.28	1.33	1.31	
28. 1.20.	3130	58515	.864	3923	3877		89	4169	85.5	5	4017	4113	1.062	1.283	1.331	1.314	
11. 2.20.	3290	58515	.822	3923	3877		89	4169	85.5	5	4017	4113	1.062	1.22	1.27	1.25	
25. 2.20.	3420	58968	.795	3945	3907		89	4169	85.5	5	4017	4113	1.056	1.17	1.22	1.20	
10. 3.20.	3420	59422	.800	3966	3937		89	4169	85.5	5	4017	4113	1.051	1.17	1.22	1.20	
24. 3.20.	3910	59195	.698	3955	3922		89	4169	85.5	5	4017	4113	1.054	1.027	1.066	1.052	5.0
7. 4.20.	3660	59195	.746	3955	3922		89	4169	85.5	5.5	4017	4113	1.054	1.098	1.14	1.12	
21. 4.20.	3880	59648	.707	3977	3952		89	4169	85.5	5.5	4017	4113	1.048	1.035	1.074	1.060	
5. 5.20.	3660	58515	.739	3923	3877		89	4169	85.5	5.5	4017	4113	1.062	1.098	1.14	1.12	
19. 5.20.	3760	58515	.719	3923	3877		89	4169	85.5	5.5	4017	4113	1.062	1.068	1.11	1.09	
2. 6.20.	3620	58515	.747	3923	3877	5.9	89	4169	85.5	5.5	4017	4113	1.062	1.109	1.15	1.13	12.0
					Incr. of 2.9												Decr. of 2.0

Man of poor physique. He looked very thin and ill on admission. Cough was not severe. Sputum averaged ¾ oz daily. T.B. were not present. Signs indicated only quiescent disease of both apices. He is quite edentulous and suffers from much gastro-intestinal disturbance which probably accounts for much of his bad condition. He made no apparent improvement during his period of observation.

No. 99. Name M. MacLennan Age 36 yrs. Admitted 5.12.19. Admission 1st. TURBAN II

Height 167 cms. Discharged 9.7.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
6.12.19.	2940	54886	.879	3746	3637	12.1	90	4263	86.5	4	4110	4208	1.14	1.39	1.45	1.43	31.0
19. 1.20.	3450	57154	.771	3857	3787		90	4263	86.5	4	4110	4208	1.105	1.191	1.24	1.21	
28. 1.20.	3270	58742	.825	3934	3893		90	4263	86.5	4	4110	4208	1.083	1.26	1.30	1.28	
11. 2.20.	3290	59648	.834	3977	3952		90	4263	86.5	4	4110	4208	1.072	1.25	1.29	1.27	
25. 2.20.	3100	60329	.892	4010	3997		90	4263	86.5	4	4110	4208	1.063	1.32	1.37	1.36	
17. 3.20.	3180	62370	.891	4107	4132		90	4263	86.5	4	4110	4208	1.038	1.29	1.34	1.33	
30. 3.20.	3490	61236	.801	4053	4057		90	4263	88	4.5	4254	4281	1.051	1.22	1.22	1.23	19.0
14. 4.20.	3360	61009	.830	4043	4042		90	4263	88	4.5	4254	4281	1.054	1.27	1.27	1.28	
28. 4.20.	3530	60329	.784	4010	3997		90	4263	88	4.5	4254	4281	1.063	1.21	1.21	1.21	
19. 5.20.	3250	58969	.837	3945	3907		90	4263	88	4.5	4254	4281	1.081	1.31	1.31	1.32	
2. 6.20.	3420	58969	.796	3945	3907	7.5	90	4263	88	4.5	4254	4281	1.081	1.24	1.24	1.25	20.0

Incr. of 4.6 Incr. of 11.0

Thin man of hectic aspect on admission. Cough very severe. Sputum 3 oz daily. T.B. present in small numbers. Complaining of pain in r. side of chest when admitted. Dry pleurisy developed in this site two days later. Initial V.C. reading was probably unduly reduced on account of pleural pain. Physical signs indicated extensive active disease of R. upper lobe. He made no improvement during his period of residence. Cough remained severe and sputum was copious. T.B. increased in numbers in sputum. Weight increased and V.C. increased over initial reading which was probably unduly depressed for reasons stated. He was finally discharged at his own request. Note oscillating V.C.

No. 100. Name Wm. McAskill. Age 24 yrs. Admitted 1.6.20. Admission 1st. TURBAN II.

Height 182.5 cms. Discharged – Still in residence.

Date	V.Cap.	Weight in gms.	V.C.Const. in W.	V.C.Calc. in W.	V. C.Calc. As % W.	% Dim of W.	Stem Lgth – L. in cms.	VC.Cal in L.	Chest Meas. – Ch. in cms	Expn. in cms.	VC.Cal. in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3.	P.F. 4	% Dim of V.C.
2.6.20.	3909	70308	.792	4477	4659	+0.5	92	4455	91	8.5	4550	4525	.995	1.17	1.14	1.16	13.8.

Tall man of good physique. Cough slight. Sputum 1 oz. daily. T.B. + few. Signs indicated on extensive dry fibrosis of the R. upper lobe. Initial observation only taken.

No. 101. Name Edward McKenna. Age 50 yrs. Admitted 3.5.20. Admission 1st. TURBAN II.

Height -164 cms. Discharged - Still in residence.

Date	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth - L in cms.	VC.Cal in L	Chest Meas. - Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of V.C.
4.5.20	2750	51030	.892	3555	3382	8.7	86	3893	78	4	3343	3626	1.095	1.22	1.42	1.32	24.2
19.5.20	2690	51483	.917	3577	3412	8.4	86	3893	78	4	3343	3626	1.088	1.24	1.44	1.34	25.8
			Incr. of 0.3.														Decr. of 1.6.

Thin man of poor physique and pale aspect. Cough slight. Sputum 1½ oz. daily. Signs indicated double mildly active apical disease. T.B. present in sputum in small numbers. He is still in residence.

No. 102. Name James Paul. Age 49 yrs. Admitted 14.5.20. Admission 1st. TURBAN II.

Height 162.5 cms. Discharged - Still in residence.

Date	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
17.5.20.	3280	54886	.786	3746	3637	7.1	87.5	4030	84	4.5	3876	3973	1.076	1.18	1.23	1.21	17.5

Well built man of deficient weight. Cough severe. Sputum 1 oz daily. Signs were indefinite and indicated only evidence of collapse of R. upper lobe. T.B. not found in sputum. Initial observation only made.

No. 103. Name George Kerr. Age 38 yrs. Admitted 18.5.20. Admission 1st. TURBAN II.

Height 160.5 cms. Discharged – in residence.

Date	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W	Stem Lgth – L. in cms	VC.Cal in L.	Chest Meas. – Ch. in cms	Expn. in cms	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of V.C.
19.5.20.	2870	48535	.824	3429	3217	11.9	86	3893	81	5.5	3605	3765	1.135	1.25	1.36	1.31	23.8

Pale man of moderate physique. Cough severe. Sputum 1 oz. daily. T.B. present in small numbers. Physical Signs indicated only moderately active double apical disease. Initial observation only taken.

No. 104. Name Wm. Irving. Age 32 yrs. Admitted 1.4.20. Admission I. TURBAN II.

Height 171.5 cms. Discharged – in residence.

Date	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W	Stem Lgth = L. in cms.	VC.Cal in L.	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal inCh.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
2.4.20	3640	73937	.880	4642	4899	↑8.8	90	4263	90	4.5	4450	4378	.918	1.22	1.17	1.20	16.9
20.4.20	3670	74617	.878	4673	4944		90	4263	90	4.5	4450	4378	.912	1.21	1.16	1.19	
4.5.20	3710	74844	.871	4693	4959		90	4263	90	4.5	4450	4378	.910	1.20	1.15	1.18	
18.5.20	3500	73937	.915	4642	4899		90	4263	90	4.5	4450	4378	.918	1.27	1.22	1.25	
25.5.20	3400	73483	.938	4621	4869	↓8.4	90	4263	90	4.5	4450	4378	.922	1.31	1.25	1.28	22.4

Decr. of 0.4 Decr. of 5.9

Man of good nutrition and physique. He complained of severe cough with sputum which averaged 2 oz. daily. T.B. not present. Elastic tissue most abundant, the [illegible] appearing to consist of masses of pure tissue He had much bronchitis of basal distribution and apparently mildly active disease of Turban 11. grade. He made no improvement during his period of residence and finally was discharged at his own request in a worse condition than that of admission. Note fall of W. and V.C.

No. 105. Name A. McCall. Age 22 yrs. Admitted 11.5.20. Admission 1st. TURBAN II.

Height 160 cms. Discharged – Still in residence.

Date	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth – L. in cms.	VC.Cal in L.	Chest Meas. – Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	%Dim of VC.
12.5.20.	2735	50123	.885	3509	3322	2.1	82.5	3582	82	5.5	3694	3656	1.020	1.35	1.31	1.34	25.2
25.5.20	2980	51030	.823	3555	3382	0.8	82.5	3582	82	5.5	3694	3656	1.008	1.25	1.30	1.23	22.3
					Incr. of 1.3												Incr. of 2.9

Man of good physique and healthy aspect. Cough severe and sputum 1½ oz. daily containing abundant T.B. Double pulmonary disease of Turban 11. grade present, apparently of mild activity. He was active and looked well, despite abundance of T.B. in sputum. He was still in residence when observations were stopped.

No. 106 Name John Sinclair. Age 32 yrs. Admitted 6.2.20. Admission 1st. TURBAN II.

Height 177.5 cms. Discharged - Still in residence.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
7.2.20.	2810	61690	1.0005	4075	4088	5.7	90.5	4311	86	4.5	4063	4207	1.058	1.44	1.53	1.49	33.3
17.2.20.	2610	62824	1.09	4129	4162	"	90.5	4311	86	4.5	4063	4207	1.044	1.55	1.65	1.61	
2.3.20.	2750	63277	1.04	4150	4192		90.5	4311	86	4.5	4063	4207	1.038	1.47	1.57	1.53	
16.3.20.	2910	63277	.984	4150	4192		90.5	4311	86	4.5	4063	4207	1.038	1.39	1.48	1.44	
30.3.20.	2910	63958	.992	4182	4238		90.5	4311	86	4.5	4063	4207	1.031	1.39	1.48	1.44	
13.4.20.	3120	63504	.920	4161	4208		90.5	4311	86	4.5	4254	4305	1.036	1.36	1.38	1.38	28.2
27.4.20.	3060	63277	.935	4150	4192		90.5	4311	86	4.5	4254	4305	1.038	1.39	1.41	1.41	
11.5.20.	3310	63050	.862	4139	4178		90.5	4311	86	4.5	4254	4305	1.041	1.28	1.30	1.30	
25.5.20.	3440	62824	.828	4129	4162	4.2	90.5	4311	86	4.5	4254	4305	1.044	1.23	1.25	1.25	20.0
			Incr. of 1.5														Incr. of 13.3.

Tall man of fair physique. Did not look well on admission. Cough was severe and sputum 3 oz daily containing abundant T.B. Signs in chest indicated fairly extensive active disease of R. upper lobe. He had persistent "streaking" of sputum for some time after admission, associated with general malaise and severe cough. Note rising W throughout this time. This settled down and he underwent great improvement for the remainder of his period of observation. Cough diminished in frequency and severity, sputum fell to 1 oz daily and he felt much fitter. There was definite improvement in the physical signs.

No. 107 Name G. Paterson. Age 45 yrs. Admitted 28.5.20. Admission 1st. TURBAN II.

Height 155 cms. Discharged – In residence.

Date	V.Cap.	Weight in gms	VC. Const in W.	VC. Cal in W	VC. Cal as % W	% Dim of W.	Stem Lgth = L in cms	VC. Cal in L	Chest Meas. = Ch in cms	Expn. in cms.	VC. Cal in Ch	VC. Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of V.C.
25.5.20.	2750	53071	.918	3656	3517	+0.8	83	3626	81	4.5	3605	3634	.992	1.31	1.32	1.32	24.4

Man of good physique and nutrition, but pale. Cough was not severe and occurred largely after breakfast. Sputum was 1¾ oz daily. T.B. were not evident but abundant elastic tissue was present. Signs indicated fairly extensive, but apparently only mildly active disease of R. upper lobe. Initial observation only was made.

No. 108 Name Wm. Robertson Age 47 yrs. Admitted 27.2.20. Admission IInd TURBAN II.

Height 160 cms. Discharged - In residence.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of V.C.
29.2.20.	3000	46267	.761	3312	3066	14.9	85.5	3847	75.5	6.5	3132	3489	1.161	1.044	1.28	1.16	14.1
9.3.20.	2880	47628	.810	3382	3156		85.5	3847	75.5	6.5	3132	3489	1.137	1.09	1.34	1.21	
23.3.20.	3220	49216	.742	3463	3262		85.5	3847	75.5	6.5	3132	3489	1.111	.973	1.19	1.08	
6.4.20.	3220	50123	.752	3509	3322		85.5	3847	75.5	6.5	3132	3489	1.096	.973	1.19	1.08	
20.4.20.	3160	51257	.778	3566	3397		85.5	3847	75.5	6.5	3132	3489	1.078	.991	1.22	1.10	
4.5.20.	3140	52391	.796	3623	3472		85.5	3847	77	6.5	3258	3558	1.062	1.037	1.23	1.13	
18.5.20.	3245	52391	.770	3623	3472		85.5	3847	77	6.5	3258	3558	1.062	1.004	1.18	1.09	
1.6.20.	3240	52391	.770	3623	3472	3.2	85.5	3847	77	6.5	3258	3558	1.069	1.004	1.18	1.09	8.9

Incr. of 11.7 Incr. of 5.2

Pale thin man. He complained of severe dyspnoea on any exertion, and feelings of excessive fatigue. Cough was slight. Sputum 1 oz daily. T.B. not present. Signs indicated only moderately active disease of both upper lobes of Turban II extent. He made improvement under treatment. Cough and sputum decreased greatly. He gained much weight, but remained pale, and was still dyspnoeic on exertion when he left the Sanatorium.

No. 109. Name John Davidson. Age 27 yrs. Admitted 7.5.20. Admission 1st. TURBAN II.

Height 164 cms. Discharged – in residence.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth – L in cms	VC.Cal in L.	Chest Meas. = Ch in cms	Expn. in cms	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of V.C.
8.5.20.	2680	48308	.880	3417	3202	12.3	86	3893	79	5	3429	3672	1.139	1.28	1.45	1.37	27.1
18.5.20.	2820	49442	.850	3475	3277	10.8	86	3893	79	5	3429	3672	1.123	1.22	1.38	1.30	23.2
				Incr. of 1.5												Incr. of 3.9	

Man of bad physique and bad general condition. Cough severe. Sputum 2 oz daily and black and glutinous in character. T.B. not present, but elastic tissue present in abundance. Signs indicated double moderately active disease of Turban 11. extent. Initial observation only was made.

No. 110 Name D. Russell Age 44 yrs. Admitted 27.12.19. Admission 1st. TURBAN II.

Height 164.5 cms. Discharged - in residence.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L &Ch.	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of V.C.
28.12.19.	2890	49442	.829	3475	3277	13.8	87.5	4030	86.5	4.5	4110	4091	1.160	1.42	1.39	1.41	29.4
7. 1.20.	2510	48762	.943	3440	3232		87.5	4030	86.5	4.5	4110	4091	1.17	1.63	1.60	1.62	
21. 1.20.	2700	49216	.885	3463	3262		87.5	4030	86.5	4.5	4110	4091	1.163	1.52	1.49	1.51	
4. 2.20.	2500	49896	.965	3497	3307		87.5	4030	86.5	4.5	4110	4091	1.152	1.64	1.61	1.63	
18. 2.20.	2520	50123	.961	3509	3322		87.5	4030	86.5	4.5	4110	4091	1.148	1.63	1.60	1.62	
3. 3.20.	2810	48989	.847	3452	3247		87.5	4030	86.5	4.5	4110	4091	1.167	1.46	1.43	1.45	
17. 3.20.	2620	49442	.915	3475	3277		87.5	4030	86.5	4.5	4110	4091	1.160	1.57	1.54	1.56	
30. 3.20.	3120	50350	.778	3520	3337		87.5	4030	86.5	4.5	4110	4091	1.145	1.32	1.29	1.31	
13. 4.20.	3140	50576	.776	3532	3352		87.5	4030	86.5	4.5	4110	4091	1.113	1.31	1.28	1.30	
27. 4.20.	3140	50350	.774	3520	3337		87.5	4030	86.5	4.5	4110	4091	1.145	1.31	1.28	1.30	23.3
11. 5.20.	3200	49896	.754	3497	3307		87.5	4030	86.5	4.5	4110	4091	1.152	1.29	1.26	1.28	
18. 5.20.	3140	50123	.771	3509	3322		87.5	4030	86.5	4.5	4110	4091	1.148	1.31	1.28	1.30	
1. 6.20.	3290	49669	.731	3486	3292	13.5	87.5	4030	86.5	4.5	4110	4091	1.156	1.25	1.22	1.24	19.6
			Incr. of 0.3														Incr. of 9.8

Man of bad physique and in poor general condition, looking pale and ill on admission. Cough was severe Sputum 1½ oz daily containing T.B. in small numbers. Signs indicated a mildly active lesion of R. upper lobe of Turban II. extent. His condition was stationary for a long time, but began to improve towards the end of March 1920. When these observations were concluded he was feeling fitter and looking better, but dough was still severe and sputum fairly abundant. Signs in R. upper lobe were drier in character.

No. 191. Name A. McInnes. Age 26. Admitted 6.2.20. Admission 1st. TURBAN II.

Height 167.5 cms. Discharged – in residence.

Date	VC.Cap.	Weight in gms	VC.Const in W	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of V.C.
9.2.20.	2750	48535	.860	3429	3217	18.7	89.5	4216	77	3.5	3258	3740	1.229	1.18	1.53	1.36	26.5
23.2.20.	2900	48762	.818	3440	3232		89.5	4216	77	3.5	3258	3740	1.225	1.12	1.45	1.29	
8.3.20.	2820	48989	.844	3452	3247		89.5	4216	77	3.5	3258	3740	1.221	1.15	1.49	1.33	
22.3.20.	2820	48762	.842	3440	3232		89.5	4216	77	3.5	3258	3740	1.225	1.15	1.49	1.33	
12.4.20.	2910	48762	.815	3440	3232		89.5	4216	77	5	3258	3740	1.225	1.12	1.45	1.29	
26.4.20.	2935	48989	.812	3452	3247		89.5	4216	77	5	3258	3740	1.221	1.11	1.43	1.27	
10.5.20.	3040	48762	.781	3440	3232		89.5	4216	77	5	3258	3740	1.225	1.07	1.38	1.23	
24.5.20.	3120	48762	.761	3440	3232	18.4	89.5	4216	77	5	3258	3740	1.225	1.04	1.35	1.20	16.6
	Incr. of 0.3											Incr. of 9.9					

Very pale and thin. He is an old gastro-enterostomy case with persistent dyspeptic symptoms! Cough slight. Sputum 1¼ oz daily. T.B. not present. Signs indicated only slightly active double apical disease. His condition improved slightly during the period of observation. No change was detected in his physical signs, but he looked better and felt better and more active. Cough too was less severe.

No. 112. Name. J. McGhie. Age 42 yrs. Admitted 23. 4. 20. Admission 1st. TURBAN II.

Height 158 cms. Discharged – in residence.

Date.	V.Cap.	Weight in gms	V.C.Const. in W.	VC.Cal in W.	VC.Cal as % W.	% Dim of W.	Stem Lgth – L. in cms	VC.Cal in L.	Chest Meas. – Ch in cms	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L. & Ch.	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of V.C
24.4.20.	2625	51937	.946	3600	3442	8.6	86.5	3937	80.5	4	3560	3764	1.094	1.35	1.50	1.43	30.3
3.5.20.	2515	52391	.994	3623	3472		86.5	3937	80.5	4	3560	3764	1.087	1.41	1.56	1.49	
24.5.20.	3010	53298	.841	3668	3532	6.8	86.5	3937	80.5	4	3560	3764	1.073	1.25	1.31	1.25	20.0
					Incr. of 1.8												Incr. of 10.3.

Pale man of bad physique. Cough severe during night. Sputum 2 oz. daily. T.B. not found. He complained of severe exertion dyspnoea. Physical signs showed only apparently slightly active disease of both upper lobes of Turban 11 extent. He was showing signs of undoubted improvement when the observations were stopped.

No. 113. Name N. Morrison Age 32 yrs. Admitted 24.5.20. Admission 1st. TURBAN II.

Height 163.5 cms. Discharge – in residence.

Date.	V.Cap.	Weight in gms	VC.Const in W.	V.C.Cal in W.	VC.Cal as % W.	% Dim of W.	Stem lgth = L in cms.	VC.Cal in L.	Chest Meas. = Ch in cms.	Expn. in cms.	VC.Cal in Ch	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
25.5.20.	3000	53978	.851	3701	3577	8.2	87.5	4030	86	7	4063	4067	1.088	1.35	1.34	1.35	26.3

Man of good physique but thin. He had apparently lost weight. Cough not severe. Sputum 1½ oz. daily. T.B. not present. Signs indicated moderately active disease of both upper lobes. Initial observation only was made.

No. 114. Name T. Beattie. Age 25 yrs. Admitted 30.4.20. Admission IInd. TURBAN II.

Height 172 cms. Discharged - In residence.

Date	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of V.C.
1.5.20.	2875	57381	.928	3868	3802	13.2	92	4455	83.5	6	3830	4152	1.152	1.33	1.55	1.44	30.8
10.5.20.	3130	58061	.860	3901	3847		92	4455	83.5	6	3830	4152	1.142	1.22	1.42	1.33	
24.5.20.	3270	58061	.823	3901	3847		92	4455	83.5	6	3830	4152	1.142	1.17	1.36	1.27	
31.5.20.	3270	58061	.823	3901	3847	12.5	92	4455	83.5	6	3830	4152	1.142	1.17	1.36	1.27	21.3
				Incr. of 0.7													Incr. of 9.5.

Pale thin man who looked very anaemic. He had very severe albuminurie. Cough was not severe, and sputum only of moderate amount. Physical signs indicated only mildly active disease of R. upper lobe. T.B. were present in sputum in small numbers. He was showing evidence of slight general improvement when the readings were stopped. His case is instructive. His pallid appearance suggested extensive disease and advanced toxaemia. Physical signs showed only restricted quiescent disease. The V.C. diminution is in keeping with the physical signs.

No. 115. Name R. Duncan. Age 39 yrs. Admitted 3.6.20. Admission 1st. TURBAN II.

Height 171 cms. – Discharged – in residence.

Date	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch in cms	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
4.6.20.	3425	59648	.801	3977	3952	4.6	89	4169	85	5.5	3969	4089	1.048	1.16	1.22	1.19	16.2

Pale man of fair physique. Cough severe. Sputum 1 oz daily. T.B. not present. Physical signs indicated very mildly active disease of both lungs of Turban 11 extent. Initial observation only was taken.

No. 116. Name J. Ferrier. Age 20 yrs. Admitted 3.6.20. Admission 1st. TURBAN II.

Height 154.5 cms. Discharged – in residence.

Date.	V.Cap.	Weight in gms.	VC.Const. in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms	VC.Cal in L	Chest Meas. = Ch in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	%Dim of VC
5.6.20.	3000	46267	.728	3312	3066	8.7	83	3626	83	3.5	3784	3624	1.094	1.26	1.21	1.21	17.2

Man of fair physique and nutrition, though very pale. Cough was slight and sputum ½ oz daily. T.B. were not present. Signs indicated only mildly active disease of both upper lobes of Turban 11 extent. Initial observation only wasmade.

No. 117. Name J. Stewart Age 23.yrs. Admitted 18.4.19. Admission 1st. TURBAN II.

