A STUDY OF SOME ASPECTS OF THE TUBERCULOSIS PROBLEM IN SCOTLAND.

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For convenience of description this Thesis has been divided into four parts and an Appendix. In Part I a summary statement of the home conditions, found on visitation in different parts of Scotland, of patients suffering from tuberculosis in its pulmonary form, will be found. Part II contains a more detailed description of the home conditions of certain patients, especially of those in connection with whom difficulties in administration had been experienced by the Local Authorities or their staff. In this Part a descriptive summary of a few patients who, at time of visit, were accommodated in shelters, is also given. Photographs of these shelters are appended in the booklet which accompanies this Thesis. Part III refers to the home conditions found on visitation, in an industrial parish in Lanarkshire, of patients suffering from tuberculosis in its pulmonary or non-pulmonary form. Part IV gives some information as to the various methods of disinfection in vogue in Scotland, in connection with tuberculosis.

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In the appendix is given a summary of the decisions of the Local Government Board concerning certain points in administration raised by various Local Authorities: also a list of approved institutions for the treatment of tuberculosis in Scotland.

Here I should like to record my indebtedness to the Medical Officers of Health, the Tuberculosis Officers, and other officials whom it was my privilege to meet, for placing themselves at my disposal in order to carry out the work of visitation of the patients' homes.

PART I.

Summary statement of the home conditions of patients suffering from Pulmonary Tuberculosis.

So far, it has not been possible to visit the area of every Local Authority in Scotland. The Table on pages 13-19 refers to the home conditions found in those areas visited, and for convenience of description and comparison, these have been classified arbitrarily into industrial and rural.

Under the first-mentioned are included the Burghs of Dumfries, Motherwell, Paisley, Greenock, Kilmarnock, Hamilton, Bo'ness, Grangemouth, Falkirk, Stirling, Musselburgh, Kirkcaldy, Port Glasgow, Kirkintilloch, Wishaw, Clydebank, Leith, Coatbridge, Airdrie, Rutherglen, Dunfermline, Irvine, Aberdeen, Musselburgh, Dundee and Ayr. Also the Middle Ward of Lanark, Maxwelltown, Peebles, Fraserburgh, Montrose, Arbroath, Perth, Peterhead, Rothesay and Inverness: also the Counties of Dumfries, Haddington, Ayr, Stirling, Renfrew, Dumbarton, Fife, Clackmannan, Argyll (Easdale and Ballachulish), Aberdeen and Midlothian.

The following are classed as rural:- Counties of Berwick, Forfar, Kincardine, Banff, Wigtown, and Kirkcudbright.

The Table shows (a) total number of dwellings visited; (b) sleeping accommodation of the patients; (c) method of disposal of the patients' sputum; (d) ventilation of the patients' sleeping apartment; (e) condition of the house /

house generally as regards cleanliness; and (f) number of instances in which there was accommodation adjoining the house on which a shelter could be placed. Further, (a), (b), (c), (d), (e), and (f) have been sub-divided according as they refer to dwellings of one, two, three, four and more apartments.

Under (a) of the Table it will be noted that in the industrial areas most of the visits were to homes of one and two apartments. In one of the rural areas one patient lived in the house alone.

In (b) of the same Table, one observes that the percentage of patients who enjoyed the privilege of an apartment reserved for their own use was only 25.9 in the two-apartment house, while it was 78 in houses of four or more apartments.

I might here mention that visits made in one of our larger burghs to a number of houses in which a notified tuberculosis case was resident, out of 146 two-apartment houses it was found that in one the patient occupied the house alone; in twelve, the patient and one other were the occupants; in sixteen, the patient and two others; in twenty-three, the patient and three others; in twenty-six, the patient and four others; in twenty-four, the patient and five /

five others; in eighteen, the patient and six others; in fifteen, the patient and seven others; in eight, the patient and eight others; in one, the patient and nine others; and in two, the patient and ten others. In thirty-seven, or one-quarter of the above total of these 146 two-apartment houses, it had been possible to arrange that the patient slept in one of the apartments alone, but in the remaining three-quarters the patient shared the apartment with the other inmates. In fact, the same bed was shared by the patient with one or more members of the family in 50 per cent. of the total.

From such facts one can see that in order to reserve for the patient one of the apartments, considerable inconvenience must accrue to the remaining inmates. In order to fully appreciate the difficulties met with in properly accommodating the tuberculosis patient at home, one has but to examine the statistics of the Registrar General based upon the census of 1911*. Thus in the whole of Scotland the percentage of the population living in one and two apartment houses was 47.9. From Vol. 1, of the same reports the following data have been abstracted. They show that in the most important industrial areas, representing in fact approximately 1,798,000 of the population, 10 per cent or more were accommodated in houses of one apartment, and /

*Volume II Census 1911.

and that in a total population of approximately 2,707,000, 50 per cent were living in houses of one and two apartments. The details are as follows - the figures after each area represent the percentage of the population living in one and two apartment houses respectively:-

(a). Industrial areas - Airdrie Burgh (19.3, 51.5); Clydebank Burgh (12.8, 62.3); Coatbridge Burgh (22.4, 54.2); Glasgow Burgh (13.8, 48.7); Greenock Burgh (10.0, 48.9); Hamilton Burgh (18.7, 49.5); Kilmarnock Burgh (15.1, 49.8); Lanark County - excluding Glasgow and the large Burghs - (16.4, 50.9); Linlithgow County (10.9, 54.3); Motherwell Burgh (16.8, 53.7); Paisley Burgh (12.0, 53); Rutherglen Burgh (13.9, 47.1); Wishaw Burgh (23.0, 53.1); Dumbarton Burgh (7.2, 47.9); Falkirk Burgh (6.6, 52.3); Dundee Burgh (9.8, 53.16); Ayr County - excluding Ayr and Kilmarnock Burghs - (9.9, 43.4); Clackmannan County (9.0, 42.8); Renfrew County - excluding Paisley and Greenock Burgh - (8.4, 44.0); Fife County - excluding Dunfermline and Kirkcaldy Burghs - (4.7, 45.1); Stirling County - excluding Stirling and Falkirk Burghs - (8.9, 48.9); Dumbarton County - excluding Clydebank and Dumbarton Burghs - (6.8, 43.8); Shetland (7.6, 42.8); Edinburgh Burgh (5.3, 30.9); Aberdeen Burgh (4.8, 33.8); Kirkcaldy Burgh (2.4, 43.5 /

43.5); Dunfermline Burgh (6.5, 36.4); Leith Burgh (5.4, 44.5) Falkirk Burgh (6.6, 52.3); Stirling Burgh (5.8, 31.6); Arbroath Burgh (8.0, 35.2); Midlothian County - excluding Edinburgh (5.3, 43.6); and Ayr Burgh (7.2, 37.2).

(b). More Rural areas. Aberdeen County (1.96, 15.68); Argyll County (3.2, 27.6); Banff County (2.9, 18.4); Berwick County (4.4, 31.1); Bute County (2.2, 18.9); Dumfries County (3.6, 29.8); Caithness County (3.8, 27.8); Forfar County - excluding Dundee and Arbroath Burghs - (5.3, 30.4); Haddington County (4.2, 40.5); Inverness County (2.9, 21.9); Kincardine County (2.7, 28.8); Kirkcudbright County (1.8, 17.5); Perth County - excluding Perth Burgh - (3.2, 21.3); Wigtown County (2.1, 16.5); Selkirk County (4.9, 41.5); Roxburgh County (4.3, 28.3); Sutherland County (3.0, 14.7); Ross and Cromarty County (3.4, 34.4); Peebles County (3.8, 33.9); Elgin County (2.0, 13.9); Nairn County (4.5, 18.0); Orkney (3.8, 30.5). (Populations in houses of over 24 apartments are excluded).