Height 182 cms. Discharged - in residence.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L.	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
25.11.19.	3300	68040	.913	4373	4508	2.9	92.5	4503	90	3.5	4450	4500	1.03	1.35	1.37	1.36	26.7
1.12.19.	3300	675864	.909	4352	4478		92.5	4503	90	3.5	4450	4500	1.04	1.35	1.37	1.36	
15.12.19.	3100	68720	.980	4404	4553		92.5	4503	90	3.5	4450	4500	1.02	1.43	1.44	1.45	
29.12.19.	3090	67586	.971	4352	4478		92.5	4503	90	3.5	4450	4500	1.04	1.44	1.45	1.45	
12. 1.20.	3190	68040	.945	4373	4508		92.5	4503	90	3.5	4450	4500	1.03	1.39	1.412	1.411	
26. 1.20.	3310	67813	.909	4362	4493		92.5	4503	90	3.5	4450	4500	1.032	1.34	1.36	1.36	
9.2. 20.	3540	68040	.852	4373	4508		92.5	4503	90	3.5	4450	4500	1.03	1.26	1.27	1.27	
23. 2.20.	3450	68947	.883	4414	4568		92.5	4503	90	3.5	4450	4500	1.020	1.29	1.30	1.30	
8. 3.20.	3200	67360	.936	4341	4463		92.5	4503	90	3.5	4450	4500	1.037	1.39	1.40	1.40	
29. 3.20.	3580	67813	.841	4362	4493		92.5	4503	90	3.5	4450	4500	1.032	1.24	1.26	1.26	20.5
17. 4.20.	3540	66906	.842	4320	4433		92.5	4503	90	5	4450	4500	1.042	1.26	1.27	1.27	
31. 4.20.	3665	66452	.803	4299	4403	4.6	92.5	4503	90	5	4450	4500	1.047	1.22	1.23	1.23	18.5

Decr. of 1.7 Incr. of 8.2

This man had been 7 months in residence when readings were begun. At this latter time he had a moderately active lesion of R. upper lobe of Turban II extent. Sputum was i oz daily and contained abundant T.B. He had many vicissitudes during his period of observation but made improvement on the whole. He felt more active and had less cough. T.B. remained numerous in sputum. Fall of V.C. on 8th March was associated with evening pyrexia of a few days duration and slightly increased cough.

No. 118. Name M. Hill. Age 45 yrs. Admitted 2.9.19. Admission 1st. TURBAN III.

Height 174 Cms. Discharged 14.12.19.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms	VC.Cal in L	Chest Meas. = Ch in cms.	Expn. in cms.	VC.Cal in Ch	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of V.C.
27.11.19.	2860	64411	1.014	4203	4268	5.7	92	4455	93	2	4752	4625	1.059	1.662	1.557	1.614	38.2
3.12.19.	2800	64411	1.035	4203	4268	5.7	92	4455	93	2	4752	4625	1.501	1.694	1.591	1.652	39.5
			Stationary														Decr. of 1.3

This man was very ill on admission. He was slightly cyanosed, very weak and dyspnoeic on any exertion. Cough was severe and sputum purulent and averaging 5 oz daily. T.B. were present in small numbers. Signs indicated active disease of R. lung of Turban lll. extent. He was finally transferred to a Tuberculosis Hospital.
He had been 3 months in residence when the above readings were taken.

No. 119. Name J. Grant Age 51 yrs. Admitted 5.9.19. Admission 1st. TURBAN III.

Height 166 cms. Discharged 19.12.19.

Date	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth - L in cms	VC.Cal in L	Chest Meas. = Ch in cms.	Expn in cms.	VC.Cal in Ch	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
26.11.19.	1900	55340	1.368	3768	3667	8.6	88.5	4122	81.5	2.5	3649	3899	1.983	1.094	2.179	2.026	51.3
9.12.19.	1660	54432	1.547	3724	3607	9.7	88.5	4122	81.5	2.5	3649	3899	2.243	2.198	2.483	2.348	57.4
			Decr. of 1.1														Decr. of 6.1

Very emaciated man. He had been 3½ months in the Institution when these readings were taken. Cough was severe. Sputum 3½ daily. Disease was in both upper lobes and of Turban 111 extent. T.B. present in sputum in small numbers. He left of his own accord.

No. 120. Name J. McCleary. Age 26 yrs. Admitted 30.5.19. Admission IInd. TURBAN III.

Height 166.5 cms. Discharged 14.12.19.

Date	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
27.11.19.	900	46720	2.577	3336	3096	16.3	87	3984	82	2	3694	3856	1.194	4.104	4.426	4.284	76.7
9.12.19.	1010	46720	2.278	3336	3096	16.3	87	3984	82	2	3694	3856	3.303	3.657	3.944	3.818	73.8
		Stationary											Incr. of 2.9				

Very thin and toxic looking man. Cough was not very severe. Sputum 2 oz. daily containing very abundant T.B. Physical signs were those of advanced, active double pulmonary disease. He had been 6 months in the Institutionwhen these readings were taken. He was finally transferred to a Tuberculosis Hospital where he died.

No. 121. Name P. Kenna. Age 32 yrs. Admitted 3.10.19. Admission 1st. TURBAN III.

Height 165 cms. Discharged 26.12.19.

Date	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms	VC.Cal in L	Chest Meas. = Ch. in cms	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
2.12.19	2070	55566	1.259	3779	3682	17.9	91	4358	85	3.5	3970	4180	1.15	1.91	2.10	2.02	50.5
16.12.19	2010	56700	1.31	3835	3757	16.6	91	4358	85	3.5	3970	4180	1.13	1.97	2.16	2.07	51.9
					Incr. of 1.3												Decr. of 1.4

This man had been 9 weeks in residence when these readings were taken. He was of poor physique. Cough was severe. Sputum ½ oz. daily. T.B. not present. Signs indicated fairly extensive, but apparently fairly quiescent, disease of both lungs of Turban 111. extent. He was finally discharged at his own request.

No. 122. Name T. Vallery. Age 42 yrs. Admitted 2.5.19. Admission Vth. TURBAN III.

Height 167.5 cms. Discharged 9.1.20.

Date	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms	VC.Cal in L	Chest Meas. = Ch in cms	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC
26.11.19.	2100	61236	1.331	4053	4057	+ 7.6	85	3802	90	1.5	4450	4135	.938	2.12	1.81	1.97	49.2
2.12.19.	2000	60782	1.39	4032	4027		85	3802	90	1.5	4450	4135	.942	2.22	1.901	2.06	
16.12.19.	2050	60782	1.35	4032	4027		85	3802	90	1.5	4450	4135	.942	2.17	1.85	2.01	
30.12.19.	2070	62370	1.37	4107	4132		85	3802	90	1.5	4450	4135	.925	2.15	1.83	2.006	
6. 1.20.	2210	62824	1.28	4129	4162	+8.6	85	3802	90	1.5	4450	4135	.920	2.01	1.72	1.87	46.6

Incr. of 1. 0 Incr. of 2.6

This man had been 6½ months in residence when these observations were begun. He was a man of good physique and good nutrition. Cough was severe. Sputum 2 oz daily. T.B. had been present in 1913 but were not detected during his present stay. Physical signs were those of extensive, moderately active disease of Turban III. extent, involving both lungs. No change took place in his condition during his period of observation. He was finally transferred to a Tuberculosis Hospital.

No. 123. Name F. Innes. Age 32yrs. Admitted 2.5.19. Admission 1st. TURBAN III.

Height 163.5 cms. Disaharged 9.1.20.

Date	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
25.11.19.	1800	61236	1.553	4053	4057	0.6	88	4076	90	2	4450	4281	1.005	2.47	2.26	2.38	58.0
2.12.19.	1650	61009	1.690	4043	4042		88	4076	90	2	4450	4281	1.008	2.69	2.47	2.59	
16.12.19.	1510	61690	1.86	4075	4088		88	4076	90	2	4450	4281	1.0002	2.94	2.72	2.84	
2. 1.20.	1550	62370	1.828	4107	4132	+0.7	88	4076	90	2	4450	4281	.992	2.87	2.65	2.77	63.8

Incr. of 1.3 Decr. of 5.3

This man had been 6½ months in residence when his observations were begun. Cough was severe. Sputum averaged 5 oz daily. T.B. were present in small numbers. Dyspnoea on any exertion was very marked. Signs indicated very extensive active double pulmonary disease. His condition was becoming worse and he was transferred to a Tuberculosis Hospital.

No. 124. Name P. McCabe. Age 25 yrs. Admitted 10.1.20. Admission 1st TURBAN III.

Height 163.5 cms. Discharged 14.1.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L.	Chest Meas. = Ch in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of V.C.
10.1.20.	2030	56246	1.295	3813	3727	2.1	86	3893	85	4	3969	3951	1.021	1.95	1.91	1.94	48.7

Thin pale man of fair physique. Cough was not severe. Sputum averaged 2 Oz daily. T.B. were not present. Signs indicated extensive fibroid disease of both lungs. He was very dyspnoeic on any exertion. He refused to remain in the Institution.

No. 125. Name J. Currie. Age 19.yrs. Admitted 6.6.19. Admission 111rd. TURBAN III.

Height 166 cms. Discharged 16.1.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L.	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
25.11.19.	1400	52618	1.798	3634	3487	12.9	89	4169	83	2.5	3785	3993	1.147	2.70	2.978	2.852	64.9
8.12.19.	1580	52618	1.587	3634	3487		89	4169	83	2.5	3785	3993	1.147	2.395	2.636	2.527	60.4
22.12.19.	1250	52618	2.006	3634	3487		89	4169	83	2.5	3785	3993	1.147	3.028	3.335	3.194	
29.12.19.	1300	52618	1.928	3634	3487		89	4169	83	2.5	3785	3993	1.147	2.911	3.206	3.091	
12. 1.20.	1430	51710	1.731	3589	3427	13.9	89	4169	83	2.5	3785	3993	1.161	2.64	2.91	2.79	64.2

Decr. of 1.0 Incr. of 0.7

This man had been 5½ months in the Institution when his observations were begun. He was thin and pale. Cough was severe. Sputum averaged 4 oz daily. Abundant T.B. were present. Signs indicated very extensive active double pulmonary disease with extensive fibrotic change. Dyspnoea on exertion was marked. He was making no progress and was transferred to a Tuberculosis Hospital.

No. 126. Name J. Gallagher. Age 17 yrs. Admitted 17.6.19. Admission 11nd. TURBAN III.

Height 154.5 cms. Discharged 18.1.20.

Date	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
27.11.19.	1180	44906	1.895	3242	2975	6.2	81	3453	79.5	1.5	3472	3480	1.065	2.942	2.926	2.949	66.1
9.12.19.	1190	45814	1.907	3289	3036		81	3453	79.5	1.5	3472	3480	1.049	2.917	2.901	2.924	
23.12.19.	1280	45587	1.766	3277	3021		81	3453	79.5	1.5	3472	3480	1.053	2.712	2.698	2.719	
6.1.20.	1230	45587	1.838	3277	3021		81	3453	79.5	1.5	3472	3480	1.053	2.82	2.80	2.83	
17.1.20.	1250	45587	1.808	3277	3021	5.1	81	3453	77.5	1.5	3300	3395	1.053	2.64	2.76	2.71	63.2
	Incr. of 1.1																Incr. of 2.9

This boy had been 6 months in residence when his observations were begun. He was very pale and of poor general condition. Cough was severe. Sputum averaged 4 oz. daily, and contained abundant T.B. Signs indicated extensive active double pulmonary disease. He was making no progress and was transferred to a Tuberculosis Hospital.

No. 127. Name G. Gallagher. Age 15 yrs. Admitted 14.11.19. Admission 1st. TURBAN III.

Height 146.5 cms. Discharged 23.1.20.

Date,	V.Cap.	Weight in gms	VC. Const in W.	VC. Cal in W.	VC. Cal as % W.	% Dim of W.	Stem Lgth = L in cms	VC. Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC. Cal in Ch.	VC. Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC
26.11.19.	1500	37649	1.313	2856	2495	8.5	77	3130	74	3	3008	3080	1.09	2.005	2.08	2.05	50.0
11.12.19.	1500	38556	1.336	2905	2555		77	3120	74	3	3008	3080	1.09	2.005	2.08	2.05	
25.12.19.	1580	38556	1.26	2905	2555		77	3120	74	3	3008	3080	1.07	1.90	1.97	1.94	
1. 1.20.	1680	37876	1.177	2868	2510		77	3120	74	3	3008	3080	1.08	1.78	1,85	1.82	
15. 1.20.	1890	39010	1.069	2929	2585		77	3120	74	3	3008	3080	1.065	1.59	1.65	1.63	
22. 1.20.	1890	39010	1.069	2929	2585	6.2	77	3120	74	3	3008	3080	1.065	1.59	1.65	1.63	38.7

Incr. of 2.3

Incr. of 11.3

Thin boy of moderate physique, but pale. Slight cough. Scanty sputum. T.B. not present. Signs in chest indicated quiescent disease of Turban 111 extent. He improved greatly during his period of residence and left the Institution much fitter in every way.

No. 128. Name J. Foyer. Age 44 yrs. Admitted 12.8.19. Admission 1st. TURBAN III..

Height 168.5 cms. Discharged 23.1.20.

Date	V.Cap.	Weight in gms.	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms	VC.Cal in L	Chest Meas. = Ch in cms.	Expn. in cms	VC.Cal in Ch	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
3.12.19.	1900	58514	1.424	3923	3877	+3.2	85	3802	85	1	3969	3905	.969	2.08	2.000	2.05	51.4
15.12.19.	1400	59195	1.94	3955	3922		85	3802	85	1	3969	3905	.961	2.83	2.72	2.79	
12.1. 20.	1720	59875	1.600	3988	3967	+4.8	85	3802	85	1	3969	3905	.953	2.31	2.21	2.27	56.0

Incr. of 1.6 Decr. of 4.6

This patient had been 3½ months in residence when readings were begun. At this time he had slight cough: but no sputum. Physical signs indicated extensive quiescent disease of both lungs with much fibroid change in the R. lung. He was dyspnoeic only on heavy exertion. No change took place in his condition during his period of observation. He was discharged at his own request.

No. 129 Name M. Jurewiez. Age 29 yrs. Admitted 14.7.19. Admission 1st. TURBAN III

Height 181.5 cms. Discharged 23.1.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
27.11.19.	2550	75751	1.278	4724	5019	+9.6	90.5	4311	95	2	4958	4648	.912	1.94	1.68	1.82	45.2
5.12.19.	2410	75071	1.343	4693	4974		90.5	4311	95	2	4958	4648	.918	2.05	1.78	1.928	
19.12.19.	2590	75524	1.25	4714	5004		90.5	4311	95	2	4958	4648	.914	1.914	1.66	1.79	
2. 1.20.	2450	75298	1.32	4704	4989		90.5	4311	95	2	4958	4648	.916	2.02	1.76	1.89	
16. 1.20.	2520	74617	1.28	4673	4944	+8.4	90.5	4311	95	2	4958	4648	.922	1.96	1.71	1.84	45.8
			Decr. of 1.2														Decr. of 0.6

This man had been 4½ months in residence when his readings were begun. He was of excellent physique and good nutrition. He had morning cough and sputum which averaged 1½ oz daily. T.B. were present in small numbers. Signs indicated extensive fibrotic disease of left upper lobe and restricted quiescent disease of R. apex. No change occurred during his period of observation. He was discharged at his own request.

No. 130. Name H. Logan. Age 16 yrs. Admitted 7.3.19. Admission 1st. TURBAN III!

Height 141.5 cms. Discharged 21.3.20.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
27.11.19.	1250	37195	1.562	2831	2415	+ 0.9	73	2805	70.5	4	2730	2782	.99	2.18	2.24	4.22	55.1
10.12.19.	1240	37649	1.588	2856	2495		73	2805	70.5	4	2730	2782	.98	2.20	2.34	2.24	
24.12.19.	1420	38102	1.39	2880	2525		73	2805	70.5	4	2730	2782	.97	1.92	1.97	1.95	
31.12.19.	1500	38556	1.336	2905	2555		73	2805	70.5	4	2730	2782	.96	1.82	1.87	1.85	46.1
14.1.20.	1500	38723	1.34	2917	2570		73	2805	70.5	4	2730	2782	.961	1.82	1.87	1.85	46.1
21.1.20.	4480	38329	1.35	2893	2540	+ 3.1	73	2805	70.5	4	2730	2782	.969	1.84	1.89	1.87	46.8

Incr. of 2.2.

Incr. of 8.3.

This boy had been 8 months in residence when these observations were begun. He was then of good nutrition and good general condition. Cough and sputum were slight. T.B. were not present. Signs indicated extensive quiescent disease of both lungs. Slight change took place in his condition during his period of observation and he finally was discharged at his own request with disease quite quiescent.

No. 131. Name Wm.McGill. Age 25 yrs. Admitted 23.1.20. Admission 1st. TURBAN III.

Height 151.5 cms. Discharged – 26.1.20.

Date	V.Cap.	Weight in gms.	VC.Const. in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
25.1.20.	1700	46040	1.34	3301	3051	7.9	82.5	3582	77.5	5	3300	3456	1.085	1.94	2.107	2.03	50.8

Thin poor specimen of a man. Cough was severe but sputum was not copious. T.B. were not found. Signs in chest indicated extensive active disease of left upper lobe and mildly active disease of R. apex. He was found to be suffering from gonorrhoea and was sent back for appropriate treatment.

No. 132. Name R. Camduff Age 23 yrs. Admitted 13.6.19. Admission 1st. TURBAN III.

Height 194.5 cms. Discharged 30.1.20.

Date.	V.Cap.	Weight in gms.	VC.Const in W	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
28.11.19.	3200	80287	1.062	4926	5320	+8.2	93	4552	90	3.5	4450	4599	.92	1.390	1.42	1.43	30.5
11.12.19.	3180	82328	1.088	5016	5455		93	4552	90	3.5	4450	4599	.907	1.399	1.43	1.44	
25.12.19.	3200	82328	1.08	5016	5455		93	4552	90	3.5	4450	4599	.907	1.390	1.42	1.43	
8. 1.20.	3210	81648	1.07	4986	5410		93	4552	90	3.5	4450	4599	.912	1.38	1.41	1.42	
22. 1.20.	3020	81648	1.139	4986	5410		93	4552	90	3.5	4450	4599	.912	1.47	1.507	1.52	
29. 1.20.	3330	81648	1.033	4986	5410	+9.5	93	4552	90	3.5	4450	4599	.912	1.34	1.37	1.39	27.6

Incr. of 1.3 Incr. of 2.9

This man had been 5⅛ months in residence when his readings were begun. By this time he had improved immensely. On admission he had (had) severe cough and slight sputum containing abundant T.B. By November cough and spit had disappeared and signs in chest were those of extensive arrested disease of both lungs. His condition was stationary throughout his period of observation. There was no appreciable cause for fall of V.C. on 22nd January.

No. 133. Name Alex. Hill. Age 16 yrs. Admitted 9.12.19. Admission IInd. TURBAN III.

Height 150 cms. Discharged 30.1.20.

Date.	V.Cap.	Weight in gms	VC. Const in W.	VC. Cal in W.	VC.Cal as % W	% Dim of W	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch in cms.	Expn. in cms.	VC.Cal in ch	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
10.12.20.	670	31752	2.60	2526	2104	13.5	74.5	2921	68	2	2541	2738	1.156	3.792	4.425	4.086	75.6
23.12.20.	690	32432	2.56	2565	2149		74.5	2921	68	2	2541	2738	1.138	3.682	4.433	3.968	
30.12.20.	730	31525	2.37	2513	2089		74.5	2921	68	2	2541	2738	1.162	3.48	4.001	3.75	
13. 1.20.	740	31525	2.34	2513	2089		74.5	2921	68	2	2541	2738	1.162	3.43	3.94	3.69	
20. 1.20.	730	30845	2.33	2474	2044		74.5	2921	68	2	2541	2738	1.180	3.43	3.94	3.69	
27. 1.20.	800	31072	2.14	2487	2059	14.8	74.5	2921	68	2	2541	2738	1.174	3.18	3.65	3.42	70.8

Decr. of 1.3 Incr. of 4.8

This boy was pale and emaciated on admission. Cough was not severe. Sputum ½ oz daily. T.B. were not found in the admission specimen. Physical signs revealed extensive active disease of both lungs. No change took place during his period of stay and he was finally discharged at his mother's request. T.B. were numerous in the discharge sample of sputum. This boy was afebrile; but any form of exercise caused intense dyspnoea.

No. 134. Name Wm. Newton. Age 22 yrs. Admitted 23.10.19. Admission 1st **TURBAN III.**

Height 158.5 cms. Discharged 6.2.20.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch.	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
28.11.19.	1700	48535	1.391	3432	3216	14.9	87.5	4030	80.5	3	3560	3807	1.174	2.094	2.370	2.239	55.4
4.12.19.	1700	48989	1.392	3452	3247		87.5	4030	80.5	3	3560	3807	1.167	2.082	2.357	2.226	
18.12.19.	2120	49216	1.127	3463	3262		87.5	4030	80.5	3	3560	3807	1.163	1.679	1.900	1.795	44.4
8. 1.20.	2050	49442	1.169	3475	3277		87.5	4030	80.5	3	3560	3807	1.159	1.73	1.96	1.85	
22. 1.20.	1800	47855	1.301	3394	3172	15.8	87.5	4030	80.5	3	3560	3807	1.187	1.98	2.24	2.12	52.3

Decr. of 0.9 Incr. of 3.1

This man had been 5 weeks in residence when his readings were begun. Cough was slight. Sputum was scanty. T.B. were not detected, but elastic tissue was present. Physical signs indicated extensive and apparently quiescent, disease of both lungs. No change occurred and his condition during his period of observation. He was finally discharged at his own request
Fall of V.C. on 22.1.20. due to coryza.

No. 135. Name J. McDonald. Age 39 yrs. Admitted 15.9.19. Admission IInd. TURBAN III.

Height 170.5 cms. Discharged 7.2.20.

Date	V.Cap	Weight in gms.	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal. in L.	Chest Meas. = Ch. in cms	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch.	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
3.12.20.	1500	51030	1.635	3555	3382	6.5	85	3802	82	3.5	3694	3767	1.069	2.46	2.54	2.51	60.0

Thin man emaciated to an extreme degree. Stem length in this case is inaccurate on account of a spinal kyphosis. W. diminution and V.C. diminution expressed are thus too small. He had severe and persistent cough, complete absence of sputum, and great dyspnoea on any exertion. He died in the Institution.
He was a case of very advanced fibro-caseous disease of both lungs.

No. 136 Name J. Murray Age 41 yrs. Admitted 24.10.19. Admission IInd TURBAN III

Height 166 cms. Discharged 20.2.20.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
25.11.19.	1900	60329	1.456	4010	3997	3.8	89	4169	86	3	4063	4137	1.039	2.13	2.19	2.17	54.1
2.12.19.	2100	60555	1.294	4020	4012		89	4169	86	3	4063	4137	1.037	1.93	1.98	1.97	
16.12.19.	1920	62597	1.48	4118	4148		89	4169	86	3	4063	4137	1.012	2.11	2.17	2.15	
13. 1.20.	2080	62597	1.365	4118	4148		89	4169	86	3	4063	4137	1.012	1.95	2.004	1.99	
27.1. 20.	2100	62824	1.35	4129	4162		89	4169	86	3	4063	4137	1.009	1.93	1.98	1.97	
10. 2.20.	2200	62824	1.29	4129	4162		89	4169	86	3	4063	4137	1.009	1.85	1.89	1.88	
17. 2.20.	2130	63277	1.34	4150	4192	0.5	89	4169	86	3	4063	4137	1.005	1.91	1.96	1.95	48.5

Incr. of 3.3 Uncr. of 5.6

This man had been 1 month in residence when his readings were begun. He was pale and of fair physique. Cough was severe. Sputum averaged 4 oz daily. T.B. were not found on examination. Physical signs indicated fairly extensive disease of both upper lobes, apparently of a mild degree of activity. He improved during his period of observation. Cough diminished in frequency and severity. Sputum fell to 1½ oz daily and he felt much fitter in every way.
Fall of V.C. on 16th December was due to coryza.

No. 137 Name E. Millar Age 36 yrs. Admitted 14.10.19. Admission 1st. TURBAN III.

Height 160.5 cms. Discharged 21.2.20.

Date	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms	VC.Cal in L	Chest Meas. - Ch in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
27.11.19.	1950	58288	1.384	3912	3862	+0.5	86	3893	85	1.5	3970	3951	.995	2.03	1.99	2.02	50.6
11.12.19.	2110	58968	1.289	3945	3907		86	3893	85	1.5	3970	3951	.97	1.88	1.84	1.87	
25.12.19.	2100	58968	1.290	3945	3907		86	3893	85	1.5	3970	3951	.987	1.89	1.85	1.88	
1. 1.20.	2090	58515	1.294	3923	3877		86	3893	85	1.5	3970	3951	.992	1.899	1.86	1.89	
22. 1.20.	2260	58968	1.204	3945	3907		86	3893	85	1.5	3970	3951	.987	1.75	1.72	1.75	
29. 1.20.	2210	58288	1.221	3912	3862		86	3893	85	1.5	3970	3951	.995	1.80	1.76	1.79	
11. 2.20.	2290	59195	1.19	3955	3922	+1.6	86	3893	85	1.5	3970	3951	.984	1.73	1.70	1.72	42.1

Incr. of 1.1 Incr. of 8.5

This patient had been 6 weeks in residence when his readings were begun. He was pale, but of good nutrition and physique. He had slight cough, and no sputum. Physical signs indicated extensive dry fibrosis of R. upper lobe and quiescent disease of left apex. His general condition improved greatly during his period of residence. His colour improved and he became very fit and active. He was finally transferred to a Tuberculosis Colony.