It is probably unsafe to assert that, house for house, those in the rural areas are better in essentials (size of window, height of ceiling, conveniences, etc.) than those houses especially of the more modern type in the industrial areas. However, from the tuberculous patient's /

patient's point of view and especially when one considers that he spends the greater part of his life at home, it is a matter of no inconsiderable importance to himself and his relatives that he should command an apartment for his own use where, untrammelled by his friends, he can pursue open-air methods. One may conclude therefore that in the areas where the majority of the population is resident in one and two-apartment houses, success in that direction will be less frequently achieved than in those where the population is accommodated in houses of larger size.

It is of some interest also to mention here that in the Preliminary Report of the Registrar General upon the 1911 census, the population as compared with that for 1901 had increased 4.4% in Burghs of 30,000 and over; 14.7% in Burghs between 10,000 and 30,000; 11.7% in Burghs between 2000 and 10,000; 2.1% in Mainland-Rural Districts and decreased 5.6% in Insular-Rural Districts. With reference to increases in individual Burghs, one finds that there were increases of 79.7% in Clydebank; 29.6% in Motherwell; 68.4% in Cowdenbeath; 65.9% in Lochgelly; and in others very substantial percentages.

Where housing accommodation increases <u>pari passu</u> with /

with increase in population, the general public health is not likely to suffer, but it is an undeniable fact that in many instances this is not so, some houses being shared by two or more families, while in others lodgers are accommodated at the sacrifice of space which legitimately should be used by the householder's family. Until, therefore, some means are devised to diminish this housing "tension" (one refers of course to the supply of more or less up-to-date accommodation) in growing industrial areas, great difficulties in efficiently dealing with the "home treatment" of the tuberculous patient both from the curative and preventive points of view are likely to continue.

Looking now at (c) of the table on page 10, and including only those who admitted having sputum, one finds that reasonable care over sputum disposal was exercised by 80.8 per cent of the patients visited in industrial areas, but by only 71.8 per cent of those in the rural areas. It has to be admitted that the figures are too small to be conclusive, but it is hoped that after sufficient staff, especially of the health visitor type, has been appointed in the area of each Local Authority, the knowledge of preventive methods (and proper disposal of the sputum is one of the most important) will be more universal and the proportion of those who are careless become /

become negligible.

One was disappointed to find that in only a few instances did the patient, even when previously trained in sanatorium methods, carry his sputum flask when outside the house. Rather than be seen so using it, some patients carried in their pockets pieces of paper or rag which on reaching home were burned. One can conceive that where the sputum is laden with tubercle bacilli, much infection of the pocket lining will ensue. Others, while avoiding expectorating on pavements or busy thoroughfares, reserved their expectoration for the street gulleys or the quieter country roads. Spitting into the fire direct was a fairly frequent method. It is almost needless to reiterate the danger which appertains to this method due to the fact that the sputum very often slips past the burning embers and lodges in the dustpan to be there inspissated and mayhap inspired by the person who cleans up. Several of those who claimed to have no sputum presumably swallowed it. This suspicion rested principally upon children.

(d) of the table on page 17-18, gives in detail the condition of the windows at time of visit. It will be observed (excluding those not noted and the instance in which the patient used a shelter during the day) that in 220 or 30.% /

30 per cent of the total the window was closed at time of visit, and that in an additional 161 or 22 per cent the window was open less than six inches. It is of some interest to observe that the percentage of instances in which the windows were closed was highest in houses of one and two apartments. In houses of that size, there being too often, no option, the patient is sacrificed to the caprice of the remaining inmates. In a few instances where the windows were closed, there was a deficiency of bed or body clothes. In the vast majority, however, the cause was not material and obviously was due either to ignorance or to indifference to the needs of the patient.

From (e) of the table it will be observed that in the industrial areas there was evidence of a greater lack of the use of soap and water and tidiness than in the rural areas. What the cause may be, whether due to the fact that in the former the housewife is so overburdened with the cares of this world that she loses interest in the appearance of things or that her standard of cleanliness has been lowered by the example of others, is impossible to determine. However, both explanations are suggested by the fact that some of the dirtiest dwellings were found among those who, originally natives of the "country", had in young married life set up house in the industrial areas and although wages were higher, expenses in every direction (including easier opportunities for expenditure /

expenditure on so-called "pleasures") probably more than counterbalanced that advantage. Apart from the question of tuberculosis, one feels that those with young families and also those newly married who contemplate moving from rural into the industrial areas for the lure of higher wages, etc., should remember the greater difficulties and responsibilities incidental to housekeeping in the latter.

With reference to the question of possible shelter accommodation, we find in (f) of the table that the rural areas present much greater facilities for this than do the industrial. Such a finding was to be expected. In many of the latter areas it is only in very exceptional circumstances, if at all, that shelters could be employed. Accordingly, in such areas, efforts (apart from institutional accommodation) must be mostly directed to improvements upon the patient's sleeping accommodation inside the house.

Table shewing (a) total number of dwellings visited; (b) sleeping accommodation of the patients in each size of house; (c) method of disposal of sputum; (d) ventilation of the patients' sleeping apartments; (e) conditions of the dwellings as regards cleanliness; (f) number of dwellings possessing space adjoining the house for placing of a shelter.

(a) Total number visited:-

Size of Dwelling.	Industrial areas.	Rural areas.
1 apartment	91	1
2 apartments	426	14
3 apartments	135	12
4 apartments and over	56	20
Totals	708	47

(b) /

(b) Sleeping accommodation of these patients.

Size of Dwelling.	Industrial areas.	Rural areas.
1 apartment:-		
Bed alone	33	1
Bed-chair alone	4	-
Bed with spouse and children	4	-
Bed with spouse	24	-
Dwelling alone	4	-
Bed with spouse and infant	10	-
Sleeps on mattress on floor	1	-
Bed with parent	6	-
Bed with parent and one member of family	1	-
Bed with children	2	-
Bed with one other member of family	1	-
Bed with two other members of family	1	
	91	1
2 apartments:-		
Apartment alone	107	7
Bed alone	110	3
Bed chair alone	16	-
Bed with spouse	69	1
Bed with spouse and infant	20	1
Bed with parent	35	2
Bed with parents	2	-
Bed with brother or sister	27	-
Bed with children	9	-
Bed with spouse and children	3	-
Bed with one child	9	-
Bed with parent and brother or sister	7	-
Bed with 3 daughters	1	-
Bed with two other members of family	2	-
Bed with lodger	1	-
Bed with grand-parent	1	-
Bed with nephew	1	-
Bed with uncle	1	-
Dwelling alone	3	-
During day (at work on night shift) occupies parents' bed	2	-
Totals	426	14
Percentage (both areas) in which patient had apartment for own use	25.9.	

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(b) sleeping accommodation (continued).

Size of Dwelling.	Industrial areas.	Rural areas.
3 apartments:-		
Apartment alone	65	7
Bed alone	24	1
Bed chair alone	3	-
Bed with spouse	16	2
Bed with parent	4	1
Bed with brother or sister	10	1
Bed with two members of family	1	-
Bed with spouse and infant	6	-
Bed with two children	1	-
Bed with other notified case	1	-
Bed with child	2	-
Bed with lodger	1	-
Bed with grandparent	1	-
Totals	135	12
Percentage (both areas) in which patient had apartment for own use.	48.9	
4 and over apartments:-		
Apartment alone	45	15
Bed or cot alone	7	1
Bed with spouse	3	1
Bed with parent	-	-
Bed with brother or sister	-	2
Bed with aunt	1	-
Totals	56	19
Percentage (both areas) in which patient had apartment for own use.	78.	

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(c) Method of disposal of sputum.

1 apartment:-		
No sputum	19	1
Proper methods employed	54	-
Improper methods employed	18	-
	91	1
2 apartments:-		
No sputum	147	4
Proper methods employed	220	4
Improper methods employed	57	6
Not noted or reply indefinite	2	-
Totals	426	14
3 apartments:-		
No sputum	39	3
Proper methods employed	84	8
Improper methods employed	12	1
Totals	135	12
4 apartments and over:-		
No sputum	15	7
Proper methods employed	35	11
Improper methods employed	6	2
Totals	56	20
Percentages to total) Industrial using proper methods) Rural	80.8	
	71.8	

(d) /

(d) Ventilation of patient's sleeping apartment at time of visit with statement of weather conditions.

1 apartment:-		
Window closed	35	1
Window open less than 6 inches.	22	-
Window open 6" to 1'	14	-
Window open 1-2 ft. or more	17	-
Not noted	3	-
Totals	91	1
Percentage to total (both areas) in which windows closed	40.4	
" open less than 6"	24	
2 apartments:-		
Window closed	145	6
Window open less than 6"	86	3
Window open 6" to 1 ft.	65	2
Window open 1 to 2 ft. or more	104	3
Window condition not noted	25	-
One patient sleeps on balcony in good weather	1	-
Totals	426	14
Percentage to total (both areas) in which windows closed	36	
" in which windows open less than 6".	21	
3 apartments:-		
Window closed	23	-
Window open less than 6"	33	6
Window open 6" to 1 ft.	30	5
Window open 1 to 2 ft. or more	44	-
un-noted	5	1
Totals	135	12
Percentage to total (both areas) in which windows closed	16	
" in which windows open less than 6".	27	

4 apartments and over:-

Windows closed	9	1
Window open less than 6"	9	2
Window open 6" to 1 ft.	9	10
Window open 1 to 2 ft. or more.	21	7
Un-noted	7	-
Occupies shelter during day	1	-
Totals	56	20

Percentage to total (both areas) in which window closed	14
" in which window open less than 6 inches.	16
Total percentage with windows closed	30
" " " " open less than 6 inches.	22

Size /

(e) Cleanliness of Dwelling

Size of Dwelling.	Industrial areas.	Rural areas.
1 apartment:-		
Clean	60	1
Not clean	31	-
2 apartments:-		
Clean	331	12
Not clean	95	2
3 apartments:-		
Clean	120	11
Not clean	15	1
4 and over apartments:-		
Clean	48	18
Not clean	8	2
Totals:-		
Clean	559	42
Not clean	149	5
Percentage not clean	21	10.6

(f) Space adjoining dwelling suitable for shelter.

All Dwellings	92	20
Percentage	12.9	42.5

PART II.

Detailed statement of the Home Conditions of certain cases of Pulmonary Tuberculosis visited.

In these notes the area of the Local Authority in which the patient was resident is given together with the initials, the sex, and the age of each patient. The cases are mostly of a type which presented difficulties in administration to the staffs of the Local Authorities. Few of the shelter cases, however, ---nearly all the shelters are shewn in photograph --- come under that category. Their reproduction by photographyit was felt might serve a useful purpose, as in such manner their utility, even during our trying winter climate, is proven, provided the patient is conscientious and is fortuitously circumstanced as regards garden or other open space.

Dumfries Burgh.

/. J.R., male, aged 34. A few weeks prior to date of visit, this patient was admitted to the Local Authority's hospital (tuberculosis ward). The approach to his dwelling, which was a single apartment house on the ground floor of a 3-storey tenement, is through a covered passage off the main thoroughfare leading into an open passage or alley about six feet wide. On the side of this passage opposite to the tenement is the wall of a more recent building (not dwellings). This wall cuts off much of the /

the light and ventilation from the houses on the lower flats. The tenement in question has been under the notice of the Local Authority with a view to action being taken under the Housing, Town Planning, &c. Act, but, according to the Medical Officer of Health no action has been possible owing to the difficulty which would accrue in re-housing the displaced tenants. At time of visit, the patient (who was still receiving institutional treatment) was seated at his fireside: the window was open only one inch and the air in the apartment much vitiated. In explanation the patient observed that that afternoon he had obtained leave from the hospital to go into the Burgh "for a shave". To his mind, the most natural sequence was a visit to his home, with exposure to the unhygienic conditions described.

The salient facts in connection with this case are (a) the size of house occupied by a consumptive patient (temporarily in hospital), his wife and two children; (b) such light and ventilation as should enter the dwellings facing the narrow passage from which they are approached, have been considerably blocked by the blank wall of a building more recently constructed than the tenement and at a distance of about six feet only[x]; and (c) the patient on the pretext of a visit to the barber took the opportunity of spending several hours in a vitiated atmosphere at his home, thus /

x See also reference to a similar condition on page 57.

thus largely counteracting any benefit he might have obtained in the institution.

Montrose Burgh.

F. R., female, aged 44. This patient, together with her husband, occupied one attic room of a two-storey and attic tenement. The ceiling was only six feet three inches in height, and the plaster was bulging in places. As seen in the appended photograph No. .1. the principal window was small. At time of visit it was open about two inches. In addition, there were two very small sky-light windows which obviously had not been opened for a considerable time as they were covered with cobwebs. Rent 8d. per week. To trade, the husband was a pedlar, and stated that he earned about 5/- per diem. He and his wife had occupied this house for four years and prior to that had travelled from place to place. They stated that some assistance was obtained from philanthropic sources. At time of visit patient was bedridden: she occupied a bed alone. The husband acted as nurse and "swept the floor" as he had been informed by some one "that to wash it would be bad for the sick person". Fortunately, the patient had been taught to take some care with her sputum and she expectorated into pieces of paper which were burned in the fire. Ultimately this patient /

patient was removed to the poorhouse and has since died.

The case is cited as it depicts a dwelling which should clearly not have been let for separate occupation. Its legitimate use under modern ideas of hygiene would more appropriately be as a store. It has not been occupied since this patient's husband removed and is likely to remain unlet.

3. A. N., female, aged 44. This patient resides alone in the two-apartment house, shewn in the appended photograph No. 2. She returned about two months prior to visit after a period of treatment in a sanatorium, and has re-started work in a spinning mill. From the photograph one observes that the patient's dwelling (the window is marked with a cross) is kept ventilated even during her absence at work.

4. A. H., aged 43. This patient was a lodger in a three-apartment dwelling of a two-storey and attic tenement of a fairly modern kind. To occupation, he was a surface-man on the railway and normally occupied one of the best apartments in the house. During the summer letting season he removed to the attic, but nothing further than a general wash-down of his apartment was carried out by the landlady, the existence of phthisis being carefully hidden from the incomers.

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The case is cited as an example of the type where summer visitors are subjected to circumstances which are not quite devoid of danger from infection. In cases of this kind, disinfection of apartments which are in regular occupation by tuberculosis patients should be supervised by the staff of the Local Authority when it is intended to use them for other persons. In that manner only will the summer visitor be reasonably safeguarded from infection. To leave the disinfection and other precautions to the individual is not sufficient guarantee that they will be properly carried out.

County Renfrew.

5- A. A., female, aged 20. The dwelling is one of two apartments, top floor of a fairly modern three-storey tenement. Socially, the family is fairly well-off. For about six months after onset of illness patient was nursed at home having one of the two apartments for her own use. Thereafter, she was for three months in a sanatorium and returned one month prior to visit. The appended photograph No. 3.. shews this patient's bed in situ at time of visit and also the condition of the windows. They are seen to be half open; a proof of the conscientiousness of the patient and her friends as the weather was cold and showery and the visit a surprise one.