No. 138. Name W. McNally Age 22 yrs. Admitted 15.7.19. Admission 11nd TURBAN III.

Height 165.5 cms. Discharged 25.2.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of V.C.
27.11.19.	1200	58741	2.261	3934	3892	1.3	87	3984	86	4	4063	4044	1.01	3.38	3.32	3.37	70.4
5.12.19.	1500	58968	1.814	3945	3907		87	3984	86	4	4063	4044	1.007	2.70	2.65	2.69	
19.12.19.	2620	59432	1.04	3966	3937		87	3984	86	4	4063	4044	1.004	1.55	1.52	1.55	35.3
2. 1.20.	2080	60102	1.32	3999	3982		87	3984	86	4	4063	4044	.996	1.95	1.91	1.94	
16. 1.20.	2230	59422	1.23	3966	3937		87	3984	86	4	4063	4044	1.004	1.82	1.78	1.81	
30. 1.20.	2480	59648	1.106	3977	3952		87	3984	86	4	4063	4044	1.001	1.64	1.606	1.63	
13.2. 20.	2600	60556	1.05	4021	4012	+0.9	87	3984	86	4	4063	4044	.991	1.56	1.53	1.55	35.8

Incr. of 2.2 Incr. of 34.6

This patient had been 4½ months in residence when these observations were begun. He had slight cough and occasional scanty sputum. Physical signs were those of extensive fibroid disease of left lung with great flattening of the side and retraction of heart to left. Restricted mild disease of R. apex was present. He improved greatly during his period of observation and was finally transferred to a Tuberculosis Colony.
Fall of V.C. on 2.1.20 was associate-d with an exacerbation of bronchitis.
The first two V.C. readings are open to suspicion in this case. He appeared not to be making a full effort.

No. 139. Name T. Nelson Age 33 yrs. Admitted 24.10.19. Admission IInd TURBAN III.

Meight 172 cms. Discharged 27.2.19.

Date	V. Cap.	Weight in gms	VC. Const. in W.	VC. Cal in W	VC. Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC. Cal in L	Chest Meas. = Ch in cms.	Expn. in cms	VC. Cal in Ch	VC. Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
26.11.19.	2000	63504	1.44	4161	4208	2.4	90	4263	88	3.5	4254	4281	1.02	2.12	2.13	2.14	53.3
10.12.19.	1860	63958	1.55	4182	4238		90	4263	88	3.5	4254	4281	1.019	2.28	2.29	2.30	
24.12.19.	1760	65545	1.67	4257	4343		90	4263	88	3.5	4254	4281	1.001	2.41	2.43	2.45	
31.12.19.	1990	64865	1.46	4225	4298		90	4263	88	3.5	4254	4281	1.009	2.13	2.14	2.15	
14. 1.20.	1810	65772	1.63	4267	4358		90	4263	88	3.5	4254	4281	.999	2.35	2.36	2.37	
28. 1.20.	1900	65545	1.54	4257	4343		90	4263	88	3.5	4254	4281	1.001	2.23	2.24	2.25	
11. 2.20.	1910	66226	1.55	4288	4388		90	4263	88	3.5	4254	4281	.994	2.22	2.23	2.24	
25.2.20.	1800	65092	1.62	4235	4313	0.7	90	4263	88	5	4254	4281	1.006	2.36	2.37	2.38	58.0

Incr. of 1.7 Decr. of 4.7

Pale man of fair physique. He had been 1 month in residence when theseobservations were begun. He had slight morning cough and sputum which averaged 1 oz daily and contained numerous T.B. Physical signs indicated extensive fibroid disease of whole of left lung and a small faintly active lesion of R. apex. His condition remained stationary and he was finally discharged at his own request. Morning cough and scanty sputum containing numerous tubercle bacilli persisted. Note increasing W and oscillating V.C.

No. 140. Name R. Boyde. Age 20 yrs. Admitted 6.12.18. Admission 1st. TURBAN III.

Height 166 cms. Discharged 11.6.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth - L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of V.C.
3.3.20.	1490	51257	1.65	3566	3397	6.2	85	3802	84.5	3.5	3923	3882	1.066	2.63	2.55	2.60	61.6

This boy had been a patient in the Institution since Dec. 1918. i.e. two years before the reading was taken. He had a tendency to severe haemoptyses and on that account repeated observations were mot made. He was of good physique but very pale with severe cough and sputum which averaged 3 oz daily. T.B. were present in small numbers. His physical signs indicated extensive fibrotic disease of R. lung and an area of activity at the left apex. His condition was remaining perfectly stationary.

No. 141. Name J. Turnbull. Age 39 yrs. Admitted 6.2.20. Admission IIIrd TURBAN III

Height 161 cms. Discharged 5.3.20.

Date	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms	VC.Cal in L	Chest Meas. = Ch in cms	Expn. in cms	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of V.C.
9.2.20.	2450	51257	1.004	3566	3397	10.6	87	3984	82	4	3694	3856	1.127	1.50	1.63	1.57	,36.5
24.2.20.	2190	51710	1.13	3589	3427	10.0	87	3984	82	4	3694	3856	1.110	1.69	1.82	1.76	43.2

Incr. of 0.6 Decr. of 6.7

Thin poor specimen of a man. Cough was severe and sputum averaged 3 oz daily. T.B. were not present. His physical signs indicated extensive fibroid disease of both upper lobes of apparently a fairly dry character. He refused to remain in the Sanatorium.

No. 142. Name John Campbell. Age 35 yrs. Admitted 9.9.19. Admission 11nd TURBAN III

Height 175 cms. Discharged 19.3.20.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms	VC.Cal in L	Chest Meas. = Ch in cms.	Expn. in cms.	VC.Cal in Ch	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
25.11.19.	1300	60329	2.135	4010	3997	5.0	89.5	4216	83	1.5	3784	4015	1.05	2.91	3.24	3.08	67.6
1.12.19.	1250	59875	2.201	3988	3967		89.5	4216	83	1.5	3784	4015	1.06	3.02	3.37	3.21	
15.12.19.	1230	59875	2.237	3988	3967		89.5	4216	83	1.5	3784	4015	1.06	3.07	3.42	3.26	
29.12.19.	1110	59195	2.45	3955	3922		89.5	4216	83	1.5	3784	4015	1.07	3.41	3.79	3.61	
12. 1.20.	980	58061	2.64	3901	3847		89.5	4216	83	1.5	3784	4015	1.080	3.86	4.30	4.09	
19. 1.20.	1020	58061	2.64	3901	3847		89.5	4216	82	1.5	3694	3967	1.080	3.62	4.13	3.89	
2. 2.20.	1280	58061	2.102	3901	3847		89.5	4216	82	1.5	3694	3967	1.080	2.88	3.29	3.09	
16. 2.20.	1300	57834	2.06	3890	3832		89.5	4216	82	1.5	3694	3967	1.084	2.84	3.24	3.05	
1. 3.20.	1350	57834	1.98	3890	3832	7.7	89.5	4216	82	1.5	3694	3967	1.084	2.74	3.12	2.94	66.0

Decr. of 2.7 Incr. of 1.6

This man had been 2½ months in the Institution when his observations were begun. He had severe cough and sputum which averaged 3 oz daily and contained fairly numerous T.B. He was very thin and in bad general condition. Physical signs showed extensive fibro - caseous disease of left upper lobe and a patch of active disease at R.apex. He made no improvement during his stay. Cough and sputum remained unchanged and he was dyspnoeic on any exertion. He was finally discharged at his own requeste
Big fall of V.C. on 12th Jan. was associated with exacerbation of cough and increase of sputum.

No. 143 Name J. Davidson Age 20 yrs. Admitted 3.10.19. Admission 1st. TURBAN LII.

Height 172 cms. Discharged 1.4.20.

Date	V.Cap.	Weight in gms	VC.Const in W.	VC. Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms	VC.Cal in L	Chest Meas. = Ch in cms	Expn. in cms	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
25.11.19.	2500	59422	1.094	3966	3937	9.0	91	4358	85	3	3964	4181	1.098	1.58	1.74	1.67	40.0
14. 1.20.	1960	59875	1.404	3988	3967		91	4358	85	3	3964	4181	1.092	2.02	2.23	2.13	
28. 1.20.	2130	60329	1.29	4010	3997		91	4358	85	3	3964	4181	1.086	1.86	2.04	1.96	
11. 2.20.	2200	61009	1.27	4043	4042		91	4358	85	3	3964	4181	1.077	1.80	1.98	1.90	
25. 2.20.	2210	61690	1.27	4075	4088		91	4358	85	3	3964	4181	1.069	1.79	1.97	1.89	
9. 3.20.	2170	61916	1.29	4085	4088		91	4358	85	3	3964	4181	1.066	1.82	2.00	1.92	
23. 3.20.	2200	62824	1.29	4129	4162	5.3	91	4358	85	5	3964	4181	1.055	1.80	1.98	1.90	47.4

Incr. of 3.7 Decr. of 7.4

This patient had been 1½ months in residence when his observations were begun. He was of bad physique and bad general condition. Cough was severe. Sputum averaged ¾ oz daily and contained numerous T.B. Physical signs indicated diffuse infiltrative disease of both lungs, the signs being fairly dry in character. He made no improvement during his period of observation and was finally discharged at his own request.

No. 144. Name J. Marshall. Age 30 yrs. Admitted 23.5.19. Admitted IInd. TURBAN III.

Height 182 cms. Discharged 9.4.20.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W	VC.Cal as % W	% Dim of W	Stem Lgth = L in cms	VC.Cal in L	Chest Meas. = Ch in cms.	Expn. in cms.	VC.Cal in ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of V.C.
25.11.19.	1700	60329	1.633	4010	3997	10.0	92	4455	83.5	2.5	3828	4152	1.11	2.25	2.62	2.44	59.1
1.12.19.	1800	60782	1.545	4032	4027		92	4455	83.5	2.5	3828	4152	1.104	2.12	2.47	2.30	
15.12.19.	1780	61009	1.56	4043	4042		92	4455	83.5	2.5	3828	4152	1.101	2.15	2.50	2.33	
29.12.19.	1330	61009	2.09	4043	4042		92	4455	83.5	2.5	3828	4152	1.101	2.88	3.35	3.12	
12. 1.20.	1780	60329	1.55	4010	3997		92	4455	83.5	2.5	3828	4152	1.11	2.15	2.50	2.33	
26. 1.20.	1680	61463	1.66	4064	4072		92	4455	83.5	2.5	3828	4152	1.09	2.28	2.65	2.47	
9. 2.20.	1570	62143	1.80	4096	4118		92	4455	83.5	2.5	3828	4152	1.088	2.44	2.84	2.64	
23. 2.20.	1570	62597	1.81	4118	4148		92	4455	83.5	2.5	3828	4152	1.082	2.44	2.84	2.64	
8. 3.20.	1570	61916	1.79	4085	4102		92	4455	83.5	2.5	3828	4152	1.090	2.44	2.84	2.64	
22. 3.20.	1780	61690	1.58	4075	4088		92	4455	83.5	2.5	3828	4152	1.093	2.15	2.50	2.33	
5. 4.20.	1920	61690	1.46	4075	4088	8.6	92	4455	83.5	2.5	3828	4152	1.093	1.99	2.32	2.16	53.8

Incr. of 1.4 Incr. of 5.5

This man had been 6 months in residence when readings were begun. He was of bad physique but of fair general condition. Dough was slight. Sputum averaged 1½ oz daily. T.B. were not present in sputum. Physical signs indicated extensive fibroid disease of both lungs, signs being however dry in character. He was fit for a considerable amount of exercise performed slowly. Otherwise he was liable to dyspnoea. He improved during his period of observation.
Note oscillating V.C. He showed no evidence of toxaemia, disease being almost entirely quiescent.

No. 145. Name Wm. Hopewell. Age 33 yrs. Admitted 6.2.20. Addmission IInd. TURBAN III.

Height 168 cms. Discharged 13.4.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms	VC.Cal in L	Chest Meas. = Ch. in cms	Expn. in cms	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of V.C.
7.2.20.	1780	45133	1.26	3254	2991	22.1	89	4169	79	3.5	3429	3800	1.281	1.92	2.34	2.14	53.2
18.2.20.	1550	47401	1.500	3371	3141		89	4169	79	3.5	3429	3800	1.237	2.21	2.69	2.45	
3.3.20.	1680	48535	1.41	3429	3217		89	4169	79	3.5	3429	3800	1.215	2.04	2.48	2.26	
24.3.20.	2120	48762	1.12	3440	3232		89	4169	79	3.5	3429	3800	1.212	1.61	1.97	1.79	44.0
5.4.20.	2190	48762	1.09	3440	3232	17.5	89	4169	80.5	4.5	3560	3872	1.212	1.62	1.90	1.77	43.4

Incr. of 4.6

Incr. of 9.8

Man of poor physique, pale and emaciated. Cough was severe. Sputum averaged ½ oz daily. T.B. were not present. Physical signs indicated extensive fibroid disease of both lungs, signs being however dry in character. He improved during his period of residence. Cough diminished in frequency and intensity and sputum practically disappeared. He felt stronger and his exercise tolerance increased. He was discharged at his own request to resume work as foreman in a golfball factory.

No. 146 Name J. Bradley. Age 24 yrs. Admitted 30.1.20. Admission 1st. TURBAN III.

Height 156 cms. Discharged 30.4.20.

Date.	V. Cap.	Weight in gms	VC. Const in W	VC. Cal in W	VC. Cal as % W	% Dim of W.	Stem Lgth = L in cms	VC. Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC. Cal in Ch.	VC. Cal in L &Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
31.1.20.	2020	47628	1.155	3382	3156	6.8	83	3626	82.5	3	3740	3701	1.072	1.85	1.79	1.83	45.4
9.2.20.	2000	49442	1.19	3475	3277		83	3626	82.5	3	3740	3701	1.043	1.87	1.81	1.85	
23.2.20.	2040	49896	1.23	3497	3307		83	3626	82.5	3	3740	3701	1.037	1.83	1.77	1.81	
4.3.20.	2040	49896	1.23	3497	3307		83	3626	82.5	3	3740	3701	1.037	1.83	1.77	1.81	
18.3.20.	2140	50803	1.14	3543	3367		83	3626	82.5	3	3740	3701	1.023	1.75	1.69	1.73	
1.4.20.	2340	50803	1.04	3543	3367		83	3626	82.5	4.5	3740	3701	1.023	1.60	1.55	1.59	36.8
15.4.20.	2640	50803	.926	3543	3367		83	3626	82.5	4.5	3740	3701	1.023	1.42	1.37	1.40	
22.4.20.	2670	51257	.922	3566	3397		83	3626	82.5	4.5	3740	3701	1.016	1.40	1.36	1.38	
29.4.20.	2670	50803	.915	3543	3367	2.3	83	3626	82.5	4.5	3740	3701	1.023	1.40	1.36	1.38	27.9
			Incr. of 4.5														Incr. of 17.5

Thin pale man. He complained of morning cough and sensation of fatigue. Sputum averaged ½ oz daily. T.B. were not present. Physical signs indicated extensive mildly active lesion of R. upper lobe and similar lesion of left lower lobe. He improved very much under treatment. Cough diminished greatly and sputum became fractional in amount. He felt very fit and well and left to resume work as a labourer. Note progressive steady rise of V.C.

No. 147. Name C. Blair. Age 56 yrs. Admitted 6.2.20. Admission 1st. TURBAN III.

Height 166 cms. Discharged 13.5.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of V.C.
9.2.20.	2160	54659	1.19	3735	3622	16.2	92	4455	84	3	3876	4177	1.192	1.79	2.06	1.93	48.3
24.2.20.	2260	54886	1.15	3746	3637		92	4455	84	3	3876	4177	1.187	1.71	1.97	1.85	
9.3.20.	2100	55566	1.24	3779	3682		92	4455	84	3	3876	4177	1.178	1.84	2.12	1.99	
23.3.20.	2140	55566	1.21	3779	3682		92	4455	84	3	3876	4177	1.178	1.80	2.08	1.95	
6.4.20.	2260	55339	1.15	3768	3667		92	4455	84	3	3876	4177	1.182	1.71	1.97	1.85	
20.4.20.	2260	56246	1.16	3813	3727		92	4455	84	3.5	3876	4177	1.168	1.71	1.97	1.85	
4.5.20.	2380	56246	1.11	3813	3727	14.4	92	4455	84	3.5	3876	4177	1.168	1.63	1.88	1.76	43.0

Incr. of 1.8 Incr. of 5.3

Thin elderly man with evidence of considerable emphysema. Cough very severe. Sputum 2 oz daily. T.B. not present. He complained severely of dyspnoea on any exertion. Signs indicated extensive tubercular disease of both lungs. He improved during his period of residence. Cough diminished in intensity. Sputum fell to 1½ oz daily and he felt stronger and more active. Dyspnoea however persisted. He was finally dismissed for breach of rules. Fall of V.C. on 9th March was associated with exacerbation of bronchitis.

No. 148. Name F. Ashmore. Age 53 yrs. Admitted 30.1.20. Admission 1st. TURBAN III.

Height 163.5 cms. Discharged 13.5.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of V.C.
2.2.20.	2160	54659	1.193	3735	3622	8.4	88	4076	88.5	2	4303	4209	1.091	1.99	1.88	1.95	48.7
17.2.20.	2160	56020	1.21	3802	3712		88	4076	88.5	2	4303	4209	1.072	1.99	1.88	1.95	
2.3.20.	2020	57607	1.32	3879	3817		88	4076	88.5	2	4303	4209	1.051	2.13	2.02	2.08	
16.3.20.	2120	57834	1.27	3890	3832		88	4076	88.5	2	4303	4209	1.048	2.03	1.92	1.98	
30.3.20.	2210	57834	1.21	3890	3832		88	4076	88.5	2	4303	4209	1.048	1.95	1.84	1.90	
13.4.20.	2300	58061	1.17	3901	3847		88	4076	89	4	4352	4233	1.044	1.89	1.77	1.84	45.7
27.4.20.	2490	58742	1.09	3934	3893		88	4076	89	4	4352	4233	1.038	1.74	1.64	1.70	
11.5.20.	2520	58515	1.07	3923	3877	3.8	88	4076	89	4	4352	4233	1.039	1.72	1.62	1.68	40.5

Incr. of 4.6 Incr. of 8.2

Thin pale man, originally of powerful physique. Cough was severe. Sputum 2 oz daily containing T.B. in small numbers. Physical signs indicated extensive fibroid disease of left lung, and an area of apparently healed disease in R. upper lobe. He improved during his residence. Cough diminished in intensity, and amount of sputum decreased to 1 oz daily, T.B. however still being present. He felt fitter. He was finally discharged at his own request.

No. 149 Name L. Johnstone Age 31 yrs. Admitted 17.10.19. Admission IInd. TURBAN III.

Height 169.5 cms. Dishcarged 21.5.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
27.11.19.	2400	58968	1.134	3945	3907	7.5	90	4263	84.5	5	3925	4110	1.08	1.63	1.77	1.71	41.6
4.12.19.	2230	59422	1.226	3966	3937		90	4263	84.5	5	3925	4110	1.07	1.76	1.91	1.84	
18.12.19.	2420	58968	1.12	3945	3907		90	4263	84.5	5	3925	4110	1.08	1.62	1.76	1.70	
1. 1.20.	2550	58515	1.06	3923	3877		90	4263	84.5	5	3925	4110	1.086	1.53	1.67	1.61	
15. 1.20.	2750	58968	.989	3945	3907		90	4263	84.5	5	3925	4110	1.08	1.43	1.55	1.49	
29. 1.20.	2810	58515	.927	3923	3877		90	4263	84.5	5	3925	4110	1.086	1.39	1.52	1.46	
11. 2.20.	2810	58515	.927	3923	3877		90	4263	84.5	6	3925	4110	1.086	1.39	1.52	1.46	
25. 2.20.	2910	58061	.924	3900	3847		90	4263	84.5	6	3925	4110	1.092	1.35	1.46	1.41	
11. 3.20.	3090	58515	.875	3923	3877		90	4263	84.5	6	3925	4110	1.086	1.27	1.38	1.33	
25.3. 20.	3330	57834	.806	3890	3832		90	4263	84.5	6	3925	4110	1.096	1.18	1.28	1.24	19.0
8. 4.20.	3230	57834	.830	3890	3832		90	4263	84.5	6	3925	4110	1.096	1.21	1.32	1.27	
22. 4.20.	3270	57834	.821	3890	3832		90	4263	84.5	7	3925	4110	1.096	1.20	1.30	1.26	
6. 5.20.	3295	58288	.819	3912	3862		90	4263	84.5	7	3925	4110	1.115	1.19	1.29	1.25	
13. 5.20.	3175	58288	.850	3912	3862	8.3	90	4263	84.5	7	3925	4110	1.115	1.23	1.34	1.29	25.5
			Decr. of 0.8														Incr. of 16.1

Old standing case of pulmonary tuberculosis. He was of good physique and in good general condition Cough was severe in morning. Sputum was 2 oz. daily. T.B. were not present. Signs indicated extensive fibroid disease of left lung and area of more recent disease at right apex. He improved very much under treatment and became very fit. Dough diminished greatly and was confined to an occasional morning cough which expelled with ease a small amount of sputum. He was transferred to a Tuberculosis Colony with disease in a state of quiescence. Note rise of V.C., and fall of W.

No. 150. Name D. Beattie. Age 19 yrs. Admitted 4.10.18. Admission 1st. TURBAN III.

Height 179 cms. Discharged 21.5.20.

Date,	V.Cap.	Weight in gms.	VC.Const in W	VC.Cal in W	VC.Cal as % W	% Dim of W	Stem Lgth - L in cms.	VC.Cal in L.	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
25.11.19.	3100	58515	.872	3923	3877	10.0	91	4358	82.5	4	3739	4058	1.11	1.20	1.40	1.39	23.7
1.12.19.	2870	58968	.983	3945	3907		91	4358	82.5	4	3739	4058	1.104	1.29	1.49	1.48	
15.12.19.	3030	58968	.898	3945	3907		91	4358	82.5	4	3739	4058	1.104	1.23	1.44	1.43	
29.12.19.	2970	58742	.914	3934	3893		91	4358	82.5	4	3739	4058	1.107	1.26	1.46	1.36	
12. 1.20.	3280	59648	.836	3977	3952		91	4358	82.5	4	3739	4058	1.095	1.14	1.33	1.24	
26. 1.20.	3280	59648	.836	3977	3952		91	4358	82.5	4	3739	4058	1.095	1.14	1.33	1.24	
2. 2.20.	3310	59648	.829	3977	3952		91	4358	82.5	4	3739	4058	1.095	1.13	1.32	1.23	
16. 2.20.	3480	59875	.791	3988	3967		91	4358	82.5	4	3739	4058	1.093	1.074	1.25	1.16	
1. 3.20.	3440	60329	.804	4010	3997		91	4358	82.5	4	3739	4058	1.086	1.09	1.26	1.18	
15. 3.20.	3480	60556	.797	4021	4012		91	4358	82.5	6.5	3739	4058	1.083	1.074	1.25	1.16	
29. 3.20.	3520	60329	.786	4010	3997		91	4358	82.5	6.5	3739	4058	1.086	1.062	1.24	1.15	13.3
12. 4.20.	3100	57834	.866	3890	3832		91	4358	82.5	6.5	3739	4058	1.120	1.20	1.40	1.31	
19. 4.20.	3170	58288	.851	3912	3862		91	4358	82.5	6.5	3739	4058	1.114	1.18	1.37	1.28	
3. 5.20.	3560	58742	.762	3934	3893	9.8	91	4358	82.5	6.5	3739	4058	1.107	1.05	1.23	1.14	12.3
				Incr. of 0.2													Incr. of 11.4

This patient had been 13⅓ months in residence when these readings were begun. At this time he was not very well. Cough was severe, and sputum averaged 1 oz daily, containing abundant T.B. Physical signs indicated very extensive fibro-caseous disease involving the whole of the R. lung and a small area of mildly active disease at the ~~right~~ left apex. He improved during his period of observation. Cough and sputum diminished and he felt more active. He was finally transferred at his own request to another Sanatorium. T.B. remained numerous in sputum.
Fall of V.C. on 12th and 19th April not explainable.
This man is an instance of a case of apparently extensive pathological change in the lung showing a fairly good Vital Capacity. His condition was never satisfactory and his exercise tolerance was always low.

No. 151. Name A. Borland. Age 39 yrs. Admitted 4.3.20. Admission II. TURBAN III.

Height 165.5 cms. Discharged 21.5.20.

Date	V.Cap.	Weight in gms	VC. Const. in W.	VC. Cal in W.	VC. Cal as % W.	% Dim of W.	Stem Lgth = L in cms	VC. Cal in L.	Chest Meas. - Ch. in cms.	Expn. in Cms.	VC. Cal in Ch	VC. Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
5.3.20.	2320	48762	1.023	3440	3232	16.6	88.5	4122	79.5	3.5	3472	3803	1.198	1.49	1.77	1.64	39.0
5.4.20.	2490	50123	.972	3509	3322		88.5	4122	79.5	3.5	3472	3803	1.174	1.39	1.66	1.53	
21.4.20.	2510	50349	.967	3520	3337		88.5	4122	79.5	3.5	3472	3803	1.171	1.38	1.64	1.51	
12.5.20.	2590	50576	.940	3532	3352	14.3	88.5	4122	79.5	3.5	3472	3803	1.167	1.34	1.60	1.47	31.9
					Incr. of 2.3											Incr. of 8.1	

Emaciated pale man. Cough severe. Sputum ½ oz daily. T.B. not present. He ran a constant evening pyrexia of 99 - 100° F. Taken by mouth. Physical signs indicated extensive long standing fibroid disease of R. upper lobe and an area of healed disease at the left apex. He improved generally under treatment and was afebrile when discharged at his own request. He had a condition of pyuria of uncertain origin and giving rise to few symptoms which possibly was responsible for part of his pyrexia and bad general condition.

No. 152. Name J. Hayes Age 23 yrs. Admitted 27.2.20. Admission 1st TURBAN III.

Discharged 3.6.20.

Date.	V.Cap.	Weight in gms.	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W	Stem Lgth = L in cms	VC.Cal in L	Chest Meas. = Ch in cms	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC
1.3.20.	2530	61009	1.102	4043	4042	10.2	92.5	4503	82.5	6	3740	4125	1.113	1.48	1.78	1.63	38.7
9.3.20.	2400	62143	1.177	4096	4118		92.5	4503	82.5	6	3740	4125	1.099	1.56	1.87	1.72	
23.3.20.	2900	62370	.977	4107	4132		92.5	4503	82.5	6	3740	4125	1.096	1.29	1.55	1.42	
6.4.20.	2950	62596	.963	4118	4148		92.5	4503	82.5	6	3740	4125	1.093	1.27	1.53	1.40	28.5
20.4.20.	2815	61690	.998	4075	4088		92.5	4503	82.5	6	3740	4125	1.105	1.33	1.59	1.46	
4.5.20.	2775	61463	1.01	4064	4072		92.5	4503	82.5	6	3740	4125	1.108	1.35	1.61	1.48	
20.5.20.	2870	61690	.979	4075	4088	9.5	92.5	4503	82.5	6	3740	4125	1.105	1.30	1.57	1.44	30.5
				Incr. of 0.7											Incr. of 8.2.		

Tall pale thin man. Cough severe at night. Sputum ½ oz daily containing extremely numberous T.B. Physical signs indicated extensive dry fibroid disease of the R. lung and a small area of mild activity at the left apex. He improved under treatment. Cough diminished greatly in frequency and severity. Sputum remained ½ oz daily containing very abundant T.B.. He felt much fitter. Note fairly good V.C. in the presence of advanced disease.
Fall of V.C. on 20th April and 4th May was the result of a coryzal attack.

No. 153. Name John Smith. Age 28 yrs. Admitted 27.2.20. Admission 1st. TURBAN III.

Height 163.5 cms. Discharged 3.6.20.

Date.	V.Cap.	Weight in gms	V.C.Const. in W.	V.C.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC
28.2.20.	2510	62597	1.13	4118	4148	+4.6	86.5	3937	89	3.5	4352	4161	.956	1.73	1.57	1.66	39.7
8.3.20.	2400	63958	1.20	4182	4238		86.5	3937	89	3.5	4352	4161	.941	1.81	1.64	1.73	
22.3.20.	2970	63277	.964	4150	4192		86.5	3937	89	3.5	4352	4161	.939	1.47	1.32	1.40	28.7
5.4.20.	2910	64865	1.002	4225	4298		86.5	3937	89	3.5	4352	4184	.931	1.49	1.35	1.43	
27.4.20.	3310	63504	.867	4161	4208		86.5	3937	89.5	5.5	4401	4184	.946	1.33	1.19	1.27	20.9
4.5.20.	3180	63050	.898	4139	4178		86.5	3937	89.5	5.5	4401	4184	.951	1.39	1.24	1.32	
17.5.20.	3320	63504	.867	4161	4208		86.5	3937	89.5	5.5	4401	4184	.946	1.33	1.19	1.27	20.9
31.5.20.	3420	63504	.839	4161	4208	+5.7	86.5	3937	89.5	5.5	4401	4184	.946	1.29	1.15	1.23	18.7
						Incr. of 1.1											Incr. of 21.0

Man of powerful physique and good nutrition. Cough was moderately severe and sputum 1 oz daily. T.B. not found but much elastic tissue present. Signs indicated extensive fairly quiescent disease of left upper lobe and an area of mild activity at the right apex. He improved greatly during treatment. Cough and sputum diminished and he felt much stronger and fitter. He left to resume his occupation of mercantile marine officer.

No. 154. Name H. Adams. Age 40 yrs. Admitted 16.1.20. Admission 1st. TURBAN III.

Height 169.5 cms. Discharged 3.6.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	%Dim of VC
17.1.20.	2510	50803	.974	3543	3367	12.1	87.5	4030	81	4	3605	3831	1.13	1.43	1.605	1.52	35.5
27.1.20.	2580	52844	.975	3645	3502		87.5	4030	81	4	3605	3831	1.105	1.39	1.56	1.48	
10.2.20.	2540	52618	.987	3634	3487		87.5	4030	81	4	3605	3831	1.108	1.42	1.58	1.51	
24.2.20.	2700	53978	.945	3701	3577		87.5	4030	81	4	3605	3831	1.088	1.34	1.49	1.42	
11.3.20.	2690	54432	.955	3724	3607		87.5	4030	81	4	3605	3831	1.082	1.34	1.49	1.42	
25.3.20.	2860	53978	.893	3701	3577		87.5	4030	81.5	5	3649	3854	1.088	1.27	1.41	1.35	
15.4.20.	2780	54886	.929	3746	3637		87.5	4030	81.5	5	3649	3854	1.075	1.31	1.45	1.39	
6.5.20.	2885	54432	.890	3724	3607		87.5	4030	81.5	5	3649	3854	1.082	1.26	1.39	1.33	
20.5.20.	2895	54432	.887	3724	3607	7.6	87.5	4030	81.5	5	3649	3854	1.082	1.26	1.39	1.33	24.9
	Incr. of 4.5																Incr. of 10.6

Thin pale man. Cough of moderate severity. Sputum ½ oz daily. T.B. present in small numbers. Signs indicated fibrotic lesion of R. upper lobe and a mildly active lesion of left upper lobe. He improved greatly during his period of treatment. Cough diminished in severity. Sputum disappeared and he felt fitter. Improvement in signs was definite. Note, oscillating, but rising, V.C.

No. 155. Name J. Wilson. Age 25 yrs. Admitted 4.3.20. ADMISSION 1st. TURBAN III.

Height 172 cms. Discharged 25.6.20.

Date.	V.Cap.	Weight in gms	V.C.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	%Dim ofVC
5.3.20.	1280	52617	1.96	3634	3487	14.8	90	4263	82.5	4.5	3740	4013	1.173	2.92	3.33	3.13	68.2
23.3.20.	1760	53978	1.45	3701	3577		90	4263	82.5	4.5	3740	4013	1.152	2.13	2.42	2.28	
6.4.20.	1610	53978	1.57	3701	3577		90	4263	82.5	4.5	3740	4013	1.152	2.32	2.65	2.49	
20.4.20.	1625	53978	1.57	3701	3577		90	4263	82.5	4.5	3740	4013	1.152	2.30	2.62	2.46	
27.4.20.	1495	54432	1.72	3724	3607		90	4263	82.5	4.5	3740	4013	1.144	2.50	2.85	2.68	
11.5.20.	1625	54432	1.58	3724	3607		90	4263	83	5.5	3784	4038	1.144	2.32	2.62	2.48	
25.5.20.	1720	54205	1.49	3712	3952	12.4	90	4263	83	5.5	3784	4038	1.148	2.20	2.48	2.35	57.4
				Incr. of 2.4													Incr. of 10.8

Thin pale man. Cough was not severe. Sputum was ½ oz. daily. T.B. were present in small numbers. Physical signs indicated extensive fibrotic disease of left lung, the signs being fairly dry in character, and an area of apparently mildly active disease in left upper lobe. Dyspnoea on exertion was severe. He appeared to make slight general progress during his period of observation. He felt slightly fitter. Physical signs and cough and sputum remained unchanged. Dyspnoea was severe and T.B. remained in sputum. He was discharged at his own request.

No. 156. Name W. Brown. Age 24 yrs. Admitted 5.12.19. Admission 1st. Turban III.

Height 167.5. Discharged 4.6.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch.	P.F. 1	P.F. 2	P.F. 3	P.F. 4	%Dim of VC
6.12.19.	2520	57154	1.056	3857	3787	+ 0.3	85.5	3847	88.5	3.5	4303	4090	.997	1.707	1.530	1.623	38.4
22.12.19.	2540	57381	1.050	3868	3802		85.5	3847	88.5	3.5	4303	4090	.994	1.694	1.514	1.610	
12. 1.20.	2610	58968	1.042	3945	3907		85.5	3847	88.5	3.5	4303	4090	.975	1.64	1.47	1.57	
26. 1.20.	3000	60329	.922	4010	3997		85.5	3847	88.5	3.5	4303	4090	.959	1.43	1.29	1.36	
5. 2.20.	2990	59875	.920	3988	3967		85.5	3847	88.5	5	4303	4090	.965	1.44	1.28	1.36	
20. 2.20.	3000	61009	.929	4043	4042		85.5	3847	88.5	5	4303	4090	.951	1.43	1.29	1.36	
5. 3.20.	3100	61009	.899	4043	4042		85.5	3847	88.5	5	4303	4090	.951	1.39	1.24	1.32	
19. 3.20.	3100	60556	.895	4021	4012		85.5	3847	88.5	5	4303	4090	.956	1.39	1.24	1.32	
26. 3.20.	3140	61009	.888	4043	4042		85.5	3847	88.5	5	4303	4090	.951	1.37	1.22	1.30	
9. 4.20.	3260	60329	.848	4010	3997		85.5	3847	88.5	5	4303	4090	.959	1.32	1.18	1.25	20.3
23. 4.20.	3000	60329	.922	4010	3997		85.5	3847	88.5	5	4303	4090	.959	1.43	1.29	1.36	
7. 5.20.	3100	60329	.892	4010	3997		85.5	3847	88.5	6.5	4303	4090	.959	1.39	1.24	1.32	
28. 5.20	3310	61009	.842	4043	4042	+ 5.1	85.5	3847	88.5	6.5	4303	4090	.951	1.30	1.16	1.24	19.1
			Incr. of 4.8														Incr. of 19.3

Man of powerful physique and fair general condition. He had been working as a fire-clay worker until the day of his admission to Sanatorium. Cough was not severe. Sputum was 1½ oz. daily. T.B. were present in small numbers. Physical signs showed massive consideration of R. upper lobe, and infiltration of R. Lower lobe. He made very great improvement during his period of stay. Cough and sputum disappeared. Signs in his right lower lobe cleared up completely, and signs in R. upper lobe appeared to pass into a condition of quiescence. He was finally discharged to receive training in brick laying from the Pensions Authorities. He felt very fit and well. Note slightly oscillating but rising V.C.

No. 157. Name James McDonald. Age 34 yrs. Admitted 4. 3. 20. Admission Ist. TURBAN III.

Height 165.5 cms Discharged 17. 6.20.

Date.	V.Cap.	Weight in gms.	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas = Ch in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch.	P.F. 1	P.F. 2	P.F. 3	P.F. 4	%Dim of VC.
5.3.20.	2140	51710	1.16	3589	3442	12.7	86.5	4110	81.5	5	3649	3810	1.145	1.70	1.92	1.78	43.8
22.3.20.	2670	52617	.938	3634	3487		86.5	4110	81.5	5	3649	3810	1.131	1.37	1.54	1.43	30.0
6.4.20.	2560	53298	.988	3668	3532		86.5	4110	81.5	5	3649	3810	1.120	1.42	1.60	1.49	
20.4.20.	2670	54205	.959	3712	3592		86.5	4110	81.5	5	3649	3810	1.107	1.37	1.54	1.43	
6.5.20.	3000	54205	.854	3712	3592		86.5	4110	81.5	5	3649	3810	1.107	1.22	1.37	1.27	
20.5.20.	3090	53978	.826	3701	3577		86.5	4110	82	5.5	3649	3834	1.110	1.20	1.33	1.24	
3.6.20.	3100	53525	.819	3679	3547	10.5	86.5	4110	82	5.5	3649	3834	1.117	1.19	1.32	1.23	19.7
			Incr. of 2.2														Incr. of 24.1

Pale man of poor physique. Cough was not severe. Sputum averaged 3 oz. daily. T.B. + few. Physical signs indicated extensive, but apparently fairly quiescent, disease of both upper lobes. He improved very greatly during his period of observation. Cough and Sputum decreased & T.B. disappeared from sputum. Signs showed definate improvement. He was finally discharged at his own request.

No. 158. Name Wm. White. Age 28 yrs. Admitted 13.3.20. Admission 1st. TURBANIII.

Height 170.5 cms. Died 5.6.20.

Date.	V.Cap.	Weight in gms.	VC.Const in W.	VC.Cal in W.	VC.Cal as %W.	% Dim of W.	Stem Lgth. = L in cms.	VC.Cal in L	Chest Meas = Ch in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch.	P.F. 1	P.F. 2	P.F. 3	P.F. 4	%Dim of VC.
13.3.20.	1500	48762	1.58	3440	3232	20.0	90.5	4311	77	4.5	3258	3767	1.253	2.19	2.87	2.51	60. 0
24.3.20.	1910	38989	1.24	3452	3247		90.5	4311	77	4.5	3258	3767	1.246	1.71	2.25	1.97	49. 0
14.4.20.	2240	46721	1.03	3336	3096		90.5	4311	77	4.5	3258	3767	1.292	1.45	1.92	1.68	50. 5

Pale man, emaciated to a skeleton. Cough most severe and incessant. Sputum copious. T.B. + very numerous. Extensive fibroid disease of left lung with extensive fibro-caseous disease of R. lung. Huge cairty below R. clavicle. Advanced tuberculosis of larynx and tubercular ulcer of lower lip. Stem length is diminished by kyphosis so that estimated V.C. diminution is below what it probably should be. This man underwent slight temporary improvement. Later Rapid T.B. ulceration of bowel set in and he died.

No. 159. Name A. Barr. Age 26 yrs. Admitted 24.2.20. Admission 1st. TURBAN III.

Height 168 cms. Discharged 11.6.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of V.C.
26.2.20.	1820	49896	1.32	3497	3307	19.8	91	4358	81	4.5	3605	3983	1.246	1.98	2.39	2.18	54.0
31.3.20.	2090	49896	1.15	3497	3307		91	4358	81	4.5	3605	3983	1.246	1.73	2.08	1.91	48.0
14.4.20.	2270	50576	1.07	3532	3352		91	4358	81	4.5	3605	3983	1.234	1.58	1.92	1.75	
28.4.20.	2305	50803	1.06	3543	3367		91	4358	81	5	3605	3983	1.230	1.56	1.89	1.73	
12.5.20.	2165	51484	1.14	3577	3412		91	4358	81	5	3605	3983	1.218	1.67	2.01	1.84	
26.5.20.	2305	51257	1.07	3566	3397	18.2	91	4358	81	5	3605	3983	1.222	1.56	1.89	1.73	42.2

Incr. of 1.6 Decr. of 11.8

Man of bad physique. Very ill on admission with severe cough, copious expectoration and constant pyrexia. Sputum averaged 5 oz daily and contained very numerous T.B. Signs were those of very extensive active disease of both lungs. He improved during his period of stay. Temperature became normal. Cough improved and sputum decreased in amount. T.B. appeared to be fewer. No change was detectable in the physical signs. He was finally discharged at his own request.

No. 160. Name C. McGruckion. Age 25 yrs. Admitted 20.2.20. Admission 1st. TURBAN III.

Height 168.5 cms. Discharged 11.6.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of V.C.
23.2.20.	2500	53071	1.01	3656	3517	16.2	91	4358	84.5	5	3923	4156	1.239	1.57	1.74	1.66	40.0
10.3.20.	3170	54886	.815	3746	3637		91	4358	84.5	5	3923	4156	1.163	1.24	1.37	1.31	24.0
24.3.20.	3360	57154	.792	3857	3787		91	4358	84.5	5	3923	4156	1.129	1.17	1.29	1.34	19.0
7.4.20.	3130	57607	.855	3879	3817		91	4358	84.5	5	3923	4156	1.123	1.25	1.39	1.32	25.0
21.4.20.	3410	58288	.791	3912	3862		91	4358	87	6	4158	4278	1.114	1.22	1.28	1.25	
5.5.20.	3410	58288	.791	3912	3862		91	4358	87	6	4158	4278	1.114	1.22	1.28	1.25	
19.5.20.	3370	57834	.796	3890	3832		91	4358	87	6	4158	4278	1.120	1.23	1.29	1.26	
2.6.20.	3610	58288	.747	3912	3862	10.2	91	4358	87	6	4158	4278	1.114	1.15	1.21	1.18	15.6
					Incr. of 6.0												Incr. of 24.4

Pale emaciated man who was very ill on admission with persistent pyrexia, severe cough and copious sputum in which T.B. were not found, but which contained abundant elastic tissue. Physical signs showed extensive, ~~moderately~~ initially active, disease of R. upper lobe and a small area of apparently healed disease of the left apex. He made very great improvement. Temperature became normal. Cough and sputum decreased, though abundant T.B. were found in the discharge specimen of sputum. He was very fit and active. Physical signs in lungs showed little change.

No. 161. Name P. McQuade. Age 30 yrs. Admitted 18.5.20. Admission 111rd. TURBAN. III.

Height 166 cms. Discharged 11.6.20.

Date.	V.Cap.	Weight in gms	V.C.Const in W.	VC.Cal in W.	VC.Cal as %W	%Dim of W.	Stem Lgth =L in cms.	VC.Cal in L	Chest Meas. = Ch cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	%Dim of VC
20.5.20.	2470	55793	1.06	3790	3697	3.7	86.5	3937	86.5	5	4110	4044	1.038	1.66	1.59	1.63	38.9

Man of fair physique and nutrition. Cough was severe, and sputum averaged 3 oz. daily, showing abundant T.B. Physical signs indicated extensive mildly active disease of left lung and an area of healed disease at the R. apex. Initial observation only taken.

No. 162. Name James Menzies. Age 34 yrs. Admitted 7.5.20. Admission Ist. TURBAN III.

Height 169.5 cms. Discharged 20.6.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch in cms.	Expn. in cms.	VC.Cal in Ch	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
8.5.20.	2325	53071	1.085	3656	3517	17.1	91.5	4406	87.5	3.5	4207	4328	1.204	1.81	1.89	1.86	46.3

Thin pale man, very dyspnoeic on admission. He complained of severe cough. Sputum averaged 5 oz. daily. T.B. were present in small numbers. Physical signs indicated extensive asthmatic bronchitis with a great profusion of basal sounds, and disease of both upper lobes. Initial observation only made.

No. 163. Name A. Johnstone. Age 10 yrs. Admitted 21.5.20. Admission Ist. TURBAN III.

Height 124 cms. Discharged - in residence.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as %W	% Dim of W	Stem Lgth - L in cms.	VC.Cal in L	Chest Meas - Ch in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch.	P.F. 1	P.F. 2	P.F. 3	P.F. 4	%Dim of VC.
25.5.20.	1100	23360	1.27	2025	1548	21.5	70	2579	60.5	3.5	2011	2289	1.273	1.83	2.34	2.08	52.0

Thin pale boy. Severe cough. No sputum obtainable. He suffered from very severe asthmatic bronchitis with evidence of tuberculous disease of left upper and right lower lobes.
Initial observation only taken.

No. 164. Name J. McInnes. Age 11 yrs. Admitted 16.4.20. Admission Ist. TURBAN III.

Height 115.5 cms. Discharge - in residence

Date .	V.Cap.	Weight in gms.	VC.Const in W.	VC.Cal in W.	VC.Cal as %W	% Dim of W	Stem Lgth. = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch.	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
19.4.20.	625	20412	2.02	1557	1353	30.0	65	2224	61	4	2044	2143	1.428	3.27	3.56	3.43	70.9
1.5.20.	860	20865	1.50	1867	1353		65	2224	61	4	2044	2143	1.191	2.38	2.59	2.49	
14.5.20.	575	20865	2.08	1867	1353		65	2224	61	4	2044	2143	1.191	3.55	3.87	3.72	
28.5.20.	880	20865	1.47	1867	1353	16.1	65	2224	61	4	2044	2143	1.191	2.32	2.53	2.43	59.0
			Incr. of 13.1														Incr. of 11.9

Thin poor specimen of a boy. He was very ill on admission. Cough was severe and sputum purulent containing abundant T.B. He was very dyspnoeic. Sings showed very advanced active disease of both lungs, notably the upper half of R. lung. He was showing evidence of undoubted improvement when the observations were stopped.

No. 165. Name W. Baing. Age 12 yrs. Admitted 12.8.20. Admission Ist TURBAN III.
Height 136.5 cms. Discharged – in residence.

Date.	V.Cap.	Weight in gms.	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W	Stem Lgth. = L in cms.	VC.Cal in L.	Chest Meas. = Ch in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch.	P.F. 1	P.F. 2	P.F. 3	P.F. 4	%Dim of VC.
28.11.19.	1580	31298	1.088	2500	2074	9.6	72.5	2766	69	3.5	2616	2704	1.106	1.655	1.750	1.711	41.6
5.12.19.	1610	31525	1.07	2513	2089		72.5	2766	69	3.5	2616	2704	1.1006	1.624	1.718	1.679	
19.12.19.	1690	31979	1.036	2539	2119		72.5	2766	69	3.5	2616	2704	1.089	1.547	1.636	1.600	
9. 1.20.	1800	31525	.963	2513	2089		72.5	2766	69	3.5	2616	2704	1.1006	1.45	1.53	1.502	
23. 1.20.	1800	31979	.973	2539	2119		72.5	2766	69	3.5	2616	2704	1.089	1.45	1.53	1.502	
7. 2.20.	1800	33113	.998	2603	2194		72.5	2766	69	3.5	2616	2704	1.063	1.45	1.53	1.502	
20. 2.20.	1890	33113	.950	2603	2194		72.5	2766	69	3.5	2616	2704	1.063	1.38	1.46	1.43	
5. 3.20.	1890	33566	.960	2629	2224		72.5	2766	69	3.5	2616	2704	1.051	1.38	1.46	1.43	
19. 3.20.	1920	33793	.954	2642	2239		72.5	2766	69	3.5	2616	2704	1.047	1.36	1.44	1.41	
26. 3.20.	2190	33793	.832	2642	2239		72.5	2766	69	3.5	2616	2704	1.047	1.19	1.26	1.24	
2. 4.20.	2130	34474	.868	2680	2284		72.5	2766	69	3.5	2616	2704	1.032	1.23	1.30	1.27	19.1
16. 4.20.	2230	34927	.837	2705	2314		72.5	2766	70	4.5	2692	2743	1.022	1.21	1.24	1.23	
1. 5.20.	2055	34700	.904	2693	2299		72.5	2766	70	4.5	2692	2743	1.027	1.31	1.34	1.33	
14. 5.20.	2070	35154	.906	2718	2329		72.5	2766	70	4.5	2692	2743	1.018	1.30	1.33	1.32	
28. 5.20.	2230	35154	.841	2718	2329	1.7	72.5	2766	70	4.5	2692	2743	1.018	1.21	1.24	1.23	18.7
		Incr. of 7.9															Incr of 22.9

This boy had been 3½ months in the Institution when his observations were begun. He then had slight cough unaccompanied by sputum and physical signs indicated extensive ~~mildly~~ active disease of the R. lung. He made very great improvement in every way during his period of observation and disease passed into a condition of apparent quiescence. Big rise of W. & VC.

No. 166. Name R. Findlay. Age 18 yrs. Admitted 6.2.20. Admission 1st TURBAN III.

Height 160.5 cms. Discharged - in residence.