Mrs. /

6 Mrs. D., aged 39, with her husband, four daughters and five sons resides in a four-apartment modern type of workman's house. The rent is 14/7 per fortnight, inclusive. Her husband is a baker; and three daughters are working also. Patient sleeps in an apartment alone and although obviously suffering from laryngeal as well as pulmonary tuberculosis, attends to ordinary household duties. On two separate occasions (the first for two months, the second for seven weeks), patient had been under treatment in the Local Authority's hospitals, but each time she cut the treatment short as she was "worried about her family affairs". In connection with this patient it should be added that there is a strong suspicion that her husband is negligent of household affairs, thus adding considerably to her worries and causing her to remain at home.

7 M. M., female, aged 18. An advanced case, confined to bed, which is placed near centre of the room in a two-apartment cottage. Her mother and a sister sleep in a separate bed in same room. There is a window on each side of the apartment. The family consists of father, mother, five sisters and a brother. Previously, a death from phthisis /

phthisis occurred in this family and when persuaded to allow the patient at present ill to go to an institution, the parents refused, as they take a fatalistic attitude towards the disease. They contended from the first that she would die. They seemed not to see the importance of avoiding, if possible, further infection of the family. This attitude towards the disease is not at all helpful in the crusade against it. One hopes that in time the disease will be viewed in its true perspective and that the health of the contacts will not be sacrificed to a Moloch of the type above depicted.

Airdrie Burgh.

8 Mrs. W., female, aged 48. Fourteen months prior to visit this patient and her husband - the sole occupants - came from a five-apartment house in Newcastle "to get better work". The house they had since then occupied was of one apartment, ground floor in a two-storey tenement. The floor of the apartment is on a lower level than the road which adjoins one side of the tenement. Fortunately, however, at the other side, there is a sloping open space. The window, of sash type, is hung only on top half and the lower sash is fixed by nails. It was closed at time of visit /

visit. Rent is 6/- per month. The husband earns 30/- per week as fireman in a tube factory. Mrs. W. was admitted to the Local Authority's hospital, but remained only a week as "she thought she did not require treatment". This is an example where, notwithstanding the bad home conditions, the patient voluntarily returned to same after the Local Authority had provided institutional treatment.

9 Wm. W., male, aged 41. A case of chronic phthisis: wife and daughter also notified cases. House, two-apartments (Rent 11/- per four weeks inclusive), through and through, ground floor of a two-storey brick tenement. A few months prior to visit, the family had removed to this address from a one-apartment dwelling. The parish council granted 12/- per week and patient's wife earned an occasional day's wages as char-woman. In addition to the above-named ed notified cases, there were three healthy (?) younger daughters. The notified daughter at time of visit had just returned from the Local Authority's hospital, where she had been for 22 weeks. The children looked under-nourished. The father (Wm.) was able to get about and might have been fit for some kind of work, say, on a farm colony at a sanatorium. The mother, although at work occasionally had recurring haemoptysis.

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The only effectual treatment for this family would be to segregate all in an appropriate institution. In that manner they would obtain sufficient nourishment; the daughter being a very early case (pleuritic) would probably recover completely: the three younger daughters (presumably infected) would have a good opportunity of resisting any development later of symptoms. Probably the father and mother could at least be employed in some appropriate work at the institution and later might be able for remunerative employment outside under the aegis, say, of an after-care committee. Unfortunately, meantime, it is not possible to satisfy these conditions, and the interference with tuberculosis schemes by the War has very much deferred provision for families situated as this one is.

/0 D. H., male, aged 25. A case with recurrent haemoptysis. This patient, shortly prior to visit, came to reside with his married sister. The house is one of two apartments, through and through. His sister, her husband and four of a family occupy one apartment, giving patient the remaining room to himself. For fourteen months /

months, patient had been on different occasions in two hospitals of an adjoining Local Authority. Ultimately he took his discharge without warning as "he was tired of living in hospitals". His sister had altruistically undertaken the burden of lodging and nursing him. There are tubercle bacilli in patient's sputum and a few days prior to visit he had had a haemoptysis while walking in the public thoroughfare.

Here we have a case who, although subject to alarming symptoms in the form of haemoptysis, voluntarily relinquishes institutional treatment to become a burden and possibly a source of infection to his friends.

The following case also visited in the Burgh of Airdrie is an instance where a family voluntarily removed to a larger house to give the patient better accommodation on his return from institutional treatment:—

// T. McM., male aged 20. - chronic phthisis. Patient, together with his parents, a brother and a sister, occupy a four-apartment house. Patient had had eight months' previous institutional treatment (in two institutions). Prior to return home the family removed from a two to the present larger house so that patient might have an apartment for his sole use. He has resumed work. His father /

father and brother are thrifty and it is gratifying to discover the application of thrift in the direction indicated.

Wishaw Burgh.

/2 H.D., male, aged 56. This man, along with his wife, three adult sons, an adult daughter, and a grandson aged four years, occupied at the time of visit, a two-apartment dwelling in a two-storey tenement. The house was not kept in a cleanly state and was improperly ventilated. The reason given for the lack of ventilation was that the patient "could not stand the cold". He gave a history of having suffered "off and on" for years from "chronic bronchitis". Five years ago there was an increase in the symptoms. However, until about four months ago he was fairly well able for his work, but since then had been more or less of an invalid. Since 1911, two daughters and a son, (9/11/13, 13/11/13, and 18/11/13) have died from phthisis, and at time of visit, a second son had symptoms of the disease.

Here we have a striking instance of presumed infection of several members of a family by a parent who, though fit for work had suffered for years from chronic phthisis.

/3 M. R., male, aged 30. This patient occupies a/

a one-apartment house in a single-storey miner's row of an old type. For three years he had been unfit for work and received 8s per week from the Parish Council and a cart of coals once a year, Until within a month of her last confinement (a month prior to first visit) his wife earned an occasional 3s per diem as charwoman. Rent 2s per week. The family consists of wife; son aged 9; daughter aged 13 and infant daughter one month. Prior to patient's illness three members of the family died from whooping cough. When first visited, the patient was confined to bed, which was reserved for his own use; the house was far from clean; and his wife was nursing her infant at a broken-down fire-place. Precautions were taken with the sputum. Some months after my first visit to this patient, he was admitted to the Local Authority's hospital, but of his own accord, came home after less than three months treatment.

When revisited he was found under much the same conditions as formerly, but the house was somewhat cleaner.

The above brings out some of the difficulties in dealing with certain cases suffering from pulmonary tuberculosis in its chronic form. The illness, while not severe enough to prevent the patient getting about, renders him incapable of earning a livelihood in the ordinary labour market. He ceases to be self-supporting; living under home conditions where no pretence at adequate treatment can be made, and has to seek support from the Parish. From an administrative point of view, the difficulty in dealing with this man was that he was willing for a short time only to avail himself of institutional treatment, and his family responsibilities had increased since the onset of his illness.

Rutherglen /

Rutherglen Burgh.

/4 A, W., male, aged 37. This patient with his mother, an old age pensioner, and young daughter resides in a one-apartment house, ground floor of a two-storey back tenement. The plaster of the ceiling was cracked; and the lighting entering the house obstructed by an adjoining tenement. The patient sleeps in the bed, his mother and daughter on a "shakedown" bed. For seventeen years patient followed his trade as a football maker, but for nearly a year prior to visit had been unable to work. His sickness benefit has lapsed and he did not qualify for disablement benefit. The rent of the house is 9/- per month and the parish council grants the family 5/- per week. Six weeks prior to visit, the patient had returned from a sanatorium in which he had had three months' treatment. He was still unfit for work and unlikely ever to be self-supporting.