Date.	V.Cap.	Weight in gms.	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth. = L in cms.	VC.Cal in L.	Chest Meas. = Ch in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch.	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
7.2.20.	1800	46948	1.28	3347	3111	17.9	88	4076	76.5	5	3215	3639	1.218	1.78	2.26	2.02	50.6
17.2.20.	1820	47628	1.28	3382	3150		88	4076	76.5	5	3215	3639	1.205	1.77	2.24	2.00	
2.3.20.	2000	48762	1.18	3440	3232		88	4076	76.5	5	3215	3639	1.184	1.61	2.04	1.82	
16.3.20.	1930	48308	1.22	3417	3202		88	4076	76.5	5	3215	3639	1.192	1.66	2.11	1.88	
30.3.20.	2290	48989	1.04	3452	3247		88	4076	76.5	5	3215	3639	1.180	1.40	1.78	1.59	37.1
16.4.20.	2320	48989	1.03	3452	3247		88	4076	77.5	5	3300	3686	1.180	1.42	1.76	1.59	37.1
1.5.20.	2300	48989	1.035	3452	3247		88	4076	77.5	5	3300	3686	1.180	1.43	1.77	1.60	
7.5.20.	2430	48762	.977	3440	3232		88	4076	77.5	5	3300	3686	1.184	1.36	1.67	1.52	
21.5.20.	2250	49216	1.06	3463	3262		88	4076	77.5	5	3300	3686	1.177	1.47	1.81	1.64	
4.6.20.	2470	48762	.970	3440	3232	15.6	88	4076	77.5	5	3300	3686	1.184	1.35	1.66	1.51	33.0
			Incr. of 2.3														Incr. of 17.6

Youth of bad physique and bad general condition. Cough slight. Sputum 1 oz daily not containing T.B. Signs indicated extensive fibroid disease of both lungs. He made very great improvement during his period of residence. Cough diminished greatly and sputum fell to ½ oz. daily. He became much fitter and felt strong & well. He is awaiting transfer to a Tuberculosis Colony.

No. 167. Name N. McAllister. Age 39 yrs. Admitted 17.6.19. Admission Ist. TURBAN III.
Height 181.5 cms. Discharged – in residence.

Date.	V.Cap.	Weight in gms.	VC.Const in W.	VC.Cal in W.	VC.Cal as % W.	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L.	Chest Meas. = Ch in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch.	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC
27.11.19.	1850	62597	1.535	4118	4149	8.6	92.5	4503	90	2	4450	4500	1.093	2.405	2.434	2.432	58.9
5.12.19.	1890	62597	1.503	4118	4149		92.5	4503	90	2	4450	4500	1.093	2.354	2.382	2.380	
19.12.19.	2260	62370	1.25	4107	4132		92.5	4503	90	2	4450	4500	1.089	1.961	1.991	1.989	
2. 1.20.	1910	61690	1.47	4075	4088		92.5	4503	90	2	4450	4500	1.105	1.33	2.360	2.357	
16. 1.20.	2060	61463	1.36	4064	4072		92.5	4503	90	2	4450	4500	1.108	2.16	2.18	2.18	
30. 1.20.	2020	62143	1.39	4096	4118		92.5	4503	89	2	4352	4450	1.099	2.15	2.23	2.203	
13. 2.20.	2110	63277	1.36	4150	4192		92.5	4503	89	2	4352	4450	1.085	2.06	2.14	2.11	
5. 3.20.	2260	62143	1.25	4096	4118		92.5	4503	89	2	4352	4450	1.099	1.92	1.99	1.97	
19. 3.20.	2320	61009	1.20	4043	4042		92.5	4503	89	3.5	4352	4450	1.113	1.87	1.94	1.92	
26. 3.20.	2490	61236	1.12	4053	4057		92.5	4503	89	3.5	4352	4450	1.111	1.74	1.81	1.79	44.2
9. 4.20.	2300	61463	1.22	4064	4072		92.5	4503	89	3.5	4352	4450	1.108	1.89	1.96	1.94	
24. 4.20.	2490	61236	1.12	4053	4057		92.5	4503	89	3.5	4352	4450	1.111	1.74	1.81	1.78	
7. 5.20.	2490	60555	1.11	4021	4012		92.5	4503	89	3.5	4352	4450	1.119	1.74	1.81	1.79	
20. 5.20.	2455	61009	1.13	4043	4042		92.5	4503	89	3.5	4352	4450	1.113	1.77	1.83	1.81	
4. 6.20.	2455	61236	1.14	4053	4057		92.5	4503	89	3.5	4352	4450	1.111	1.77	1.83	1.81	44.8

Decr. of 1.4 Incr. of 14.1

This patient had been 5 months in residence when his observations were begun. He was thin and of poor general condition, complaining of moderate cough associated with sputum which averaged 2 oz. daily. T.B. present in small numbers. He improved during his period of observation. Physical signs indicated fairly ~~extreme~~ extensive, quiescent disease of both lungs. He felt fitter and looked better.
Fall of V.C. on 9th April was due to coryza.

No. 168. Name J. Davies. Age 27 yrs. Admitted 12.8.19. Admission 1st. TURBAN III.

Height 175.5 cms. Discharged – in residence.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC
27.11.19.	2900	57154	.917	3857	3787	11.5	91	4358	82.5	4.5	3740	4058	1.145	1.289	1.502	1.434	28.6
5.12.19.	2960	57608	.904	3879	3817		91	4358	82.5	4.5	3740	4058	1.126	1.263	1.472	1.371	
19.12.19.	2940	57834	.912	3890	3832		91	4358	82.5	4.5	3740	4058	1.120	1.272	1.482	1.380	
9. 1.20.	2780	56700	.951	3835	3757		91	4358	82.5	4.5	3740	4058	1.136	1.34	1.56	1.46	
23. 1.20.	3000	56927	.884	3846	3772		91	4358	82.5	4.5	3740	4058	1.133	1.246	1.45	1.35	
7. 2.20.	2980	57381	.895	3868	3802		91	4358	82.5	4.5	3740	4058	1.127	1.25	1.46	1.36	
27. 2.20.	2920	56700	.906	3835	3757		91	4358	82.5	4.5	3740	4058	1.136	1.28	1.49	1.39	
19. 3.20.	2950	56927	.899	3846	3772		91	4358	82.5	4.5	3740	4058	1.133	1.26	1.47	1.37	
26. 3.20.	3110	56700	.854	3835	3757		91	4358	82.5	4.5	3740	4058	1.136	1.20	1.40	1.31	
9. 4.20.	3230	57154	.824	3857	3787		91	4358	82.5	4.5	3740	4058	1.129	1.16	1.35	1.26	20.4
23. 4.20.	2895	56700	.948	3835	3757		91	4358	82.5	4.5	3740	4058	1.136	1.29	1.50	1.40	
7. 5.20.	2980	56927	.890	3846	3772		91	4358	82.5	4.5	3740	4058	1.133	1.25	1.46	1.36	
21. 5.20.	3170	57154	.839	3857	3787		91	4358	82.5	4.5	3740	4058	1.129	1.18	1.38	1.28	
4. 6.20.	3040	56473	.867	3824	3742	12.3	91	4358	82.5	4.5	3740	4058	1.139	1.23	1.43	1.33	25.1

Decr. of 0.8

Incr. of 3.5

This patient had been 3½ months in residence when his readings were begun. He was thin and pale. Cough was only of moderate severity. Sputum was 2 oz daily. T.B. few. Signs indicated extensive mildly active disease of R. lung and a small area of mildly active disease of the left apex. His condition remained stationary throughout his whole period of observation. Cough and sputum remained unchanged and no appreciable change of any kind was noticed. Fall of V.C. on 9th Jan. was due to coryza.

No. 169. Name J. Mason. Age 27 yrs. Admitted 23.1.20. Admission 1st. TURBAN III.

Height 163 cms. Discharged – in residence.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
24.1.20.	1630	49669	1.475	3486	3292	5.0	83.5	3670	78.5	3.5	3386	3543	1.053	2.077	2.25	2.17	54.0
2.2.20.	1870	51030	1.311	3555	3382		83.5	3670	78.5	3.5	3386	3543	1.032	1.81	1.96	1.89	
16.2.20.	1880	51484	1.312	3577	3412		83.5	3670	78.5	3.5	3386	3543	1.026	1.80	1.95	1.88	
1.3.20.	1650	51257	1.49	3566	3397		83.5	3670	78.5	3.5	3386	3543	1.029	2.05	2.22	2.15	
19.3.20.	1650	51257	1.49	3566	3397		83.5	3670	78.5	3.5	3386	3543	1.029	2.05	2.22	2.15	
2.4.20.	2050	51257	1.20	3566	3397		83.5	3670	79	4	3429	3565	1.029	1.67	1.79	1.74	
9.4.20.	2080	51256	1.18	3566	3397		83.5	3670	79	4	3429	3565	1.029	1.65	1.76	1.71	41.7
24.4.20.	2110	51256	1.16	3566	3397		83.5	3670	79	4	3429	3565	1.029	1.62	1.74	1.69	
7.5.20.	2170	50803	1.12	3543	3367		83.5	3670	79	4	3429	3565	1.036	1.58	1.69	1.64	
21.5.20.	2220	51030	1.10	3555	3382	3.2	83.5	3670	79	5	3429	3565	1.032	1.54	1.65	1.60	37.8
			Incr. of 1.8														Incr. of 16.2

Thin and pale on admission. Cough not severe. Sputum ½ oz daily. T.B. present in large numbers. He was dyspnoeic on any exertion. Signs indicated extensive fibroid disease of the left lung and a mildly active lesion of R. upper lobe. He improved very greatly during his period of observation. Dyspnoea became greatly ameliorated. Cough and sputum practically disappeared. He felt much fitter and was put on work at his own request.
Np explanation for fall of V.C. on 1st and 19th March.

No. 170. Name Wm. Black Age 17 yrs. Admitted 30.5.20. Admission 1st. TURBAN III.

Height 156.5 cms Discharged – in residence.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
5.12.19.	1950	52391	1.281	3623	3472	8.0	86.5	3937	79	5.5	3429	3694	1.086	1.76	2.02	1.89	47.2
19.12.19.	2380	52844	1.056	3645	3502		86.5	3937	79	5.5	3429	3694	1.080	1.44	1.65	1.55	
1. 1.20.	2230	51937	1.114	3600	3442		86.5	3937	79	5.5	3429	3694	1.09	1.53	1.76	1.65	
15. 1.20.	2390	50803	1.023	3543	3367		86.5	3937	79	5.5	3429	3694	1.111	1.43	1.64	1.55	
29. 1.20.	2390	52844	1.052	3645	3502		86.5	3937	79	5.5	3429	3694	1.080	1.43	1.64	1.55	
11. 2.20.	2390	53978	1.068	3701	3577		86.5	3937	79	5.5	3429	3694	1.064	1.43	1.64	1.55	
26. 2.20.	2490	54432	1.032	3724	3607		86.5	3937	79	5.5	3429	3694	1.057	1.38	1.58	1.48	32.6
11. 3.20.	2300	54432	1.117	3724	3607		86.5	3937	79	5.5	3429	3694	1.057	1.49	1.71	1.60	
25. 3.20.	2490	53978	1.025	3701	3577		86.5	3937	79	5.5	3429	3694	1.064	1.38	1.58	1.48	32.6
8. 4.20.	2490	54205	1.028	3712	3592		86.5	3937	79	5.5	3429	3694	1.061	1.38	1.58	1.48	
22. 4.20.	2520	54205	1.016	3712	3592		86.5	3937	79.5	5.5	3472	3717	1.061	1.37	1.56	1.47	
6. 5.20.	2630	54659	.981	3735	3622		86.5	3937	79.5	5.5	3472	3717	1.054	1.32	1.50	1.41	
20. 5.20.	2690	54659	.954	3735	3622	5.1	86.5	3937	79.5	5.5	3472	3717	1.054	1.29	1.46	1.38	27.7
	Incr. of 2.9																Incr. of 19.5

This boy had been six months under treatment when his observations were begun. By this time he had improved greatly, and cough and sputum were very slight. T.B. had been present in 1918. Signs indicated very extensive dry fibroid disease of left lung with great flattening of left side of thorax and retraction of heart to left. During his period of observation he improved still further. Cough and spit disappeared and he became very fit. He is employed on farm work on the estate farm.
Note more or less constant rise of V.C.

No. 171. Name H. Fletcher. Age 33 yrs. Admitted 12.3.20. Admission IInd. TURBAN III.

Height 179 cms. Discharged – in residence.

Date.	V. Cap.	Weight in gms	VC. Const in W.	VC. Cal in W.	VC. Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC. Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC. Cal in Ch.	VC. Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3,	P.F. 4	% Dim of VC
13.3.20.	2050	53525	1.23	3679	3547	12.8	89.5	3547	81	4.5	3605	3918	1.146	1.76	2.05	1.91	47.7
22.3.20.	2300	54659	1.12	3735	3622		89.5	3622	81	4.5	3605	3918	1.128	1.56	1.83	1.70	
5.4.20.	2640	55566	.987	3779	3682		89.5	3682	81	4.5	3605	3918	1.116	1.37	1.59	1.48	32.4
19.4.20.	2510	55566	1.04	3779	3682		89.5	3682	81	4.5	3605	3918	1.116	1.44	1.68	1.56	
26.4.20.	2480	56246	1.06	3813	3727		89.5	3727	81	4.5	3605	3918	1.106	1.45	1.70	1.58	
6.5.20.	2570	57154	1.04	3857	3787		89.5	3787	81	4.5	3605	3918	1.093	1.39	1.64	1.52	
13.5.20.	2430	57381	1.09	3868	3802		89.5	3802	82	5.5	3694	3967	1.089	1.52	1.73	1.63	
27.5.20.	2710	57381	.985	3868	3802	8.3	89.5	3802	82	5.5	3694	3967	1.089	1.36	1.56	1.47	31.7
	Incr. of 4.5																Incr. of 16.0

Man of fair nutrition and physique. Cough slight. Sputum 1½ oz daily. T.B.+ Many. Signs indicated extensive moderately active disease of both upper lobes. He improved greatly during his period of observation. Cough diminished very markedly and sputum fell to ½ oz daily. He felt much fitter though still complaining of dyspnoea on exertion.
Note oscillating V.C.

No. 172. Name Joseph Black. Age 14 yrs. Admitted 26.1.20. Admission 11nd. TURBAN III.

Height 146 cms. Discharged – in residence.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC
27.1.20.	1250	41278	1.684	3051	2735	2.2	77	3120	72.5	3.5	2888	3017	1.022	2.31	2.49	2.41	58.6
7.2.20.	1230	42184	1.74	3099	2795		77	3120	72.5	3.5	2888	3017	1.006	2.34	2.53	2.45	
19.2.20.	1310	41731	1.62	3075	2765		77	3120	72.5	3.5	2888	3017	1.014	2.20	2.37	2.30	
4.3.20.	1400	42412	1.53	3111	2810		77	3120	72.5	3.5	2888	3017	1.003	2.06	2.23	2.15	
18.3.20.	1420	43092	1.53	3147	2855		77	3120	72.5	3.5	2888	3017	.991	2.03	2.19	2.12	
1.4.20.	1570	42638	1.37	3123	2825		77	3120	72.5	3.5	2888	3017	.999	1.84	1.98	1.92	
15.4.20.	1850	42638	1.17	3123	2825		77	3120	72.5	3.5	2888	3017	.999	1.56	1.69	1.63	
29.4.20.	1630	42638	1.32	3123	2825		77	3120	72.5	3.5	2888	3017	.999	1.77	1.91	1.85	
13.5.20.	1730	43092	1.25	3147	2855		77	3120	72.5	3.5	2888	3017	.992	1.67	1.80	1.74	
27.5.20.	2000	43999	1.102	3195	2916	+2.4	77	3120	73	4.5	2928	3038	.976	1.46	1.56	1.52	34.2
					Incr. of 4.6											Incr. of 24.4	

Sturdy boy of healthy aspect. Cough was not severe. Sputum averaged 2 oz daily. T.B. were present in small numbers. Elastic tissue was abundant. Physical signs indicated extensive fairly dry fibroid disease of R. lung and a small area of mild activity at the left apex. He improved immensely during his period of observation. Cough and sputum disappeared and all traces of activity disappeared. He is employed on work on the Estate farm. This boy is a brother of Case No. 170.

No. 173. Name H. McLaren. Age 32 yrs. Admitted 19.4.20. Admission 11nd. TURBAN III.

Height 167.5 cms. Discharged – in residence.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
20.4.20.	2110	48535	1.12	3429	3217	18.7	89.5	4216	75	3.5	3091	3617	1.229	1.46	1.99	1.71	41.7
28.4.20.	2220	48989	1.07	3452	3247		89.5	4216	75	3.5	3091	3617	1.221	1.39	1.90	1.63	
5.5.20.	2305	49896	1.05	3497	3307		89.5	4216	75	3.5	3091	3617	1.205	1.34	1.83	1.57	
12.5.20.	2325	50123	1.04	3509	3322		89.5	4216	75	3.5	3091	3617	1.201	1.33	1.82	1.56	
26.5.20.	2260	50576	1.07	3532	3352		89.5	4216	75	3.5	3091	3617	1.193	1.37	1.86	1.60	
3.6.20.	2325	50576	1.04	3532	3352	16.2	89.5	4216	75	3.5	3091	3617	1.193	1.33	1.82	1.56	30.2
	Incr. of 2.5																Incr. of 11.5

Thin pale man. Cough was severe. Sputum was 1½ oz daily. T.B. + few. Signs indicated extensive fairly active disease of both lungs. He improved during his period of observation. Dyspnoea diminished, cough decreased and sputum fell to ½ oz daily. He felt fitter and was latterly performing light garden work. Signs in chest showed diminution of moist sounds.

No. 174. Name P. Gillespie. Age 17 yrs. Admitted 19.3.20. Admission 1st. TURBAN III.

Height 168 cms. Discharged – in residence.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	%Dim ofVC
22.3.20.	1940	49442	1.23	3475	3277	20.3	91	4358	75	4	3091	3689	1.254	1.59	2.25	1.90	47.4
30.3.20.	2060	49896	1.17	3497	3307		91	4358	75	4	3091	3689	1.246	1.50	2.12	1.79	
6.4.20.	2070	50350	1.17	3520	3337		91	4358	75	4	3091	3689	1.238	1.49	2.11	1.78	
13.4.20.	2220	50350	1.09	3520	3337		91	4358	75	4	3091	3689	1.238	1.39	1.96	1.66	39.8
20.4.20.	2155	49442	1.11	3475	3277		91	4358	75	4	3091	3689	1.254	1.44	2.02	1.71	
27.4.20.	2170	49216	1.10	3463	3262		91	4358	75	4	3091	3689	1.258	1.43	2.01	1.70	
4.5.20.	2100	49442	1.14	3475	3277		91	4358	75	4	3091	3689	1.254	1.47	2.07	1.75	
10.5.20.	2220	50123	1.09	3509	3322		91	4358	75	4	3091	3689	1.242	1.39	1.96	1.66	39.8
27.5.20.	2220	50576	1.10	3532	3352		91	4358	75	4.5	3091	3689	1.234	1.39	1.96	1.66	
3.6.20.	2220	50803	1.101	3543	3367	18.7	91	4358	75	4.5	3091	3689	1.230	1.39	1.96	1.66	39.8
			Incr. of 1.6														Incr. of 7.6.

Tall thin boy. Cough is not severe. Sputum 1 oz daily. T.B. very numerous. Signs indicated extensive fairly active disease of both upper lobes. He improved during his period of residence. Cough and sputum diminished and he felt fitter and more active.
Note oscillating V.C.

No. 175. Name D. Reid. Age 24 yrs. Admitted 17.10.19. Admission 1st. TURBAN III.

Height 165.5 cms. Discharged – in residence.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L.	Chest Meas. – Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
26.11.19.	2100	52164	1.186	3611	3456	10.4	87.5	4030	81	2.75	3605	3723	1.116	1.71	1.91	1.77	44.0
10.12.19.	2100	52618	1.194	3634	3487		87.5	4030	81	2.75	3605	3723	1.109	1.71	1.91	1.77	
24.12.19.	2190	52164	1.138	3611	3456		87.5	4030	81	2.75	3605	3723	1.116	1.64	1.84	1.70	
7. 1.20.	2210	52618	1.134	3634	3487		87.5	4030	81	2.75	3605	3723	1.10	1.63	1.83	1.69	
21. 1.20.	2330	53071	1.08	3656	3517		87.5	4030	81	2.75	3605	3723	1.102	1.55	1.73	1.59	
4. 2.20.	2330	53071	1.08	3656	3517		87.5	4030	81	2.75	3605	3723	1.102	1.55	1.73	1.59	
17. 2.20.	2110	52844	1.19	3645	3502		87.5	4030	81	2.75	3605	3723	1.105	1.71	1.91	1.76	
3. 3.20.	2430	53071	1.04	3656	3517		87.5	4030	81	2.75	3605	3723	1.102	1.47	1.66	1.53	
17. 3.20.	2450	52391	1.02	3623	3472		87.5	4030	81	2.75	3605	3723	1.112	1.46	1.65	1.52	
30. 3.20.	2640	52164	.944	3611	3456		87.5	4030	81	2.75	3605	3723	1.116	1.37	1.53	1.41	29.0
14. 4.20.	2680	52164	.929	3611	3456		87.5	4030	81	4	3605	3723	1.116	1.35	1.50	1.39	
28. 4.20.	2620	51937	.950	3600	3442		87.5	4030	81	4	3605	3723	1.119	1.37	1.54	1.42	
19. 5.20.	2730	52618	.918	3634	3487	9.9	87.5	4030	81	4	3605	3723	1.109	1.32	1.48	1.37	26.7
			Incr. of 0.5														Incr. of 17.3

This patient had been 1½ months in residence when his observations were begun. Cough was of moderate severity. Sputum was ¾ oz daily. T.B. not found. Signs indicated extensive but very mildly active disease of both lungs. He improved very greatly during his period of observation. Sensations of fatigue disappeared and he became fit and very well. Cough and sputum fell to vanishing point. Signs in chest indicate quiescent disease only.

No. 176. Name J. Haldane. Age 32 yrs. Admitted 27.8.19. Admission IInd. TURBAN III.

Height 172.5 cms. Discharged – in residence.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC
26.11.19.	2500	60102	1.103	3999	3982	8.3	91	4358	84	4	3876	4132	1.09	1.550	1.743	1.653	39.5
24.12.19.	2560	60556	1.08	4021	4012		91	4358	84	4	3876	4132	1.08	1.51	1.70	1.61	
21. 1.20.	2800	61690	1.004	4075	4088		91	4358	84	4	3876	4132	1.069	1.38	1.55	1.47	
11. 2.20.	2800	62824	1.17	4129	4162		91	4358	84	4	3876	4132	1.055	1.38	1.55	1.47	
24. 3.20.	2860	63277	1.001	4150	4192		91	4358	84	4	3876	4132	1.050	1.35	1.52	1.44	31.0
7. 4.20.	2870	62824	.993	4129	4162		91	4358	85	5	3969	4181	1.055	1.38	1.52	1.46	
21. 4.20.	2780	61916	1.01	4085	4102		91	4358	85	5	3969	4181	1.066	1.43	1.57	1.50	
5. 5.20.	2800	61690	1.004	4075	4088		91	4358	85	6	3969	4181	1.069	1.42	1.55	1.49	
26. 5.20.	3005	61236	.931	4053	4057	7.0	91	4358	85	6	3969	4181	1.075	1.32	1.45	1.39	28.2

Incr. of 1.3. Incr. of 11.3.

This man had been three months in residence when readings were begun. He had morning cough and purulent sputum which averaged 2 oz daily. T.B. + + many. Signs indicated extensive fibroid disease of R. lung and an area of healed disease at the left apex. He improved slightly during his period of observation. Cough diminished in severity but sputum showed little change. He felt fitter and was less easily fatigued. Signs in chest remained unchanged.

No. 177. Name M. Wilson. Age 29 yrs. Admitted 23.8.18. Admission 11nd. TURBAN III.

Height 167.5 Discharged – in residence.