/5 H. A. D., male, aged 23. The patient with his wife and daughter, aged four years, resides in a one-apartment dwelling, top floor, of a two-storey tenement. The light and ventilation of the apartment are good. Unfortunately, however, the inmates at time of visit had only one of the windows open a small portion. Patient had recently returned from a sanatorium, where he had had two months' treatment on behalf of the Insurance Committee. The rent of the house

was /

was 4/6d per week, and his only source of income was his sickness benefit. That, he anticipated, would soon cease and as there was little prospect of resumption of work, the outlook was dismal in the extreme. In the house were two recess beds, but one of these only was used for the patient, his wife and child, as the bedding necessary for the second bed could not be purchased. His wife at time of visit was somewhat hoarse and it was suspected that she also was suffering from the disease.

For the two preceding cases, treatment for a brief period in an institution and on discharge, return home to such conditions as described is seldom likely to give permanent benefit. When the patient is the bread-winner and cannot resume his employment, he is generally unable to obtain sufficient nourishment either for himself or his family: nor can he live under reasonably hygienic conditions. It is to be hoped that ultimately some method giving more efficient after-care of the above type of ex-sanatorium patient will be devised.

/6 A.F., female, aged 19. This patient, together with seven sisters and her parents occupied a fairly well situated three-apartment house, top floor, of a three-storey tenement. Shortly prior to visit, the family had removed /

removed to this house from one of two apartments in a much less favourably situated part of the Burgh. This was done on the suggestion of the sanitary staff. The total means of the family were said to be 34/- per week, but the difference in rental was a matter for some consideration. It is of interest to note that the parents were willing to act upon the advice given and so achieve better housing conditions for the large family.

/) E. D., female, aged 16. This patient, her parents, three sisters and two brothers resided in a two-apartment house, top floor of a four-storey tenement. No exception could be taken to the house structurally, but it was not kept in a cleanly condition. The patient and a sister, aged fourteen, slept in the kitchen bed, the parents in a separate bed. Her eldest brother and sister had been previously under treatment in a sanatorium. The former had resumed his employment: the latter still had cough and spit. The total income of this household was £2-15/- per week and the sanitary staff had persuaded them to determine to remove to a larger house. This, it was anticipated, would be done.

The two cases above referred to are instances where by moral suasion and by pointing out the desirability

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of segregation of the tuberculosis patient when at home, an improvement in housing will occur. Of course it has to be recognised that in both instances described the procedure was simplified by the fact that the principal breadwinner was at work and in good health. When he happens to be stricken with the disease, the needs of the situation can seldom be so easily met.

Greenock Burgh.

/? Mrs. M., aged 36. This patient, together with her husband, and six of a family, occupied a one-apartment house in the attic of a four-storey tenement. The eldest son, aged fourteen, also had the disease in an early stage. The rent of the house was 2/7d per week. Her husband was employed as a "fitter's helper". Patient had been offered institutional treatment, but owing to the anxiety about family affairs which would be contingent upon her absence from home, she was unable to accept the offer. In this particular instance the difficulty was increased by the fact that the husband was given to "drinking bouts" and during these occasions pawned household possessions, etc. It is difficult to see how a patient situated as this mother was should be dealt with. She and her weakly son, not to mention the other members of the family could obtain neither sufficient /

sufficient food nor suitable housing owing to the habits of the father. The parish council could not assist in looking after the family pending institutional treatment on behalf of the mother and son, as the father was able-bodied. It is gratifying to relate that it is the exception in one's experience to find this thoughtless type of spouse. However, elsewhere, instances are quoted where the maternal parent, owing to anxiety about home affairs, is unable to avail herself of appropriate treatment. Various expedients to meet these difficulties have been suggested, such as supplying a paid housekeeper pending the mother's sojourn in the institution or removal to a "home" of the younger "healthy" members of the family on behalf of a voluntary agency to the expenses of which the father would be expected to contribute. The points at issue in different instances, however, are so great that each requires individual consideration, and no guiding principle can be laid down.

/9 J. B., male, aged 23. This patient was granted institutional treatment and admitted to a sanatorium. He resided with his parents in a two-apartment house situated in a very indifferent four-storey tenement. One of the two-apartments was sublet to a married sister, her husband and child aged two years. After a short residence in the sanatorium /

sanatorium, the patient left without any good cause and remains unfit for work. Apparently he neither realised the fact that by coming home to very bad housing conditions he jeopardised any chance he may have had of being restored to working capacity, nor the fact that he continues to be a burden upon his parents. One hopes that in time patients will be convinced that it is neither dignified nor helpful to leave an institution because of some "whim", and also that they will think first how their action is likely to reflect upon their own health and prospects of being restored to working capacity and also upon the health of their friends.

Dundee Burgh.

26 W. G., male, 44 years. This patient, together with his wife and five sons, occupied a three-apartment house in a three-storey tenement. Originally patient resided in the "country", where he was employed as a ploughman. Some years ago he brought his family into the Burgh, as he had obtained employment there as a vanman. When notified, he was advised by his medical attendant and the tuberculosis officer to go to a sanatorium. This advice he did not follow. Although unable to follow his employment, he appeared to receive adequate nourishment and took precautionary measures with his sputum.

Mrs. /

21 Mrs. G., aged 32. This patient, previous to time of visit, had removed to an unknown address. When notified she occupied a one-apartment house of a badly-lit and ventilated type along with her husband and six young children. At that time there were no vacant beds in the Local Authority's institution and she refused an offer to be sent to a more distant sanatorium.

22 P. D., aged 44. This patient had been off work for a month prior to visit. He also had refused sanatorium treatment. Along with his wife, a son aged twenty, and three younger sons, he occupied a two-apartment house in a 4-storey tenement.

In commenting on the above cases, the Tuberculosis Officer explained that in this burgh several patients at first had refused to apply for "sanatorium benefit" as they thought that necessarily implied removal to a "sanatorium". They objected to go to an institution which was any considerable distance from home. One has little encouragement in dealing with this type of patient. It is to be hoped, however, that when the future brings a greater measure of success in treatment consequent upon earlier submission to the same, there will be less unwillingness on the part of /

of the patient to meet the needs of the situation.

23 Mrs. S., aged 36. House was of two apartments through and through in a three-storey balconied tenement. About two months prior to visit patient, of her own accord, returned home from the sanatorium where she had been for nine weeks as she "got weary" of being from home. At time of visit the patient slept in a bed alone, her two children, aged 3 and 2 years, sleeping in a second bed in same apartment. Her mother attended to the house and the husband worked in a tan yard. During the daytime the patient moved on to a couch in the second apartment, but for a time had been unable to go downstairs. She expectorated into a bowl containing disinfectant. Her condition was advanced and the sputum contained numerous tubercle bacilli. Her death occurred a few weeks after visit. Prior to marriage she had worked in a spinning factory for twenty years and asserted that she had seen fellow employees expectorating on the floor of the factory.

24 R.M., male, aged 34. At time of visit patient, together with his wife, a daughter of six, and a son, aged five, occupied a shop and back apartment, ground floor of a four-storey tenement. R.M. was notified in 1913 and for ten weeks was in the local sanatorium. In 1914

he /

he went to New Zealand "for his health", but out of his fifteen months' stay there he was nine months in a sanatorium. Since his return to his family he has been unfit for work; his wife conducts the shop and he sits about smoking cigarettes. At date of visit he had developed laryngitis and was obviously a fairly advanced case. About six months after notification, his daughter also was notified. Now, however, her condition has improved. Patient was a carpet weaver up to the time of onset of his illness. His mother and a sister died from phthisis. Since time of visit patient has been re-admitted to the local sanatorium and died there.