Date.	V.Cap.	Weight in gms.	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth. = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch.	P.F. 1	P.F. 2	P.F. 3	P.F. 4	%Dim of VC.
26.11.19.	2000	51257	1.230	3566	3396	9.4	86.5	3937	80.5	4.5	3560	3764	1.10	1.78	1.96	1.88	47.0
10.12.19.	2120	52164	1.175	3611	3457		86.5	3937	80.5	4.5	3560	3764	1.09	1.67	1.85	1.77	
24.12.19.	2230	52391	1.120	3623	3472		86.5	3937	80.5	4.5	3560	3764	1.08	1.59	1.76	1.68	
7. 1.20.	2180	52391	1.146	3623	3472		86.5	3937	80.5	4.5	3560	3764	1.08	1.63	1.80	1.73	
21. 1.20.	2110	52844	1.192	3645	3502		86.5	3937	81	4.5	3605	3787	1.080	1.708	1.86	1.79	
4. 2.20.	2150	53071	1.173	3656	3517		86.5	3937	81	4.5	3605	3787	1.077	1.67	1.83	1.75	
18. 2.20.	2300	53071	1.096	3656	3517		86.5	3937	81	4.5	3605	3787	1.077	1.57	1.71	1.64	
3. 3.20.	2330	53071	1.082	3656	3517		86.5	3937	81	4.5	3605	3787	1.077	1.55	1.69	1.62	
17. 3.20.	2390	52391	1.046	3623	3472		86.5	3937	81	4.5	3605	3787	1.086	1.51	1.65	1.58	
30. 4.20.	2550	52391	.980	3623	3472		86.5	3937	81	4.5	3605	3787	1.086	1.41	1.55	1.48	32.0
14. 4.20.	2800	52391	.892	3623	3472		86.5	3937	81	4.5	3605	3787	1.086	1.28	1.41	1.35	26.1
28. 5.20.	2805	52391	.891	3623	3472		86.5	3937	81	4.5	3605	3787	1.086	1.28	1.41	1.35	
12. 6.20.	2835	52164	.878	3611	3457		86.5	3937	81	6	3605	3787	1.090	1.27	1.40	1.34	
26. 6.20.	2880	52164	.865	3611	3457	8.3	86.5	3837	81	6	3605	3787	1.090	1.25	1.37	1.34	24.0
			Incr. of 1.1														Incr.of 23.0

This man had been 15 months in residence when these observations were begun. About this time his condition was not satisfactory and he had had an undoubted spread of disease. Signs indicated extensive disease of left lung with apparent activity near apex. Sputum contained T.B. in small numbers. He improved greatly during his period of observation and became very fit & well. Cough appeared latterly only in morning and sputum fell to ½ oz. daily. He became fit and active and was put on outdoor garden work.
Note V.C. oscillating at first, and finally rising steadily.

No. 178. Name D. Hunter. Age 36 yrs. Admitted 24.2.20. Admission 1st. TURBAN III.

Height 155 cms. Discharged – in residence.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC
25.2.20.	1860	44226	1.19	3206	2931	10.1	82.5	3582	80.5	4	3560	3589	1.117	1.91	1.92	1.93	48.0
10.3.20.	1890	45814	1.20	3289	3036		82.5	3582	80.5	4	3560	3589	1.089	1.88	1.89	1.90	
24.3.20.	2120	46494	1.08	3324	3081		82.5	3582	80.5	4	3560	3589	1.077	1.68	1.69	1.70	
31.3.20.	2320	47855	1.009	3394	3172		82.5	3582	80.5	4	3560	3589	1.055	1.53	1.54	1.55	35.0
14.4.20.	2290	48535	1.03	3429	3217		82.5	3582	80.5	4	3560	3589	1.044	1.55	1.56	1.57	
28.4.20.	2130	48989	1.12	3452	3247		82.5	3582	82.	4.5	3694	3656	1.037	1.73	1.68	1.72	
12.5.20.	2035	49216	1.17	3463	3262		82.5	3582	82	4.5	3694	3656	1.034	1.81	1.76	1.80	
26.5.20.	2380	49442	1.007	3475	3277	3.0	82.5	3582	82	4.5	3694	3656	1.031	1.55	1.50	1.54	34.9
			Incr. of 7.1.														Incr. of 13.1

Thin man, very ill on admission. Cough was severe and sputum copious. T.B. + + many. Signs indicated extensive active disease of R. lung and an area of healed disease at the left apex. He improved greatly during his period of observation. Cough diminished and he felt much fitter. His exercise tolerance increased. Signs in R. lung became drier in character.

No. 179. Name J. McNaught. Age 31 yrs. Admitted 22.5.20. Admission 1st. TURBAN III.

Height 169.5 cms. Discharged – in residence.

Date.	V. Cap.	Weight in gms	VC. Const in W.	VC. Cal in W.	VC. Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC. Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC. Cal in Ch.	VC. Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
26.5.20.	1870	56473	1.41	3824	3742	6.2	88	4076	81.5	4	3649	3927	1.066	1.95	2.18	2.10	52.6

Pale man of good nutrition and physique. Cough severe. Sputum 2½ oz daily. T.B. + few. Signs indicated extensive moderately active disease of R. lung and extensive bronchitis of left lung. One observation only taken.

No. 180. Name J. Gibson. Age 35 yrs. Admitted 9.1.20. Admission IInd. TURBAN III

Height 176 cms. Discharged – in residence.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC
10.1.20.	1650	53071	1.52	3656	3517	24.6	96	4850	83	2.5	3784	4306	1.326	2.29	2.94	2.61	62.0
21.1.20.	1690	52164	1.47	3611	3457		96	4850	83	2.5	3784	4306	1.343	2.24	2.87	2.54	
4.2.20.	1830	53525	1.38	3679	3547		96	4850	83	2.5	3784	4306	1.318	2.07	2.65	2.35	
17.2.20.	1760	54205	1.45	3712	3592		96	4850	83	2.5	3784	4306	1.304	2.15	2.75	2.44	
3.3.20.	1800	55112	1.44	3757	3652		96	4850	83	2.5	3784	4306	1.291	2.10	2.69	2.39	
17.3.20.	1610	54659	1.60	3735	3622		96	4850	83	4	3784	4306	1.297	2.35	3.01	2.67	
24.3.20.	2030	54205	1.26	3712	3592		96	4850	83	4	3784	4306	1.304	1.86	2.39	2.12	53.0
7.4.20.	2040	54205	1.25	3712	3592		96	4850	83	4	3784	4306	1.304	1.85	2.38	2.11	
21.4.20.	2260	53525	1.12	3679	3547		96	4850	83	4	3784	4306	1.318	1.67	2.15	1.90	
5.5.20.	2275	54659	1.13	3735	3622		96	4850	83	4	3784	4306	1.297	1.66	2.14	1.89	
19.5.20.	2310	55112	1.12	3757	3652		96	4850	83	4	3784	4306	1.291	1.64	2.10	1.86	
2.6.20.	2410	55112	1.08	3757	3652	22.6	96	4850	83	4	3784	4306	1.291	1.57	2.01	1.78	44.1

Incr. of 2.0. Incr. of 17.9

Very thin and pale man. Cough spasmodic and severe. Sputum 4 oz daily. T.B. + + many. Dyspnoeic on any exertion. Signs indicated extensive active disease of both upper lobes. He improved greatly during his period of observation. Cough became less severe. Sputum diminished in quantity, falling to 2 oz daily. Marked improvement in physical signs was detectable. He felt fitter and dyspnoea decreased until he could walk two miles and climb a steep gradient without experiencing any ill effects.
Fall of V.C. on 17th Feb. was associated with exacerbation of bronchitis.
Fall of V.C. on 17th Mar. was associated with a period of general malaise and evening pyrexia.

No. 181. Name J. Barr. Age 35 yrs. Admitted 28.1.20. Admission 1st. TURBAN III.

Height 177.5 cms. Discharged – in residence.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC
29.1.20.	2650	61236	1.055	4053	4057	8.1	91.5	4406	86.5	7	4110	4224	1.087	1.55	1.66	1.59	37.3
17.2.20.	2660	61009	1.044	4043	4042		91.5	4406	86.5	7	4110	4224	1.089	1.54	1.65	1.58	
2.3.20.	2900	61916	.972	4085	4102		91.5	4406	86.5	7	4110	4224	1.078	1.42	1.52	1.46	
16.3.20.	2900	62370	.977	4107	4132		91.5	4406	86.5	7	4110	4224	1.072	1.42	1.52	1.46	
30.3.20.	3210	63277	.892	4150	4192		91.5	4406	86.5	7	4110	4224	1.062	1.28	1.37	1.31	24.1
20.4.20.	3270	64638	.889	4214	4283		91.5	4406	87	7	4158	4303	1.045	1.27	1.35	1.32	
4.5.20.	3310	64184	.873	4193	4253		91.5	4406	87	7	4158	4303	1.050	1.25	1.33	1.30	
18.5.20.	3510	64638	.828	4214	4283	4.4	91.5	4406	87	7	4158	4303	1.040	1.18	1.25	1.22	18.5
			Incr. of 3.7														Incr. of 18.8

Thin pale man who appears to have been originally of powerful physique. Cough of moderate severity. Sputum 1 oz daily. T.B. + + many. Signs indicated a fairly dry fibroid lesion of R. upper lobe and an area of mild activity at left apex. He improved very greatly under treatment. Cough and sputum were confined to morning and were very slight. T.B. disappeared from sputum. He felt fit and well and was latterly doing heavy garden work.
Note steady increase of V.C.

No. 182. Name J. Brown. Age 55 yrs. Admitted 7.11.19. Admission 1st. TURBAN III.

Height 161.5 cms. Discharged – in residence.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L.	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
26.11.19.	1100	43092	1.98	3147	2855	10.0	81.5	3496	75	1	3090	3304	1.110	2.80	3.17	3.003	66.8
2.12.19.	1210	43319	1.80	3160	2871		81.5	3496	75	1	3090	3304	1.106	2.55	2.89	2.730	
16.12.19.	1410	44453	1.75	3218	2946		81.5	3496	75	1	3090	3304	1.08	2.12	2.48	2.34	
30.12.19.	1290	45360	1.74	3266	3006		81.5	3496	75	1	3090	3304	1.07	2.39	2.71	2.56	
6. 1.20.	1080	45587	2.09	3277	2021		81.5	3496	75	1	3090	3304	1.066	2.86	2.23	3.06	
20. 1.20.	1260	46267	1.81	3312	3066		81.5	3496	76	1	3174	3348	1.055	2.52	2.77	2.65	
3. 2.20.	1300	46721	1.77	3336	3096		81.5	3496	76	1	3174	3348	1.048	2.44	2.69	2.57	
17. 2.20	1340	47401	1.74	3371	3141		81.5	3496	76	1	3174	3348	1.037	2.37	2.61	2.49	
2. 3.20.	1300	47174	1.78	3359	3126		81.5	3496	76	1	3174	3348	1.040	2.44	2.69	2.57	
16. 3.20.	1260	47855	1.86	3394	3172		81.5	3496	76	1	3174	3348	1.030	2.52	2.77	2.65	
30. 2.20.	1300	48308	1.81	3417	3202		81.5	3496	76	1	3174	3348	1.023	2.44	2.69	2.57	
13. 4.20.	1550	58989	1.53	3452	3247	1.3	81.5	3496	76	1.5	3174	3348	1.013	2.05	2.25	2.16	53.1
			Incr. of 8.7														Incr. of 13.7

Old ~~standing~~ chronic fibroid phthisis of 20 years standing associated with considerable cardiac hypertrophy. Cough of moderate severity. Sputum 2 oz daily. T.B. not found. He improved generally while under observation though physical signs remained stationary. He felt more fit and dyspnoea decreased.

Note oscillating V.C.

No. 183. Name Alex. McDonald. Age 17 yrs. Admitted 21.5.20 Admission 11nd. TURBAN III.

Height 173.5 cms. Discharged – in residence.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim ofVC.
22.5.20.	2230	58061	1.21	3901	3847	8.5	90	4263	80	4	3516	3892	1.093	1.58	1.91	1.75	42.7

Thin pale boy. Cough severe. Sputum 2 oz daily. T.B. + few. Extensive active fibro-caseous disease of left lung, and area of mild activity at R.apex. One observation only made.

No. 184. Name R. Hunt. Age 32 yrs. Admitted 14.5.20. Admission 111rd. TURBAN III.

Height 173.5 cms. Discharged – in residence.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
15.5.20.	2250	65772	1.31	4267	4358	2.1	91	4358	83.5	4	3830	4107	1.021	1.70	1.94	1.82	45.5
25.5.20.	2460	65318	1.19	4246	4328	2.8	91	4358	83.5	4	3830	4107	1.026	1.56	1.77	1.67	40.0
			Decr. of 0.7.														Incr. of 5.5

Pale man of good physique and nutrition. Cough of moderate severity. Sputum 1½ oz daily.
He had extensive fibroid disease of both upper lobes. T.B. + few. Two observations only made.

No. 185. Name W. J. Rooney. Age 32 yrs. Admitted 30.4.20. Admission 1st. TURBAN III.

Height 165.5 cms. Discharged – in residence.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
1.5.20.	2315	46040	.984	3301	3051	23.4	90.5	4311	79.5	3	3472	3889	1.306	1.50	1.86	1.68	41.0
11.5.20.	2340	46721	.984	3336	3096		90.5	4311	79.5	3	3472	3889	1.292	1.48	1.84	1.66	
25.5.20.	2580	47628	.904	3382	3150	21.6	90.5	4311	79.5	3	3472	3889	1.284	1.34	1.67	1.51	33.7
				Incr. of 1.8													Incr. of 7.3

Thin pale man. Moderately severe cough. Sputum 3 oz daily. T.B. + + many. Extensive fibroid disease of both upper lobes. He had begun to improve when observations were stopped.

No. 186. Name J. Crawford. Age 51 yrs. Admitted 16.4.20. Admission 1st. TURBAN III.

Height 162 cms. Discharged - in residence.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
17.4.20.	2470	48989	.964	3452	3247	13.6	87	3984	84	4	3876	3950	1.154	1.57	1.61	1.59	37.5
19.4.20.	2375	50123	.980	3509	3332		87	3984	84	4	3876	3950	1.135	1.63	1.67	1.66	
5.5.20.	2410	50349	1.008	3520	3337		87	3984	84	4	3876	3950	1.132	1.61	1.65	1.64	
12.5.20.	2325	50349	1.04	3520	3337		87	3984	84	4	3876	3950	1.132	1.67	1.71	1.70	
26.5.20.	2370	51484	1.04	3577	3412		87	3984	84	4	3876	3950	1.114	1.63	1.67	1.66	
1.6.20.	2300	51257	1.07	3566	3397	10.5	87	3984	84	4	3876	3950	1.117	1.68	1.72	1.71	41.3

Incr. of 3.1. Decr. of 4.3

Thin pale man, looking very ill. Cough severe. Sputum 3 oz daily. T.B. very numerous. Signs indicated fairly extensive infiltration of left upper lobe, and limited disease of R. apex. He showed no evidenceof improvement during his period of residence.

No. 187. Name G. Matheson. Age 36 yrs. Admitted 9.12.19. Admission 1st. TURBAN III.
Height 169 cms. Discharged – in residence.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC. Cal in L.	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
10.12.19.	2090	59422	1.309	3966	3937	11.0	92	4455	83	2.5	3784	4127	1.123	1.815	2.131	1.974	49.4
23.12.19.	2000	59648	1.372	3977	3952		92	4455	83	2.5	3784	4127	1.120	1.892	2.227	2.063	
30.12.19.	1940	59875	1.41	3988	3967		92	4455	83	2.5	3784	4127	1.119	1.95	2.24	2.07	
6. 1.20.	2100	60329	1.31	4010	3997		92	4455	83	2.5	3784	4127	1.110	1.801	2.12	1.96	
20. 1.20.	2080	60782	1.34	4032	4027		92	4455	83	2.5	3784	4127	1.105	1.82	2.14	1.98	
3. 2.20.	2060	60102	1.34	3999	3982		92	4455	83	2.5	3784	4127	1.114	1.83	2.15	2.00	
17. 2.20.	2080	60782	1.34	4032	4027		92	4455	83	2.5	3784	4127	1.105	1.82	1.14	1.98	
2. 3.20.	2230	61009	1.25	4043	4042		92	4455	83	2.5	3784	4127	1.102	1.69	1.99	1.85	
16. 3.20.	2240	60556	1.22	4021	4012		92	4455	83	2.5	3784	4127	1.107	1.68	1.98	1.84	
30. 3.20.	2390	61009	1.17	4043	4042		92	4455	83	2.5	3784	4127	1.102	1.58	1.87	1.73	
13. 4.20.	2440	61690	1.15	4075	4088		92	4455	83	3.5	3784	4127	1.093	1.55	1.83	1.69	40.9
27. 4.20.	2240	61916	1.26	4085	4102		92	4455	83	2.5	3784	4127	1.090	1.68	1.98	1.84	
11. 5.20.	2390	61690	1.17	4075	4088		92	4455	83	2.5	3784	4127	1.093	1.58	1.87	1.73	
25. 5.20.	2150	61236	1.30	4053	4057		92	4455	83	2.5	3784	4127	1.099	1.76	2.07	1.92	
1. 6.20.	2080	60555	1.33	4021	4012	9.8	92	4455	83	2.5	3784	4127	1.107	1.82	2.14	1.98	49.6

Incr. of 1.3 Decr. of 0.2

Thin pale man. Cough severe. Sputum 2 oz daily. T.B. + + + very many. Signs indicated extensive disease of left lung showing evidence of fibroid change. His condition oscillated throughout his period of residence. He was liable to repeated periods of pyrexia associated with exacerbation of cough and increase of sputum. He made no real improvement of any kind.
Note oscillating V.C.

No. 188. Name Malcolm McLeod. Age 29 yrs. Admitted 18.5.20. Admission IInd. TURBAN III.

Height 182.5 cms. Discharged - in residence.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
19.5.20.	2515	76658	1.31	4765	5079	+ 4.7	93	4552	92.5	5.5	4701	4653	.955	1.87	1.81	1.85	46.0

Big man of powerful physique. Cough not severe. Sputum 3 oz daily. T.B. not found. Signs indicated extensive, but apparently fairly quiescent, disease of both lungs. Initial observation only taken.

No. 189. Name R. Stapleton. Age 26 yrs. Admitted 10.10.19. Admission 1st. TURBAN III.

Height 162 cms. Discharged 16. 7.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
27.11.19.	1900	54432	1.352	3723	3606	6.6	87	3984	81	3	3605	3809	1.069	1.897	2.097	2.004	50.2
3.12.19.	1800	54886	1.436	3746	3637		87	3984	81	3	3605	3809	1.063	2.002	2.213	2.116	
17.12.19.	1940	55339	1.340	3768	3667		87	3984	81	3	3605	3809	1.057	1.858	2.053	1.963	
7. 1.20.	1990	54432	1.29	3724	3606		87	3984	81	3	3605	3809	1.069	1.81	2.002	1.91	
13. 1.20.	1800	54432	1.42	3724	3606		87	3984	81	3	3605	3809	1.069	2.002	2.213	2.116	
26. 1.20.	1920	53298	1.32	3668	3532		87	3984	81	3	3605	3809	1.086	1.88	2.08	1.99	
9. 2.20.	2000	53525	1.26	3679	3547		87	3984	80	4	3516	3762	1.083	1.75	1.99	1.88	
23. 2.20.	1870	53751	1.36	3690	3562		87	3984	80	4	3516	3762	1.079	1.88	2.13	2.01	
22. 3.20.	1530	52618	1.64	3634	3487		87	3984	80	4	3516	3762	1.096	2.29	2.60	2.46	
5. 4.20.	2090	53071	1.21	3656	3517		87	3984	80	3.5	3516	3762	1.089	1.68	1.91	1.80	47.2
19. 4.20.	1870	53071	1.35	3656	3517		87	3984	80	3.5	3516	3762	1.089	1.88	2.13	2.01	
3. 5.20.	1530	52391	1.63	3623	3472		87	3984	80	3.5	3516	3762	1.099	2.29	2.60	2.46	
24. 5.20.	1720	51710	1.44	3589	3427	9.9	87	3984	79.5	3.5	3472	3738	1.110	2.02	2.32	2.14	54.0
					Decr. of	3.3										Decr. of	3.8

Pale thin man. Cough fairly severe. Sputum 4 oz daily. T.B. very numerous. Signs indicated extensive active disease of left lung, and old, apparently healed, disease of R. apex. He was very unfit and evidently toxic. He made no improvement during his period of residence. He had periods of slight improvement followed by periods of recrudescence of disease and on final discharge was in a worse condition than on admission.
Note fall of V.C. and W.

No. 190. Name Edward Duff. Age 20 yrs. Admitted 24.5.20. Admission Vth TURBAN III.

Height 166.5 cms Discharged – in residence.

Date.	V. Cap.	Weight in gms	VC. Const in W.	VC. Cal in W	VC. Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC. Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC. Cal in Ch.	VC. Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
25.5.20.	2450	44906	.909	3242	2976	17.6	86.5	3937	77	6	3258	3600	1.214	1.33	1.60	1.47	31.4

Very bad condition. He was very thin and looked ill. Cough of moderate severity. Sputum 2 oz daily. T.B. + + many. Extensive fibro-caseous disease of R. lung, and early disease of left apex. He had a degree of spinal kyphosis which reduced stem length and accordingly reduced the V.C. Calc. in l. and ch. Thus expressed diminution of V.C. is probably below what it should be. Initial observation only taken.

No. 191. Name P. Farren. Age 33 yrs. Admitted 28.5.20. Admission 1st. TURBAN III.

Height 177.5 cms. Discharged – in residence.

Date.	V. Cap.	Weight in gms	VC. Const in W.	VC. Cal in W.	VC. Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC. Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC. Cal in Ch.	VC. Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
29.5.20.	2710	68040	1.11	4373	4508	5.0	93.5	4601	91.5	4.5	4601	4624	1.052	1.69	1.69	1.70	41.4

Pale man of good nutrition and physique. Cough severe. Sputum 2 oz daily. T.B. + few. Physical signs indicated disease of both upper lobes with much basal bronchitis. Initial observation only taken.

No. 192. Name John McElroy. Age 25 yrs. Admitted 16.4.20. Admission 1st. TURBAN III.

Height 171.5 cms. Discharged – in residence.

Date.	V.Cap.	Weight in gms	VC. Const in W.	VC. Cal in W.	VC. Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC. Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC. Cal in Ch	VC. Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
17.4.20.	2320	57154	1.15	3857	3787	12.5	91.5	4406	84	4.5	3876	4154	1.142	1.67	1.90	1.79	44.2
28.4.20.	2455	58515	1.10	3923	3877		91.5	4406	84	4.5	3876	4154	1.123	1.58	1,80	1,68	
5.5.20.	2495	58742	1.08	3934	3893		91.5	4406	84	4.5	3876	4154	1.120	1.55	1.77	1.66	
10.5.20.	2535	59195	1.07	3955	3922		91.5	4406	84	4.5	3876	4154	1.114	1.53	1.74	1.64	
17.5.20.	2455	58515	1.10	3923	3877		91.5	4406	84	4.5	3876	4154	1.123	1.58	1.80	1.68	
24.5.20.	2610	58968	1.04	3945	3907		91.5	4406	84	4.5	3876	4154	1.117	1.48	1.69	1.59	
31.5.20.	2630	58968	1.03	3945	3907	10.5	91.5	4406	84	4.5	3876	4154	1.117	1.47	1.67	1.58	36.7

Incr. of 2.0 Incr. of 7.5

Man of poor physique but fair nutrition. Cough not severe. Sputum $\frac{3}{4}$ oz daily. Signs indicated fairly extensive but very mildly active, double lung disease. T.B. + few, in sputum. He improved during his period of observation and was finally performing work satisfactorily.

No. 193. Name W. J. Morton. Age 27 yrs. Admitted 26.3.20. Admission 111rd. TURBAN III'

Height 169.5 cms. Discharged – in residence.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC. Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of V.C.
27.3.20.	2440	56700	1.084	3835	3757	7.0	89.5	4122	81.5	4	3649	3899	1.074	1.49	1.69	1.60	37.0
5.4.20.	2500	58288	1.080	3912	3862		88.5	4122	81.5	4	3649	3899	1.054	1.46	1.65	1.56	
19.4.20.	2275	56246	1.156	3813	3727		88.5	4122	81.5	4	3649	3899	1.081	1.61	1.81	1.71	
26.4.20.	2560	56927	1.036	3846	3772		88.5	4122	81.5	4	3649	3899	1.072	1.42	1.61	1.52	
3.5.20.	2565	56927	1.035	3846	3772		88.5	4122	81.5	4	3649	3899	1.072	1.42	1.61	1.52	
10.5.20.	2575	56246	1.022	3813	3727		88.5	4122	81.5	4	3649	3899	1.080	1.41	1.60	1.51	
17.5.20.	2630	56246	1.000	3813	3727		88.5	4122	81.5	4	3649	3899	1.080	1.39	1.57	1.48	
24.5.20.	2690	56927	.986	3846	3772		88.5	4122	81.5	4	3649	3899	1.072	1.35	1.53	1.44	
31.5.20.	2690	56927	.986	3846	3772	6.7	88.5	4122	81.5	4	3649	3899	1.072	1.35	1.53	1.44	31.0
	Incr. of 0.3																Incr. of 6.0

Man of fair physique and nutrition. Cough of moderate severity. Sputum 1½ oz daily. T.B. + + many. Signs indicated extensive fibroid disease of both lungs. He improved during his period of observation. He felt fitter but physical signs remained unchanged. His disease was of many years standing.

No. 194. Name A. Mackie. Age 34 yrs. Admitted 16.4.20. Admission 1st. TURBAN III.

Height 166 cms. Discharged - in residence.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L.	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
17.4.20.	2310	47401	1.007	3371	3141	16.4	87.5	4030	75.5	4	3132	3570	1.195	1.36	1.75	1.55	35.3
26.4.20.	2315	48081	1.015	3405	3187		87.5	4030	75.5	4	3132	3570	1.184	1.35	1.74	1.54	
3.5.20.	2250	48535	1.051	3429	3217		87.5	4030	75.5	4	3132	3570	1.175	1.39	1.79	1.59	
10.5.20.	2370	48762	1.001	3440	3232		87.5	4030	75.5	4	3132	3570	1.171	1.32	1.70	1.50	
24.5.20.	2590	48762	.916	3440	3232		87.5	4030	75.5	4	3132	3570	1.171	1.21	1.56	1.38	
31.5.20.	2625	48762	.904	3440	3232	14.7	87.5	4030	75.5	4	3132	3570	1.171	1.19	1.54	1.36	29.3
	Incr. of 1.7																Incr. of 6.0

Thin pale man. Cough was severe especially at night. Sputum was slight but contained numerous T.B. Signs indicated extensive chronic mildly active disease of both lungs, patches of disease of moderate extent beingpresent at apices of both upper lobes and in left lower lobe. He improved during his period of observation. Sputum disappeared and he felt fitter.

No. 195. Name W. Matheson. Age 24 yrs. Admitted 9.4.20. Admission 1st. TURBAN III.

Height 171.5 cms. Discharged – in Residence.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of V.C.
12.4.20.	2260	57381	1.17	3868	3802	0.6	86	3893	83	6.5	3784	3858	1.006	1.67	1.72	1.70	41.5
20.4.20.	2450	57834	1.095	3890	3832		86	3893	83	6.5	3784	3858	1.001	1.54	1.59	1.58	
4.4.20.	2620	58515	1.03	3923	3877		86	3893	83	6.5	3784	3858	.992	1.44	1.49	1.48	
18.5.20.	2800	57834	.958	3890	3832		86	3893	83	6.5	3784	3858	1.001	1.35	1.39	1.38	
31.5.20.	2935	57834	.949	3890	3832	0.1	86	3893	83	6.5	3784	3858	1.001	1.29	1.33	1.32	23.9
			Incr. of 0.5														Incr. of 17.6

Thin pale man. Cough is not severe. Sputum ¼ oz daily. T.B. not found. Signs indicated extensive apparently quiescent disease of R. lung. He improved during his period of observation and felt fitter in every way. He was finally put upon work.

No. 196. Name D. Milligan Age 20 yrs. Admitted 21.2.19. Admission 1st. TURBAN III.
Height 176 cms. Discharged – in residence.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L.	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of V.C.
27.11.19.	2600	61690	1.081	4075	4087	8.6	92	4455	87	5	4158	4326	1.09	1.59	1.71	1.66	39.9
4.12.19.	2630	62824	1.083	4129	4162		92	4455	87	5	4158	4326	1.08	1.58	1.70	1.65	
31.12.19.	2930	59648	.936	3977	3952		92	4455	87	5	4158	4326	1.120	1.42	1.52	1.47	
14. 1.20.	2810	60782	.989	4032	4027		92	4455	87	5	4158	4326	1.105	1.48	1.58	1.53	
28. 1.20.	3060	61009	.911	4043	4042		92	4455	87	5	4158	4326	1.102	1.36	1.46	1.41	
11. 2.20.	3100	62370	.914	4107	4132		92	4455	87	5	4158	4326	1.085	1.34	1.44	1.39	28.4
25. 2.20.	2800	61916	1.007	4085	4102		92	4455	87	5	4158	4326	1.090	1.48	1.59	1.54	
8. 3.20.	2880	63731	.999	4172	4223		92	4455	87	5	4158	4326	1.067	1.44	1.55	1.50	
22. 3.20.	3010	63504	.953	4161	4208		92	4455	87	5	4158	4326	1.070	1.38	1.48	1.43	
5. 4.20.	3070	64184	.942	4193	4253		92	4455	87	5	4158	4326	1.062	1.35	1.45	1.40	
19. 4.20.	2915	62597	.975	4118	4148		92	4455	86	4.5	4063	4277	1.081	1.39	1.53	1.47	
3. 5.20.	3090	63050	.924	4139	4178		92	4455	86	4.5	4063	4277	1.076	1.31	1.44	1.38	
17. 5.20.	3190	63050	.895	4139	4178		92	4455	86	4.5	4063	4277	1.076	1.27	1.40	1.34	
31. 5.20.	3220	62597	.882	4118	4148	7.6	92	4455	86	4.5	4063	3277	1.081	1.26	1.38	1.33	24.8
			Incr. of 1.0														Incr. of 15.1

This man had been 9 months in residence when his observations were begun. His condition then was not very satisfactory. He was pale and thin with severe cough and purulent sputum which averaged 4 oz daily and contained fairly numerous T.B. He had extensive fibro-caseous disease of left lung and a small area of mild activity at his right apex. He improved during his period of observation and under special treatment. Lung signs remained unchanged but he felt fitter. He however remained dyspnoeic on any, but light, exertion. Note oscillating but rising V.C.

No. 197. Name W. Stewart. Age 44 yrs. Admitted 5.3.20. Admission 1st. TURBAN III.

Height 160.5 cms. Discharged 23.7.20.

Date.	V. Cap.	Weight in gms	VC. Const in W.	VC. Cal in W	VC. Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC. Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC. Cal in Ch.	VC. Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC
6.3.20.	1900	46267	1.203	3312	3066	17.8	87.5	4030	79	3	3429	3737	1.217	1.80	2.12	1.96	49.2
23.3.20.	2300	48308	1.02	3417	3202		87.5	4030	79	3	3429	3737	1.179	1.49	1.75	1.62	
29.3.20.	2500	49670	.962	3486	3292		87.5	4030	79	3	3429	3737	1.156	1.37	1.61	1.49	
5.4.20.	2550	50349	.913	3520	3337		87.5	4030	79	3	3429	3737	1.145	1.34	1.58	1.46	31.8
12.4.20.	2380	51710	1.04	3589	3427		87.5	4030	79	3	3429	3737	1.122	1.44	1.69	1.57	
19.4.20.	2450	52164	1.02	3611	3457		87.5	4030	79	3	3429	3737	1.116	1.40	1.65	1.53	
26.4.20.	2440	52844	1.03	3645	3502		87.5	4030	79	3	3429	3737	1.105	1.40	1.65	1.53	
3.5.20.	2420	53525	1.05	3679	3547		87.5	4030	79	3	3429	3737	1.095	1.42	1.67	1.54	
17.5.20.	2450	53751	1.04	3690	3562		87.5	4030	80	4.5	3516	3789	1.092	1.43	1.65	1.55	
31.5.20.	2495	53978	1.02	3701	3577	8.2	87.5	4030	80	4.5	3516	3789	1.089	1.41	1.62	1.52	34.1
				Incr. of 9.6												Incr. of 15.1	

Thin pale man. Cough of moderate severity. Sputum ½ oz daily. T.B. not found, but much elastic tissue present. He had advanced and apparently active disease of the left lung, and fairly quiescent disease of R. upper lobe. He made very great improvement under treatment. Cough became very slight, while sputum disappeared. Physical signs improved greatly and disease appeared to pass into a condition of complete quiescence.
Fall of V.C. on 12th April due to coryza, which was followed by slight increase of cough.

No. 198. Name A. Anderson' Age 45 yrs. Admitted 24.10.19. Admission 1st. TURBAN III.

Height 166 cms. Discharged – in residence.

Date.	V. Cap.	Weight in gms	VC.Const in W	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC
25.11.19.	2900	54432	.886	3724	3607	9.7	88.5	4122	85	2	3969	4066	1.106	1.368	1.421	1.402	28.7
1.12.19.	2900	54886	.891	3746	3637		88.5	4122	85	2	3969	4066	1.100	1.368	1.421	1.402	
15.12.19.	2670	55566	.976	3779	3682		88.5	4122	85	2	3969	4066	1.090	1.486	1.543	1.523	
2. 1.20.	2550	54205	1.004	3712	3592		88.5	4122	85	2	3969	4066	1.110	1.556	1.616	1.594	
19. 1.20.	2820	55340	.922	3768	3667		88.5	4122	85	2	3969	4066	1.095	1.403	1.46	1.44	
2. 2.20.	2890	55112	.897	3757	3652		88.5	4122	85	2	3969	4066	1.097	1.37	1.43	1.41	
16. 2.20.	2860	56020	.917	3802	3712		88.5	4122	85	2	3969	4066	1.084	1.38	1.44	1.42	
1. 3.20.	2880	54886	.897	3746	3637		88.5	4122	85	2	3969	4066	1.100	1.37	1.43	1.41	
15. 3.20.	2720	55339	.956	3768	3667		88.5	4122	85	2	3969	4066	1.095	1.46	1.52	1.50	
29. 3.20.	3010	54886	.859	3746	3637		88.5	4122	85	2	3969	4066	1.100	1.32	1.37	1.35	25.9
12. 4.20.	2760	56020	.950	3802	3712		88.5	4122	85	4	3969	4066	1.084	1.44	1.49	1.47	
26.4. 20.	2880	57381	.927	3868	3802		88.5	4122	85	4	3969	4066	1.065	1.37	1.43	1.41	
10. 5.20.	2970	58061	.906	3901	3847		88.5	4122	85	4	3969	4066	1.056	1.34	1.40	1.37	
31. 5.20.	3010	58061	.894	3901	3847	5.4	88.5	4122	85	4	3969	4066	1.056	1.32	1.37	1.35	25.9
			Incr. of 4.3													Incr. of 2.8	

Thin pale man. Cough severe and sputum 4 oz daily. T.B. present in small numbers. Physical signs indicated fairly advanced double pulmonary disease of a moderate grade of activity. He made no real improvement during his whole period of observation. Cough and sputum underwent no change and physical signs remained unchanged.
Note oscillating V.C.

No. 199. Name G. Higgins. Age 10 yrs. Admitted 11.10.19. Admission 1st. TURBAN - Hilus T.B.

Height 134.5 cms. Discharged 14.12.19.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
28.11.19.	650	27443	2.414	2274	1818	20.0	73.5	2843	68.5	1.0	2567	2721	1.250	3.949	4.374	4.186	76.2

Small pale thin boy. Numerous small hard glands on both sides of neck. He had extensive collapse of R. lung evidently of long duration and an infiltrative lesion of left lower lobe. Initial observation only was taken, and he was finally discharged to a Tuberculosis Hospital.

No. 200. Name S. Hill. Age 13 yrs. Admitted 20.6.19. Admission 11nd TURBAN – HILUS T.B. Quiescent.

Height 147.5 cms. Discharged 18.12.19.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC. Cal in L.	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1,	P.F. 2	P.F. 3	P.F. 4	% Dim of V.C.
29.11.19.	1750	35934	1.086	2756	2375	9.4	76	3040	70	3.5	2697	2875	1.103	1.54	1.73	1.65	39.2
12.12.19.	1810	35608	1.045	2743	2360	9.8	76	3040	70	3.5	2697	2875	1.108	1.490	1.679	1.589	37.1
			Decr. of 0.4													Incr. of 2.1	

Tall thin pale boy who had been 5 months in the Institution when his observations were begun. He had small "shotty" glands on both sides of his neck, and evidence of quiescent intra-thoracic glandular enlargement. He had no cough and no sputum.

No. 201. Name Wm. Sloan. Age 9 yrs. Admitted 7.11.19. Admission 1st. TURBAN – HILUS T.B.

Height 113.5 cms. Discharged 18.1.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth – L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of V.C.
28.11.19.	990	23587	1.421	2039	1563	12.4	66.5	2327	61.5	4	2078	2210	1.14	2.09	2.35	2.23	55.2
12.12.19.	1010	24494	1.431	2095	1623		66.5	2327	61.5	4	2078	2210	1.11	2.05	3.30	2.18	
26.12.19.	1150	25175	1.28	2137	1668		66.5	2327	61.5	4	2078	2210	1.08	1.80	2.02	1.91	
9. 1.20.	1210	24721	1.202	2109	1638		66.5	2327	61.5	4	2078	2210	1.103	1.71	1.92	1.82	
16. 1.20.	1240	25175	1.188	2137	1668	8.2	66.5	2327	61.5	4	2078	2210	1.08	1.67	1.87	1.78	43.9

Incr. of 4.4 Incr. of 11.3

Thin pale boy. He had slight cough and no sputum. He complained of abdominal discomfort and occasional diarrhoea. A mass of small hard glands was palpable in the ileo-caecal angle. Chest signs were those of undoubted hilus disease. He improved during treatment but was finally transferred to a Tuberculosis Hospital on account of persistent pyrexia.

No. 202. Name George Ford. Age 29 yrs. Admitted 27.2.20. Admission 1st. TURBAN - HILUS T.B.

Height 170 cms. Discharged 19.3.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of V.C.
28.2.20.	3260	58742	.832	3934	3893	10.7	91.5	4406	87.5	4.5	4207	4327	1.119	1.29	1.35	1.32	24.7
9.3.20.	3200	58061	.841	3901	3847	11.5	91.5	4406	87.5	4.5	4207	4327	1.129	1.31	1.37	1.35	26.1
			Decr. of 0.8														Decr. of 1.4

Man of good colour and fair nutrition. Cough slight. Sputum ½ oz daily containing elastic tissue. Hard glands were palpable on both sides of his neck notably in both supraclavicular areas. Signs in chest pointed to a hilus type of infection. He refused to remain in the Institution.

No. 203. Name Neil Hunter. Age 13 yrs. Admitted 5.3.20. Admission 1st. TURBAN – HILUS T.B.

Height 135.5 cms. Discharged 9.4.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of V.C.
6.3.20.	1500	30618	1.13	2461	2029	12.3	73	2805	68	5	2541	2683	1.139	1.69	1.87	1.79	44.1
19.3.20.	1500	31979	1.17	2531	2119		73	2805	68	5	2541	2683	1.104	1.69	1.87	1.79	
26.3.20.	1820	32206	.967	2552	2134		73	2805	68	5	2541	2683	1.099	1.39	1.54	1.47	
2.4.20.	1820	32659	.977	2578	2164	1.1	73	2805	68	5	2541	2683	1.088	1.39	1.54	1.47	32.6
			Incr.of 4.2														Incr. of 11.5

Pale boy of good nutrition and physique. No cough or spit. Small hard glands palpable on both sides of neck. Signs of hilus glandular involvement. He improved during his period of treatment and was finally dismissed for irregular conduct.

No. 204. Name D. Bailie. Age 13 yrs. Admitted 26.12.19. Admission 1st. TURBAN - HILUS T.B.

Height 150 cms. Discharged 9. 4.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC
28.12.19.	1300	30845	1.31	2474	2044	11.8	73	2805	64.5	4	2286	2545	1.13	1.75	2.16	1.95	48,9
9. 1.20.	1520	32206	1.15	2552	2134		73	2805	64.5	4	2286	2545	1.09	1.50	1.81	1.67	
23. 1.20.	1680	32659	1.058	2578	2164		73	2805	64.5	4	2286	2545	1.088	1.36	1.67	1.51	
7. 2.20.	1720	33340	1.049	2616	2209		73	2805	64.5	4	2286	2545	1.072	1.33	1.63	1.48	
20. 2.20.	1700	33793	1.072	2642	2239		73	2805	64.5	4.5	2286	2545	1.062	1.34	1.65	1.49	
5. 3.20.	1700	34474	1.09	2680	2284		73.5	2843	66.5	4.5	2430	2642	1.060	1.43	1.67	1.55	
19. 3.20.	1750	36515	1.10	2793	2420		73.5	2843	66.5	4.5	2430	2642	1.018	1.39	1.62	1.51	
26. 3.20.	1970	36742	.983	2806	2435		73.5	2843	66.5	4.5	2430	2642	1.013	1.23	1.44	1.34	25.5
2. 4.20.	1900	37649	1.04	2856	2495	+0.4	73.5	2843	66.5	4.5	2430	2642	1.999	1.28	1.49	1.39	28.1

Incr. of 12.2 Incr. of 20.8

Emaciated weak boy. Severe cough, unaccompanied by sputum. Signs were those of active hilus tuberculosis and of an active lesion of R. upper lobe. He showed very great improvement as a result of treatment. Cough became diminished in frequency and intensity and he became fit and active. He was very much improved on discharge.

No. 205. Name D. Turner. Age 10 yrs. Admitted 16.9.19. Admission 11nd. TURBAN HILUS T.B.

Height 125 cms. Discharged 23.4.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L.	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
28.11.19.	1200	23814	1.180	2053	1578	16.9	68.5	2470	62	2.75	2112	2295	1.20	1.76	2.05	1.99	47.8
12.12.19.	1090	23360	1.282	2025	1548		68.5	2470	62	2.75	2112	2295	1.219	1.93	2.26	2.10	
26.12.19.	990	23360	1.41	2025	1548		68.5	2470	62	2.75	2112	2295	1.219	2.13	2.49	2.31	
9. 1.20.	1100	23587	1.28	2039	1563		68.5	2470	62	2.75	2112	2295	1.211	1.920	2.24	2.08	
23. 1.20.	1180	23587	1.19	2039	1563		68.5	2470	62	2.75	2112	2295	1.211	1.79	2.09	1.94	
7. 2.20.	1180	23587	1.19	2039	1563		68.5	2470	62	2.75	2112	2295	1.211	1.79	2.09	1.94	
20. 2.20.	980	23360	1.42	2025	1548		68.5	2470	62	2.75	2112	2295	1.219	2.15	2.52	2.34	
5. 3.20.	1260	23587	1.12	2039	1563		68.5	2470	62	2.75	2112	2295	1.211	1.68	1.96	1.82	
19. 3.20.	1310	23587	1.07	2039	1563		68.5	2470	62	3	2112	2295	1.211	1.61	1.88	1.75	
26. 3.20.	1260	24041	1.13	2067	1593		68.5	2470	62	3	2112	2295	1.195	1.68	1.96	1.82	
2. 4.20.	1470	23587	.957	2039	1563		68.5	2470	62	3	2112	2295	1.211	1.43	1.68	1.56	34.2
16. 4.20.	1640	24267	.875	2081	1608	15.8	68.5	2470	62	3	2112	2295	1.187	1.29	1.50	1.40	28.6
			Incr. of 1.1														Incr. of 19.2

Small boy of poor physique. Small glands palpable on both sides of neck. Severe cough. No sputum obtainable. Signs indicated marked hilus disease with much double basal moisture. He improved greatly as a result of treatment. Cough disappeared, basal signs diminished considerably, a few dry crepitations alone remaining, and he became fit and active.

No. 206. Name John Saville. Age 14 yrs. Admitted 23.4.20. Admission 11nd. TURBAN – HILUS T.B.

Height 142 cms. Discharged 30.4.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of V.C.
19.4.20.	1757	31979	.997	2539	2119	15.4	75.5	3000	67	5.5	2466	2734	1.180	1.40	1.71	1.55	35.7
1.5.20.	1900	33340	.950	2616	2209	12.8	75.5	3000	67	5.5	2466	2734	1.147	1.29	1.60	1.44	30.5
		Incr. of 2.6														Incr. of 5.2	

Pale boy of bad physique. He had slight cough unaccompanied by sputum. Signs suggested a mild degree of hilus involvement. He remained for one week only.

No. 207. Name J. Peacock' Age 12 yrs. Admitted 7.11.19. Admission IInd. TURBAN – HILUS T.B.

Height Discharged 10.5.20.

Date.	V.Cap.	Weight in gms	VC. Const in W.	VC. Cal in W	VC. Cal as % W	% Dim of W	Stem Lgth = L in cms.	VC. Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC. Cal in Ch.	VC. Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of V.C.
28.11.19.	1000	24948	1.465	2123	1653	14.1	68.5	2470	62.5	2.5	2146	2314	1.163	2.146	2.470	2.314	56.8
5.12.19.	1200	25402	1.253	2151	1683		68.5	2470	62.5	2.5	2146	2314	1.143	1.78	2.05	1.92	
19.12.19.	1400	25175	1.024	2137	1668		68.5	2470	62.5	2.5	2146	2314	1.15	1.53	1.76	1.65	
2. 1.20.	1340	25628	1.114	2165	1698		68.5	2470	62.5	2.5	2146	2314	1.140	1.601	1.84	1.72	
16. 1.20.	1380	25855	1.089	2179	1713		68.5	2470	62.5	2.5	2146	2314	1.133	1.55	1.79	1.67	
30. 1.20.	1400	26309	1.087	2206	1743		68.5	2470	62.5	2.5	2146	2314	1.119	1.53	1.76	1.65	
13. 2.20.	1530	26536	1.001	2220	1758		68.5	2470	62.5	2.5	2146	2314	1.112	1.40	1.62	1.51	
27. 2.20.	1390	26762	1.108	2233	1773		68.5	2470	62.5	2.5	2146	2314	1.106	1.54	1.77	1.66	
12. 3.20.	1490	26989	1.040	2247	1788		70	2579	62.5	4	2146	2365	1.147	1.44	1.73	1.59	
26. 3.20.	1640	27216	.951	2261	1803		70	2579	62.5	4	2146	2365	1.140	1.31	1.57	1.44	
2. 4.20.	1670	27216	.934	2261	1803		70	2579	62.5	4	2146	2365	1.140	1.29	1.54	1.41	29.4
16. 4.20.	1610	27443	.975	2274	1818		70	2579	62.5	4	2146	2365	1.135	1.34	1.60	1.47	
1. 5.20.	1690	27443	.929	2274	1818	11.8	70	2579	62.5	4	2146	2365	1.135	1.27	1.53	1.40	28.6

Incr. of 2.3 Incr. of 28.2

Thin pale boy. He had slight cough unaccompanied by sputum. Small hard glands palpable on both sides of neck. He had chronic tonsillar hypertrophy and post-nasal adenoids. Signs of hilus disease present. He improved very greatly under treatment. Cough disappeared and he became fit and active.
No cause for fall of V.C. on 27th February and 12th March.

No. 208. Name E. Joyce. Age 10 yrs. Admitted 30.5.19. Admission 1st. TURBAN – HILUS

Height 123.5 cms. Discharged 10.5.20.

Date.	V.Cap.	Weight in gms	VC. Const in W.	VC. Cal in W.	VC. Cal as %W	% Dim of W.	Stem Lgth = L in cms.	VC. Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC. Cal in Ch.	VC. Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
28.11.19.	1050	26762	1.467	2233	1773	10.9	69	2506	66	3	2393	2461	1.122	2.28	2.38	2.34	57.4
5.12.19.	980	27216	1.591	2261	1803		69	2506	66	3	2393	2461	1.108	2.44	2.55	2.50	
19.12.19.	1200	27896	1.32	2301	1848		69	2506	66	3	2393	2461	1.089	1.99	2.08	2.05	
2. 1.20.	1200	28804	1.35	2354	1908		69	2506	66	3	2393	2461	1.064	1.99	2.08	2.05	
16. 1.20.	1290	28804	1.26	2354	1908		69	2506	66	3	2393	2461	1.064	1.85	1.94	1.91	
30. 1.20.	1270	28804	1.28	2354	1908		69	2506	66	3	2393	2461	1.064	1.88	1.97	1.94	
13. 2.20.	1160	30164	1.45	2434	1999		69	2506	66	3	2393	2461	1.029	2.06	2.16	2.12	
27. 2.20.	1240	30391	1.36	2448	2014		69	2506	66	3	2393	2461	1.023	1.93	2.02	1.98	
12. 3.20.	1260	30618	1.34	2461	2029		69	2506	66	3	2393	2461	1.018	1.89	1.98	1.95	
2. 4.20.	1370	30164	1.23	2434	1999		69	2506	66	3	2393	2461	1.029	1.74	1.83	1.80	
16. 4.20.	1560	31525	1.11	2513	2089		70	2579	67	3.5	2466	2535	1.026	1.58	1.65	1.62	44.3
1. 5.20.	1540	31525	1.12	2513	2089	3.0	70	2579	67	3.5	2466	2535	1.026	1.60	1.67	1.64	39.2

Incr. of 7.9 Incr. of 18.2

Thin undersized rickety boy. He had been 6 months in residence when these readings were begun. He was even then in an unsatisfactory condition and had fairly severe cough. He improved greatly during his period of observation and was still improving when he was dismissed for irregular conduct.
Fall of V.C. on 13th Feb. associated with slight evening pyrexia. This boy was a case of extensive hilus disease.

No. 209. Name A. Gardner Age 13 yrs. Admitted 23.1.20. Admission 1st TURBAN HILUS T.B.