25- E.M., female, aged 19. Patient, together with her parents, sisters, 24 and 10; and brothers, 13 and 8, resides in a two-apartment through and through house, ground floor of a four-storey tenement. Patient's sleeping accommodation was a couch in one of the two apartments, the bed therein being utilised to sleep her two sisters and two brothers. On looking into this room, it was noticed that there was no evidence of blankets either on the couch or the bed. Patient, who has some slight consolidation in one upper lobe, is at work as a weaver, as is also the elder sister, while the father carries on a spasmodic trade as

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a box-maker. At time of visit the mother was unfit for housework and since then has died from malignant (gastric) disease. The house was not in a cleanly state and it was obvious that the mother could not attend to the household and that neither the father nor the patient or her sister took sufficient interest to keep things tidy. In fact, it was believed that cooked food was bought. The family history is bad; this patient's grandparents and an aunt died from phthisis; a brother died from the same cause five years ago, and a sister about a year ago from "consumption of the bowels"

26 Mrs. W., aged 53. Family consisted of patient, a married son, and his wife and infant. They occupied a two-apartment house, ground floor, of a three-storey tenement. The house was not clean. Patient slept in the apartment alone: the window, of sash type, did not possess cords, several panes of glass and the frames were broken. For many months the health visitor had visited this house but had failed to improve the standard of cleanliness. It was explained that repair of the broken window had not been suggested as the ventilation thereby obtained would be better than what might be expected by voluntary effort on the part of the inmates. Recently it has been learned that /

that the patient now occupies the house alone, and that the necessary repairs have been carried out.

Dumbarton Burgh.

2) Mrs. S., aged 37. Along with her husband and three of a family this patient occupied a one-apartment house, top floor of a two-storey tenement. All the ground floor houses in this property have been closed, but owing to the dearth of houses in the Burgh, the Local Authority have been unable to take proceedings with regard to those on the first floor. The appended photograph No. 5 gives a view of the property. At time of visit Mrs. S. had recently returned from the local sanatorium, where she had been for two weeks. Her excuse for leaving was that "she thought her children were not being attended to properly". Unfortunately, there was a strong presumption that she was addicted to drink. The house was not in a cleanly state. On revisiting about a year later, the patient and her home conditions were found to be in the same unsatisfactory condition.

Port Glasgow.

2) E. G., female, aged 10. House, two-apartments, top floor of a four-storey tenement. Inmates consisted of parents; one grandparent; two younger brothers and a sister. Patient's sleeping accommodation was a recess bed shared with her /

her parents, the infant sleeping in a cot in same apartment. A month previous to visit, patient had returned from a sanatorium where she had been for four weeks. She was an early case and the sputum was reported to have disappeared. This house was kept in an uncleanly and untidy condition. The health visitor and sanitary inspector paid frequent visits to amend that, but for long their efforts were unavailing. At a subsequent visit, fourteen months later, the standard of cleanliness was found to be improved, but there was still a general impression of untidiness. In the interval, the patient had been for eleven weeks in a "convalescent" home. Her general condition kept good but slight spit had returned. The house was reasonably well ventilated.

In this instance the guardians were with great difficulty persuaded to improve the hygiene of the house and so hampered the efforts made to conserve the improvement in health gained by institutional treatment.

2 ♂ C. G., male, aged 8. This patient for about three years had been in attendance at a dispensary in an adjoining burgh. Shortly prior to visit, the family had removed to the present address. The house consisted of two apartments, top floor in a four-storey tenement. At time of visit, the patient's sleeping accommodation consisted of

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a mattress on the floor in the space generally used as a recess bed. On inquiring why there were no proper arrangements for the bed, the reply was that there were no "boards" for same. Presumably these had been disposed of for firewood or otherwise. The inmates consisted of the parents, a brother aged eighteen months, and a female lodger. The house was clean, but the windows were closed. The patient, a fairly early case, appeared to be improving under dispensary treatment. The father, an able-bodied man, was given to drinking bouts, which probably explains the scant evidence of suitable bedding available for the patient.

Stirling County.

30 E. A., female, aged 33. The appended photograph No. 6 shows the shelter in which patient sleeps. It was supplied by the County Council, and, during an entire winter, she had slept in it with the exception of one or two nights when the wind was blowing a gale. Socially, the patient is not very well off. Thus she receives disablement benefit plus 5/- per week from the Insurance Committee for domiciliary treatment, and her mother is a cleaner in a neighbouring school. The rent of the house is £4-10/- per annum. The mother and patient are the sole inmates. Prior to being supplied with a shelter, patient had had four months' treatment in a sanatorium. Recently a brother died from /

from pulmonary and kidney tuberculosis.

3/ W. A., aged 48, a miner. This patient was visited on two occasions at an interval of sixteen months. At the time when the first visit was paid he had recently returned after three months' treatment in a sanatorium. He had been able to start work and for four months worked at the pithead (40 tons dross shovelled daily). Later, he went into the pit as he considered "getting" the coal easier work and certainly he preferred the larger wage. The second visit was paid about a year later when it was found that for sixteen months he had been steadily at his work. However, he was beginning to feel less fit. He has a wife and two children. He takes an intelligent interest in his health, carries out instructions, and uses a sputum flask constantly, which he carries with him to work. The medical adviser to the Insurance Committee is convinced of the great value, from an economic point of view, that is to be achieved by giving such a patient a few weeks' treatment in a sanatorium whenever his capacity for work diminishes, as there is every prospect of fitness for work in the intervals with all that that implies to himself and his dependants.

R. /

32 R.K., male, aged 26. The appended photograph No. 7 refers to a patient who had occupied the shelter during the previous winter. It was supplied by his relatives. The circumstances of the patient free him from financial worry and the problem of space for the shelter was easily solved.

33 A.F., male, aged 30. For nine and a half years he has occupied the shelter shown in the appended photograph No. 8. It was supplied by his friends. Patient is a hip joint case, with a doubtful pulmonary condition.

Arbroath Burgh.

34 W.C., male, aged 31. At time of visit, patient (recently notified) with wife, six daughters and one son resided in a two-apartment, through and through house, ground floor of a 2-storey and attic tenement. The rent was £7.16s. per annum, the income 15s. per week (earned by his wife) plus patient's sickness benefit. About six weeks later he was admitted to the Local Authority's hospital. After five months' residence therein he left of his own accord but was re-admitted three weeks later. During the second period of treatment the patient was guilty of breach of discipline. At this stage the Board's advice was sought and an effort made to get him admitted to an institution where it was thought more severe disciplinary methods might be available. However, no success was met with in/

in that direction. By this time, some patients had left the Local Authority's hospital owing to his behaviour, and although the home conditions were unsatisfactory, the hospital committee was advised to send him home.

Perth Burgh.

38. J.C., male, aged 37. This patient, together with his wife, two sons and two daughters occupied a two apartment house, these apartments being the attics in a 3-storey and attic tenement. He slept in one of the apartments alone. The rent was 1s. 1d. per week (no rates). The parish council allowed 10s. per week and his wife did an occasional day's charing. The family had occupied the premises for five years, and during that time patient (originally a stone-hewer) had been at work only at intervals. Latterly he had confined himself to carving stone ornamental frameworks for clocks. He had been under treatment in a sanatorium near the Burgh prior to visit on three different occasions, viz:- one year previously for three months; two years previously for a similar period, and more recently for nine weeks: (on the last occasion he was discharged on suspicion of liquoring). Thereupon he was admitted to the phthisis wards of the Local Authority's hospital, but remained only five days, explaining that he was "tired of the treatment". Fourteen months after being visited, the Medical Officer/

Officer of Health stated that patient was then in the Local Authority's hospital and was not likely to live long.

36. D.C., male, aged 46. This patient with his wife occupied an attic apartment in a three storey tenement. The apartment, approached via a badly lit "close" and a narrow wooden stair, possessed three windows (two of them very small). Patient occupied a bed alone. Three daughters were boarded-out temporarily with friends. The rent of the house was 2s. 3d. per week inclusive. The income was 8s. per fortnight from the parish council and the eldest daughters contributed 7s. 6d. per week (wages). The patient had been under treatment in the Local Authority's hospital phthisis ward, voluntarily returning to the home conditions above described.

These two instances illustrate the difficulties with which Local Authorities are faced in attempting to grant appropriate institutional treatment to a certain class of patient. Even though the home conditions are bad, the patient's habits or desires prevent retention in the institution for more than a few days or at most, two or three weeks.

37. Mrs. F., aged 45. This patient, notified a few days prior to visit, resided in a better-class tenement house. Her sister-in-law was interviewed. She explained that patient had not been informed that "she suffered from phthisis, in case the information would have injurious effect." To foster the deception/

deception a daughter was permitted to continue to sleep in the same bed. One discovered, however, that she was cognisant of the fact that the sputum had been taken for examination. It is difficult in these days to see how a person of any intelligence suffering from pronounced cough and sputum and knowing that a sample had been taken for examination, could fail to suspect the nature of the illness. In this instance a daughter was being sacrificed to save a very hypothetical danger to the patient's health, and such a thing should not have been permitted by the friends. It was gratifying to find that the sanitary staff advised a discontinuance of the arrangement as soon as they became aware of it.

Perth County.

38 One patient occupied a shelter at an elevation of 500 feet above sea-level. This patient's history is worthy of detailed record, as it shows determination to persevere with treatment under severe conditions:- Onset about eight years ago. Occupation a mole-catcher. At that time had two months' sanatorium treatment; later he was admitted to a second sanatorium, where he had five months' treatment. He then began to use a shelter and three years ago he and his wife and daughter removed to the dwelling the family occupied at time of visit (a farm-house which he obtained at a nominal rent) which is situated/

situated at an elevation of 500 feet above sea level. The patient used the shelter winter and summer and on the day of visit, snow to a depth of three inches generally and two feet in drifts was on the ground. The patient was obviously in an advanced stage of the disease and ultimately died with "kidney and liver complications." Unfortunately no photograph of the shelter and its surroundings was taken.

35 J.M., female. Shortly after onset of illness, patient's medical attendant informed the county medical officer that he considered that this patient was suffering from typhoid fever and that a sample of her blood had given a positive Widal. A short time after this, her younger sister, Annie, was also showing febrile symptoms. At his visit to the house the medical officer of health made out some apical mischief in J.M. In view of the positive Widal, she was removed to the isolation hospital. About a month later, her sister Annie also was removed there. By this time the diagnosis was cleared up but they were both retained in the hospital for about two months. The shelter (paid for by parent) shewn in the appended photograph No. 9, had been occupied by both patients for about two months prior to visit. It is now obvious that the elder sister is a very advanced case of pulmonary tuberculosis. The situation of the shelter is ideal and the patients both stated that they would not now sleep inside the house. In hot weather, however, they had/

had felt the heat during the day and then sat for a little in one of the cooler rooms of the house. As far as made out, there is no history of tuberculosis in the family. A little time after visit, the elder sister (J.M.) died.

40 J.C. male. For several years patient was a locomotive engine-man. He was stationed in Motherwell where he was in lodgings. His illness began there and he came home. The shelter occupied by patient at time of visit and shown in appended photograph No. 10, was erected for his sister who also suffered from phthisis. She died shortly after its erection. J.C. had occupied it for eleven weeks prior to visit. The medical officer of health considers that his was the first case in the family, and that the deceased sister's onset was more recent, her illness being of a rapid type. A second sister who showed symptoms of early phthisis was admitted to a sanatorium, was there for several months and is now at home. The illness is now thought to be quite arrested. She is seen in the photograph second from the right.

Musselburgh Burgh.

41 P.F., male, aged 6. A relative of the patient who herself had been in regular attendance at a tuberculosis dispensary took him with her on one occasion as it was thought he might also be developing symptoms of tuberculosis. At my visit/

visit I was informed that the dispensary physician, who had notified the case to the medical officer of health, had not at the same time informed the relatives of his action. The friends therefore first received information from the sanitary staff that the case had been notified. In the interval between notification and the visit by the sanitary staff, the child's symptoms in the minds of the relatives had become less marked; the consequence being that doubt was cast by them (supported by the opinion of a practitioner who was called in) upon the original diagnosis. Probably in this case no harm to the patient resulted as, if he really had suffered from tuberculosis and signs were in evidence, the latter had passed off. In other instances, however, the result might not have been so favourable as doubt, due to lack of information, would almost certainly have led to delay. It is desirable that in notifying a case the practitioner should do something more than merely fill up a form. He ought to carefully explain the facts to the friends so that from the first they may be in a position to follow advice. The information coming from the Local Authority's sanitary staff is naturally resented and may be received with incredulity.

This failure on the part of the notifying practitioner/

practitioner to inform the patient or his friends is also referred to on page 134 of Reports to the Local Government Board (Scotland) on "The Administrative Control of Pulmonary Tuberculosis in Glasgow" by Drs. Dittmar, Dewar, and McVail, 1911.

42 J.A., female, aged 26. This patient at time of visit was in an advanced stage of the disease. Her home conditions call for no special comment. About sixteen months previously she had had two months' sanatorium treatment and thereafter was offered further treatment at a farm colony. This was refused as she considered herself fit for work and was anxious to return thereto in order to retain her position in a dressmaking establishment. The premises where she worked were in the area of a Local Authority different from that in which she resided. On return to work no information to that effect was sent by the staff of the latter to the Medical Officer of Health of the former as it was feared that if any inquiry as to suitability of premises (work) were instituted, the patient's chances of employment would be jeopardised. Undoubtedly at present there is a tendency to look upon the person who is suffering or has previously suffered from phthisis as an undesirable employee and consequently individuals may suffer. However, it should clearly be

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within the province of a Medical Officer of Health to see that the patient's fellow-workers are not exposed to obvious infection either from unsuitability of premises or conduct of the same. Unless, therefore, he be informed that a patient outwith his area has returned to work within the same, he cannot make the necessary inquiry. In any event, a reasonable employer would be willing to act upon any suggestion the Medical Officer of Health might be able to make both in the interests of the returned employee and her fellow workers.

43 Mrs. H., aged 34. Resides with her husband, two sons and two daughters; her brother and a lodger, in a three-apartment house in a 3-storey tenement. At time of visit, patient was hard at work preparing food for the returning men folk. The windows were all closed and she suffered from a persistent cough, expectorating into the fire. The cleanliness of the house was striking. She stated that the men would not permit the windows to remain open. The brother and lodger were accommodated in one apartment, the largest apartment was used only for social occasions, the patient, her husband and family sleeping in the kitchen. For some time patient had attended a tuberculosis dispensary in the area of an adjoining Local Authority, but latterly had ceased attending as she became "dis-

heartened /

"disheartened at losing weight". In view of the hard domestic duties and the lack of fresh air, one cannot wonder that she made no progress. This is an instance where without taking full and first-hand note of a patient's home conditions, attendance at a dispensary for treatment had failed. There is every prospect of failure if in every case the home conditions of the patient are not recognised as of vital importance.

Inverness Burgh.

44 F. H., who, at time of visit was regularly at work on the Highland Railway, slept in a shelter placed on a piece of vacant ground (grass grown) between which and his domicile was a public thoroughfare. He had had three months' treatment in a sanatorium and from time of return therefrom had been at work for five months. As the vacant ground on which the shelter was placed was open to the public gaze a light fence had been erected round it, thus securing some privacy. The owner of the vacant space did not ask rent for the privilege of its use for the purpose. As stated, this shelter closely adjoined a public thoroughfare, but the patient's determination to carry out treatment overcame any scruples he may have had from the point of view of being in the public gaze.

Falkirk /

Falkirk Burgh.