Height 131.5cms. Discharged 10.5.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
27.1.20.	1220	30618	1.39	2461	2029	14.6	74	2882	66	3	2393	2640	1.172	1.96	2.36	2.16	53.8
7.2.20.	1280	32206	1.37	2552	2134		74	2882	66	3	2393	2640	1.129	1.87	2.35	2.06	
20.2.20.	1190	32432	1.49	2565	2149		74	2882	66	3	2393	2640	1.123	2.01	2.42	2.22	
5.3.20.	1220	32432	1.45	2565	2149		74	2882	66	3	2393	2640	1.123	1.96	2.36	2.16	
13.3.20.	1280	32886	1.39	2591	2179		74	2882	66	3	2393	2640	1.112	1.88	2.25	2.06	
26.3.20.	1510	32886	1.18	2591	2179		74	2882	66	3	2393	2640	1.112	1.58	1.91	1.75	
2.4.20.	1580	32886	1.13	2591	2179		74	2882	66	3	2393	2640	1.112	1.52	1.83	1.67	40.3
16.4.20.	1660	33339	1.08	2616	2209		74	2882	66	3	2393	2640	1.063	1.44	1.74	1.59	
1.5.20.	1660	33113	1.082	2603	2194	10.0	74	2882	66	3	2393	2630	1.107	1.44	1.74	1.59	37.1
		Incr. of 4.6															Incr. of 16.7

Thin pale boy. Small hard glands palpable on both sides of neck. Cough of moderate activity. Slight sputum. T.B. not found. Signs indicated extensive intra-thoracic glandular involvement. He improved considerably during his period of residence. Cough and sputum diminished and he became more fit and active.

No. 210. Name D. Haggerty. Age 14 yrs. Admitted 27.2.20. Admission 1st. TURBAN HILUS T.B. (Extensive)

Height 142 cms. Discharged 26.6.20.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC
1.3.20.	1330	32432	1.33	2562	2149	12.2	74.5	2921	64	4.25	2250	2577	1.138	1.69	2.19	1.93	48.4
12.3.20.	1590	34247	1.16	2667	2269		74.5	2921	64	4.25	2250	2577	1.095	1.42	1.84	1.62	
26.3.20.	1720	34474	1.075	2680	2284		74.5	2921	64	4.25	2250	2577	1.090	1.31	1.69	1.49	
2.4.20.	1820	35154	1.030	2718	2329		74.5	2921	64	4.25	2250	2577	1.071	1.23	1.60	1.41	29.4
16.4.20.	1700	34927	1.098	2705	2314		74.5	2921	64	4.25	2250	2577	1.080	1.32	1.72	1.51	
1.5.20.	1780	34927	1.049	2705	2314		74.5	2921	66	4.5	2393	2658	1.080	1.35	1.64	1.50	
16.5.20.	1700	35154	1.103	2718	2329		74.5	2921	66	4.5	2393	2658	1.071	1.41	1.72	1.56	
28.5.20.	1740	35834	1.09	2756	2375	5.7	74.5	2921	66	4.5	2393	2658	1.059	1.37	1.68	1.52	34.6
			Incr. of 6.5														Incr. of 13.8

Tall thin miserable specimen of a boy. He complained of slight cough and slight expectoration. T.B. not found. Scars of old caseating tubercular glands present in R. submaxillary area. Numerous glands of varying sizes palpable on both sides of neck. Signs indicated extensive involvement of intra-thoracic glands. He improved very greatly during his period of observation. Cough and spit disappeared and he felt very fit and active.
Note rise of V.C. till 2nd April. On 18th April he developed a recurrence of inflammation in some neck glands. V.C. fell shortly before this condition definitely appeared.

No. 211. Name J. Brand. Age 13 yrs. Admitted 30.5.19. Admission 1st. TURBAN HILUS T.B. (Active)

Height 142 cms. Discharged - in residence.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of V.C.
28.11.19.	1490	30845	1.181	2474	2044	10.7	74	2882	63.5	4	2215	2540	1.464	1.486	1.934	1.704	41.4
5 .12.19.	1400	31298	1.231	2500	2074		74	2882	63.5	4	2215	2540	1.152	1.582	2.058	1,814	
19.12.19.	1610	31752	1.08	2526	2104		74	2882	63.5	4	2215	2540	1.140	1.375	1.790	1.577	
9. 1.20.	1590	32205	1.107	2552	2134		74	2882	63.5	4	2215	2540	1.129	1.39	1.81	1.59	
23. 1.20.	1690	31525	1.026	2513	2089		74	2882	63.5	4	2215	2540	1.146	1.31	1,705	1.503	
7. 2.20.	1720	31979	1.018	2539	2119		74	2882	63.5	6	2215	2540	1.360	1.29	1.68	1.48	
20. 2.20.	1620	32205	1.08	2552	2134		74	2882	63.5	6	2215	2540	1.129	1.36	1.77	1.57	
5. 3.20.	1780	32659	.999	2578	2164		74	2882	63.5	6	2215	2540	1.117	1.24	1.62	1.42	
19. 3.20.	1830	33113	.982	2603	2194		74	2882	63.5	6	2215	2540	1.107	1.21	1.57	1.38	
26. 3.20.	1980	33113	.907	2603	2194		74	2882	63.5	6	2215	2540	1.107	1.12	1.46	1.28	22.1
2. 4.20.	1860	33566	.975	2629	2224		74	2882	63.5	6	2215	2540	1.096	1.19	1.55	1.36	
16. 4.20.	2010	34793	.906	2642	2239		74	2882	63.5	6	2215	2540	1.091	1.10	1.43	1.26	
1. 5.20.	2150	34247	.860	2667	2269		74	2882	63.5	6	2215	2540	1.080	1.03	1.34	1.18	
14. 5.20.	1980	34473	.934	2680	2284		74	2882	63.5	6	2215	2540	1.076	1.12	1.14	1.28	
28. 5.20.	2040	34473	.906	2680	2284	7.1	74	2882	63.5	6	2215	2540	1.076	1.08	1.41	1.24	19.7
			Incr. of 3.6														Incr. of 21.7

Thin pale boy. He had been 6 months in the Institution when these readings were begun. His condition had improved by then, but was still not good. He had signs of fairly extensive hilus tuberculosis. He improved very considerably during his period of observation and was discharged with disease apparently in a quiescent condition. He felt very fit, and was active, and apparently free from symptoms.

No. 212. Name James Ferguson. Age 10 yrs. Admitted 19.12.19. Admission 11nd. TURBAN HILUS T.B.

Height 136.5 cms Discharged 11. 6.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of V.C.
20.12.19.	1610	30391	1.049	2448	2014	12.7	73	2805	65.5	3.5	2357	2584	1.145	1.464	1.742	1.605	37.7
2. 1.20.	1580	32206	1.114	2552	2134		73	2805	65.5	3.5	2357	2584	1.099	1.49	1.77	1.63	
16. 1.20.	1690	32660	1.05	2578	2164		73	2805	65.5	3.5	2357	2584	1.088	1.39	1.66	1.53	
30. 1.20.	1820	33113	.987	2603	2194		73	2805	65.5	3.5	2357	2584	1.077	1.29	1.54	1.42	
13. 1.20.	1890	33566	.959	2629	2224		73	2805	67	4	2466	2644	1.066	1.25	1.49	1.37	
27. 1.20.	1980	34020	.925	2655	2254		73	2805	67	4	2466	2644	1.056	1.24	1.42	1.34	
12. 1.20.	1990	34927	.938	2705	2314		73	2805	67	4	2466	2644	1.037	1.24	1.41	1.33	
26. 1.20.	2005	34700	.926	2693	2299		73	2805	67	4	2466	2644	1.042	1.23	1.40	1.32	20.8
2. 1.20.	2000	34700	.929	2693	2299		73	2805	69	5.5	2616	2741	1.042	1.23	1.40	1.32	
16. 1.20.	2040	35607	.928	2743	2360		73.5	2843	69	5.5	2616	2741	1.036	1.28	1.39	1.34	
1. 1.20.	2070	35381	.910	2731	2344		73.5	2843	69	5.5	2616	2741	1.041	1.26	1.37	1.32	
14. 1.20.	2100	35607	.901	2743	2360		73.5	2843	69	5.5	2616	2741	1.036	1.24	1.35	1.30	
28. 1.20.	2120	35607	.900	2743	2360	3.6	73.5	2843	69	5.5	2616	2741	1.036	1.23	1.34	1.29	22.7
			Incr. of 9.1														Incr. of 15.0

Thin pale boy. He had slight cough, unaccompanied by sputum. Signs indicated fairly extensive hilus disease. He improved very greatly during his period of observation and was finally discharged, a robust, healthy looking boy.
Note increasing chest measurement and increasing mobility. Stem length also increased with growth.

No. 213. Name Alex. Brown. Age 10 yrs. Admitted 23.4.20. Admission 1st. TURBAN HILUS T.B.

Height 129.5 cms. Discharged 24.7.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC
26.4.20.	1355	25628	1.102	2165	1698	11.1	68	2434	60	5.5	1978	2205	1.124	1.46	1.79	1.62	38.6
1.5.20.	1480	25628	1.093	2165	1698		68	2434	60	5.5	1978	2205	1.124	1.33	1.65	1.49	
7.5.20.	1480	26082	1.022	2192	1728		68	2434	60	5.5	1978	2205	1.110	1.33	1.65	1.49	
14.5.20.	1455	25855	1.03	2179	1713		68	2434	60	5.5	1978	2205	1.117	1.36	1.68	1.52	
28.5.20.	1530	26535	1.00	2220	1758	8.8	68	2434	60	5.5	1978	2205	1.096	1.29	1.59	1.44	30.6
		Incr. of 2.3															Incr. of 8.0

Pale boy of fair nutrition. He had had excision of R. elbow joint performed in 1910 fpr tubercular disease. Result was excellent. He had no cough or sputum, but undoubted signs of bronchial adenopathy were present. He improved generally during his period of observation.

No. 214. Name J. Millar. **Age 18 yrs.** Admitted 15.1.20. Admission Ist. TURBAN. HILUS T.B.

Height 146.5 cms. Discharged – in residence.

Date.	V.Cap.	Weight in gms.	V.C.Const. in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas = Ch in cms.	Expn. in cms.	VC.Cal in Ch	VC.Cal in L & Ch.	P.F. 1	P.F. 2	P.F. 3	P.F. 4	%Dim of VC.
15. 1.20.	2010	43999	1.09	3195	2916	1.5	78.5	3243	76.5	3.5	3215	3246	1.015	1.59	1.61	1.61	38.1
29. 1.20.	2040	44680	1.093	3230	2916		78.5	3243	76.5	3.5	3215	3246	1.004	1.57	1.59	1.59	
11. 2.20.	2240	45360	1.006	3266	3006		78.5	3243	76.5	3.5	3215	3246	.992	1.43	1.45	1.45	
26. 2.20.	2400	47174	.965	3359	3126		78.5	3243	76.5	3.5	3215	3246	.965	1.34	1.35	1.35	
11. 3.20.	2520	47401	.923	3371	3141		78.5	3243	76.5	3.5	3215	3246	.962	1.27	1.29	1.29	
25. 3.20.	2600	47401	.817	3371	3141		78.5	3243	78	4.5	3343	3309	.962	1.29	1.25	1.27	
8. 4.20.	2540	47628	.919	3382	3156		78.5	3243	78	4.5	3343	3309	.958	1.32	1.27	1.30	23.3
22. 4.20.	2670	47401	.872	3371	3141		78.5	3243	78	4.5	3343	3309	.962	1.25	1.21	1.23	19.3
6. 5.20.	2350	47628	.993	3382	3156		78.5	3243	78	4.5	3343	3309	.958	1.42	1.38	1.40	
27. 5.20.	2050	46040	1.111	3301	3051	+1.8	78.5	3243	78	6	3343	3309	.982	1.63	1.58	1.61	38.0

Incr. of 3.3 Incr. of 0.1

Pale but of good condition. There had been extensive disease of left malar bone which was largely destroyed, a small puckered scar remaining. Healed scars on R. side of neck. Extensive moist scars over left parotid area, behind left ear and in left submaxillary area. Masses of T.B. glands present in both sides of neck. This man showed evidence of hilus involvement and of a healed focus of disease at R. apex. Towards beginning May slight cough and sputum returned and evening p yrexia appeared. Later, signs of activity at R. apex appeared.
Note rise of V.C. on 22nd April and subsequent fall.

No. 215. Name J. Farrell Age 36 yrs. Admitted 19.9.19. Admission 1st? TURBAN III. (chronic bronchitis)

Height 177 cms. Discharged 19.12.19.

Date.	V.Cap.	Weight in gms	VC.Const in W	VC.Cal in W	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of V.C.
25.11.19.	2700	74164	1.189	4653	4914	+7	94	4650	92	3	4595	4676	.999	1.70	1.72	1.71	42.2
2.12.19.	2600	72122	1.210	4560	4779	+6.4	94	4650	92	3	4595	4676	1.02	1.767	1.788	1.798	44.4

Pale man of powerful physique. He complained of slight morning cough and slight expectoration. T.B. not present. Signs were doubtful. Areas of slight dulness were present over both upper lobes associated with deficiency of R.M. Rhonchi and râles were present in abundance at both bases. He had been 2¼ months in residence when these readings were taken and finally left on 19th December.

No. 216. Name E. Keown. Age 28 yrs. Admitted 31.10.19. Admission 11nd. TURBAN ? CHRONIC BRONCHITIS.

Height 163.5 cms. Discharged 30. 1.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of V.C.
25.11.19.	2000	58060	1.345	3901	3847	+10.2	82	3539	92.5	1.5	4701	4100	.904	2.35	1.76	2.05	51.0
1.12.19.	2250	58288	1.199	3912	3862		82	3539	92.5	1.5	4701	4100		2.08	1.57	1.82	
15.12.19.	2200	58515	1.23	3923	3877		82	3539	92.5	1.5	4701	4100		2.13	1.61	1.87	
25.12.19.	1840	57154	1.45	3857	3787		82	3539	92.5	1.5	4701	4100	.918	2.55	1.92	2.22	55.0
15. 1.20.	2750	58060	.978	3901	3847		82	3539	91.5	1.5	4601	4055	.904	1.67	1.28	1.47	32.2
29. 1.20.	2610	58515	1.04	3923	3847	+10.8	82	3539	91.5	1.5	4601	4055	.902	1.76	1.35	1.55	35.7

Incr. of 0.6

Incr. of 15.3

Powerful muscular man. Note immense chest measurement. He had severe cough. Sputum was copious frothy and blood tinged in parts. T.B. were not found. Chest was fixed and emphysematous. Areas of dulness present at both apices and over apex of R. lower lobe. He improved during his period of observation. Cough diminished in frequency.
Fall of V.C. on 25th December was associated with great increase of cough.

No. 217. Name D. McLean. Age 45 yrs. Admitted 5.10.19. Admission 1st. ? TURBAN II.
(Chronic Bronchitis)
Height 160 cms. Discharged 12. 3.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of V.C.
6.12.19.	2120	61009	1.315	4043	4042	+10.2	83.5	3670	86	3.5	4063	3882	.907	1.916	1.731	1.831	45.4
22.12.19.	2130	63050	1.34	4139	4178		83.5	3670	86	3.5	4063	3882	.886	1.907	1.723	1.823	
12. 1.20.	2220	63731	1.29	4172	4223		83.5	3670	86	3.5	4063	3882	.879	1.83	1.65	1.74	
26. 1.20.	1960	63958	1.47	4182	4238		83.5	3670	86	3.5	4063	3882	.877	2.07	1.87	1.98	
9. 2.20.	2010	64184	1.44	4193	4253		83.5	3670	86	3.5	4063	3882	.875	2.02	1.82	1.93	
23. 2.20.	2000	64865	1.45	4225	4298		83.5	3670	86	3.5	4063	3882	.868	2.03	1.84	1.94	
8. 3.20.	2200	64184	1.30	4193	4253	+14.2	83.5	3670	86	3.5	4063	3882	.875	1.84	1.66	1.77	43.4

Incr. of 4.0 Incr. of 2.1

Man of good physique, but bad colour and poor general condition. Chest was large round and emphysematous. He was a case of chronic bronchitis and the diagnosis of a tubercular origin was very doubtful. T.B. were never present in sputum. He improved considerably during his period of treatment. Cough became less severe, and sputum less copious.while dyspnoea improved greatly. Very little change in V.C.

No. 218. Name C. Kersting. Age 28 yrs. Admitted 21.11.19. Admission 1st. ? TURBAN II. (Chronic Bronchitis)

Height 173 cms. Discharged 1. 4.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of V.C.
21.11.19.	1500	58288	1.77	3912	3862	12.2	92	4455	89	3	4352	4425	1.12	2.901	2.97	2.95	66.1
3.12.19.	1690	59648	1.606	3977	3952		92	4455	89	3	4352	4425	1.10	2.58	2.64	2.62	
12.12.19.	1130	59648	2.42	3977	3952		92	4455	89	3	4352	4425	1.10	3	3.93	3.91	
29.12.19.	2000	61236	1.39	4053	4057		92	4455	89	3	4352	4425	1.096	2.17	2.23	2.21	
5. 1.20.	2650	61916	1.063	4085	4102		92	4455	89	3	4352	4425	1.092	1.64	1.68	1.67	
19. 1.20.	3010	61916	.936	4085	4102		92	4455	89	3	4352	4425	1.092	1.44	1.48	1.47	32.0
2. 2.20.	2870	62370	.987	4107	4132		92	4455	89	3	4352	4425	1.085	1.52	1.55	1.54	
16. 2.20.	2700	62370	1.05	4107	4132		92	4455	89	3	4352	4425	1.085	1.61	1.65	1.64	
1. 3.20.	2610	63277	1.09	4150	4192		92	4455	89	3	4352	4425	1.073	1.66	1.70	1.69	
15. 3.20.	2350	63731	1.22	4172	4223	6.4	92	4455	89.5	3	4352	4425	1.067	1.85	1.89	1.88	46.9

Incr. of 5.8 Incr. of 19.2

Thin pale man. Cough severe. Sputum 3 oz daily. T.B. not present. Elastic tissue present. He was dyspnoeic on any exertion. Signs were those of chronic bronchitis; but on 22nd March he had a definite haemoptysis. His condition improved after that, and he was much fitter on discharge. Physical signs remained unchanged. Latterly cough had tended to become more severe especially at night. Note falling V.C. after gradual rise.

No. 219. Name J. O'Hara Age 38 yrs. Admitted 23.1.20. Admission Ist. TURBAN? Chronic Bronchitis.

Height 160.5 cms. Discharged 9.4.20.

Date.	V.Cap.	Weight in gms.	VC.Const. in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth. = L in cms.	VC.Cal in L.	Chest Meas. = Ch in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch.	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC.
26. 1.20.	2400	50350	1.012	3520	3337	9.6	86	3893	87	2.5	4158	4044	1.106	1.73	1.62	1.68	41.0
4. 2.20.	2540	57608	1.05	3879	3817		86	3893	87	2.5	4158	4044	1.004	1.64	1.53	1.59	
18. 2.20.	2620	58288	1.03	3912	3862		86	3893	87	2.5	4158	4044	.993	1.58	1.48	1.54	
3. 3.20.	2550	58742	1.06	3934	3993		86	3893	87	2.5	4158	4044	.989	1.63	1.52	1.58	
17. 3.20.	2620	58742	1.04	3934	3893		86	3893	87	2.5	4158	4044	.989	1.58	1.48	1.54	
30. 3.20.	2890	59875	.952	3988	3967		86	3893	87	5	4158	4044	.976	1.44	1.34	1.40	29.0
7. 4.20.	3020	59875	.911	3988	3967	+2.4	86	3893	87	5	4158	4044	.976	1.37	1.28	1.34	26.0
			Incr. of 12.0														Incr. of 15.0

Pale man of powerful physique. Cough severe. Sputum 2 oz daily. T.B. not present. Areas of dulness were present in R. lung. The general signs were those of chronic bronchitis. He improved greatly under treatment. Cough became less severe and he felt fitter and more active. Dyspnoea diminished greatly.

No. 220. Name R. Smith. Age 20 yrs. Admitted 2. 5.19. Admission I st TURBAN. HILUS T.B.

Height 163 cms. Discharged 19.12.19.

Date.	V.Cap.	Weight in gms.	VC.Const. in W.	VC.Calc in W.	VC.Cal as % W	% Dim of W.	Stem Lgth - L in cms.	VC.Cal in L.	Chest Meas - Ch in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch.	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC
27.11.19.	3210	53525	.790	3679	3547	0.9	84	3714	82	3.5	3694	3723	1.009	1.15	1.16	1.16	13.8
5.12.19.	2980	54432	.862	3724	3607	+0.2	84	3714	82	3.5	3694	3723	.997	1.239	1.246	1.239	20.0

Incr. of 1.1 Decr. of 6.2

This lad had been $6\frac{3}{4}$ months in residence when these readings were taken. He had extensive T.B. Adenitis particularly of left side of neck, and a small mildly active lesion of R. apex. He left shortly after observations were begun.

No. 221. Name D. Ferne. Age 11 yrs. Admitted 20.6.19. Admission Ist. ?TURBAN II. HILUS T.B.

Height 132 cms. Discharged 13.1.20.

Date.	V.Cap.	Weight in gms.	VC.Const. in W.	VC.Cal in W.	VC.Cal as % W.	% Dim of W.	Stem Lgth. = L in cms.	VC.Cal in L.	Chest Meas. =Ch in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch.	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of VC
28.11.19.	1330	33113	1.350	2603	2194	8.4	73.5	2843	69.5	2.5	2654	2761	1.09	1.99	2.13	2.08	51.8
12.12.19.	1440	33113	1.247	2603	2194		73.5	2843	69.5	2.5	2654	2761	1.09	1.84	1.97	1.91	47.8
9. 1.20.	1330	33566	1.364	2629	2224	7.5	73.5	2843	69.5	2.5	2654	2761	1.08	1.99	2.13	2.08	51.8

Incr. of 0.9

Stationary.

Sturdy boy of good colour. Masses of T.B. glands present on both side of neck, and a glandular abscess present behind angle of left jaw. He had been 5 months in the Institurion when these readings were taken. He had evidence of marked hilus T.B. and of a diffuse infiltrative lesion of R. lower lobe. He remained in a stationary condition during his period of observation.

No. 222. Name J. Dickson. Age 26 yrs. Admitted 10.10.19. Admission 1st. TURBAN HILUS T.B.

Height 172 cms. Discharged 30. 1.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of V.C.
27.11.19.	2650	48989	.898	3452	3244	18.8	89.5	4216	80	3	3516	3870	1.22	1.32	1.59	1.46	31.6
4.12.19.	3400	49442	.705	3475	3277		89.5	4216	80	3	3516	3870	1.21	1.03	1.24	1.13	12.9
21.12.19.	3350	49442	.718	3475	3277		89.5	4216	80	3	3516	3870	1.21	1.04	1.25	1.14	
9. 1.20.	3370	50803	.716	3543	3367		89.5	4216	80	3	3516	3870	1.19	1.043	1.251	1.148	
23. 1.20.	2880	49442	.832	3475	3277	17.6	89.5	4216	80	3	3512	3870	1.21	1.22	1.46	1.34	25.6
			Incr. of 1.2														Incr. of 6.0

Tall thin man. He had been $1\frac{3}{4}$ months in residence when readings were begun. Masses of T.B. glands present on R. side of neck' Extensive operation scars on left side of neck. Signs in chest indicated hilus involvement. He improved generally during his period of observation.

No. 223. Name T. Madden. Age 14 yrs. Admitted 28.11.19. Admission 1st. TURBAN HILUS T.B.

Height 138 cms. Discharged 27. 2.20.

Date.	V.Cap.	Weight in gms	VC.Const in W.	VC.Cal in W.	VC.Cal as % W	% Dim of W.	Stem Lgth = L in cms.	VC.Cal in L	Chest Meas. = Ch. in cms.	Expn. in cms.	VC.Cal in Ch.	VC.Cal in L & Ch	P.F. 1	P.F. 2	P.F. 3	P.F. 4	% Dim of V.C.
1.12.19.	1800	33340	1.002	2616	2209	10.5	74.5	2921	69	5	2616	2779	1.119	1.45	1.62	1.54	35.3
12.12.19.	1740	34247	1.05	2667	2269		74.5	2921	69	5	2616	2779	1.09	1.50	1.67	1.59	
26.12.19.	1990	35154	.942	2718	2329		74.5	2921	69	5	2616	2779	1.07	1.31	1.46	1.39	
9. 1.20.	2180	35381	.864	2731	2344		74.5	2921	69	5	2616	2779	1.068	1.20	1.34	1.27	21.6
23. 1.20.	2080	35381	.906	2731	2344		74.5	2921	69	5	2616	2779	1.068	1.26	1.404	1.33	
30. 1.20.	2100	35608	.901	2743	2360		74.5	2921	69	7.5	2616	2779	1.065	1.24	1.39	1.32	
13. 2.20.	2090	36061	.914	2768	2390	5.3	74.5	2921	69	7.5	2616	2779	1.055	1.25	1.40	1.33	24.8

Incr. of 5.2

Incr. of 10.5

Thin pale boy. T.B. glands present on both sides of neck, notably left where submaxillary and submental glands are affected and as large as beans. Tonsils chronically enlarged and post-nasal adenoids present. Signs of hilus glandular involvement were present. He improved greatly during his period of observation and became very fit and active.