45 B. G., female, aged 44. Patient during the day assisted her mother (an old age pensioner) in the latter's house, sleeping at night in that of her married sister, which is one of two-apartments in a tenement. The window of patient's sleeping apartment was much obstructed by the gable of an adjoining building. Concerning this last point, the Board made representations to the Local Authority with a view to having it remedied. (Part II of the Burgh Police (Scotland) Act 1903 had been adopted by the Local Authority). Since then the proprietor has agreed to close the house. The obstructing building is a store, is of more recent date than the obstructed dwelling-house property, and was erected in 1897. One has to remark in connection with the question of obstruction of existing dwellings by buildings more recently erected than the former and to be utilised for commerce or pleasure, that, according to statute, it is at times difficult or impossible for a Dean of Guild Court to take exception to their erection, even where it is obvious that the light and ventilation will be obstructed. Section 170 of the Burgh Police (Scotland) Act, 1892, as amended by Section 63 of the 1903 Act amply provides for light and ventilation space for buildings to be used as dwellings, but some strengthening

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of the hands of the Dean of Guild Courts is required to prevent the blocking of the space of older yet inhabitable dwellings. No argument is necessary to prove the undesirability of curtailing the back space of our existing tenements. Also, when Section 64. of the Burgh Police (Scotland) Act, 1903, is applied to sleeping apartments which have been obstructed in the manner above referred to, a greater strain is thrown upon the existing housing accommodation by the displaced tenants. Even yet one sees buildings for amusement or business purposes being erected in the already too restricted back space of dwelling tenements. The continuance of the practice is laying up a store of difficult hygienic problems to be dealt with by a future generation.

Lanark County.

44 Mrs. A., aged 33: a case of chronic phthisis. Patient, her husband, four daughters and three sons, reside in a dwelling of two-apartments in a row of single storey miners' houses. At time of visit, one apartment had been sub-let "for a week" to a man, his wife and infant. The latter family recently had come into the district owing to better prospects of work and had been promised a house in about a week's time. At time of visit the windows were closed, as patient's husband "objected to them being open". Notified /

Notified in 1907, she has had two confinements since then. On two occasions also she was for short periods in the Local Authority's institutions, each time voluntarily returning home "as the children required looking after". She still has sputum, but on examination no tubercle bacilli were found. The house generally was kept in an untidy condition. We have here another example of the patient for whom a Local Authority endeavoured to do some good by institutional treatment, but owing to home difficulties their efforts were frustrated. It is not difficult to picture the hopelessness of attempting adequate home treatment under the conditions cited.

4) P. D., male, aged 48, a case of chronic phthisis. House is one of two-apartments, on ground floor of a two-storey tenement. In addition to his wife and daughter, aged eight, two lodgers are accommodated. Patient uses a pocket flask for his sputum, — the latter contains tubercle bacilli. Originally a miner, he now works on the pithead. His wife augments the income by selling mineral waters and confectionery in one of the apartments (shop). The lodgers sleep in the same apartment as patient, but in a separate bed. According to information given at time of visit, the lodgers were not aware that patient suffered from phthisis. One gained

the /

the impression that this knowledge was withheld in case they might take their departure. The house was not kept in a cleanly condition. On two occasions - two months in 1909 and 1½ months in 1913 - patient had been in one of the Local Authority's hospitals. This case is one in which the unsuspecting lodgers were compromised by sleeping in the same apartment as a phthisis case. By being kept in ignorance of the existence of the disease, they were unable to protect themselves from circumstances favouring infection — in this instance lack of cleanliness.

48 G. B., male, aged 35: a case of chronic phthisis. This patient, together with his wife, two daughters and two sons, resided in a one-apartment house (rent 2/- weekly inclusive). The onset of his illness, dated back to about eighteen months prior to visit. By occupation a miner, he previously rented a three-apartment house, and latterly, owing to inability to pay rent, removed to the single apartment house. His income at time of visit was 17/- per week from the parish council. He had had about three months' treatment in one of the Local Authority's hospitals and at time of visit was in attendance at the tuberculosis dispensary. After return from the hospital he had resumed work as a miner, but was unable to continue this. Previously one of his daughters /

daughters had been notified, but was again in attendance at school. The tuberculosis officer was of opinion that had suitable work been available, this man could have carried on. As stated, he was supported entirely by the parish council, and owing to poverty due to his illness, had drifted into a one-apartment house.

In a purely industrial centre, especially where there is practically only one occupation (in this instance coal-mining), light work is not easily obtained. One finds also that in many cases an ex-patient, owing to the loss in wage is unwilling to pursue a less remunerative yet more suitable occupation. The patient who has a number of dependants is disheartened if unable to continue his previous occupation and fears that diminished wages may lead to insufficient nourishment. For these there is a wide field of activity for such bodies as after-care committees - also see pp 27-28 By guiding the over-zealous patient for a time, he may ultimately become perfectly fit for his former occupation. Our new armies have fulfilled this rôle to many ex-phthisis patients who joined up. Instances are known where patients still suffering from the disease have remained fit after months of training and actual fighting, yet who in civil life had been for long periods unable to follow their previous occupation /

occupation. In the army the "patient" is imbued with enthusiasm and is well-fed and clothed; in civil life enthusiasm has fled (especially if a former occupation has been tried and had to be given up) and unemployment generally means deficient food and clothing.

Dumfries County.

49 Family M., consisting of mother, adult son, (crippled by former poliomyelitis) and son aged 7½. The dwelling, situated in rural surroundings, consists of two apartments in a single storey double cottage. The father died eight years ago; two daughters aged fourteen and eleven died in 1913. The mother, a byreswoman, was absent at work at time of visit. The younger son presented symptoms suggestive of tuberculosis yet despite visitation and instruction by the tuberculosis officer's staff, he was found in bed in a room, the windows of which were closed and the air grossly vitiated.

As stated, every effort had been made to improve the hygiene of this house, but whether due to the absence of the mother at work or sheer indifference to instruction, slow, if any, progress in that direction had been possible and at time of visit, there was every likelihood that the younger son would develop the disease. The circumstances were the more regrettable as the surroundings were ideal for open-air methods.

R. /

50 - R., adult, male. This patient at time of visit was in the Local Authority's hospital. When notified he was a lodger in a two-apartment house in a miners' row of dwellings. Prior to date of notification the attention of the Medical Officer of Health was directed to the case by a letter received from a layman informing him of the uncleanly condition of the house and indicating that he suspected R. was suffering from "consumption". Thereupon the tuberculosis officer visited the house which he found in an uncleanly condition, the patient sharing an apartment with a fellow-lodger. As stated, he was removed to hospital.

This case is cited as one which was brought to the knowledge of the Medical Officer of Health by a lay informant and thereby earlier action by the Local Authority's officers was possible. It is an instance of enlightened public opinion. The patient previously had had medical attendance.

51 J. I., male, 33. Duration of illness - about eighteen months. On two occasions patient had been in Local Authority's institution, viz:- three months in 1913 and nine weeks in 1914. Some months ago the Local Authority supplied him with a shelter. At time of visit, rain /

rain was falling heavily, and as the weather had been very wet the shelter had been disused for a time. He has returned to his original work as a forester. The appended photograph No.11 shews the shelter and its relation to the dwelling.

12 J. M., female, aged 34. From 1910 until a few weeks prior to visit (1915) patient had occupied the shelter shown in the appended photograph No.12 . For a year (1909-1910) she was in a sanatorium. Tuberculin treatment is still being given. Recently, owing to the fact that her mother required greater attention at night, she has given up sleeping in the shelter. There is still occasional sputum, which contains tubercle bacilli, but she enjoys good health. Patient and her mother are the sole occupants of the two-apartment and scullery cottage, part of which is seen.

13 J. C. H., male, aged 44. For two years this patient had occupied the shelter shown in the appended photograph No.13. His onset dates back seven years and in 1912-1913 he was on two occasions in the Local Authority's hospital. On return home after his second period of treatment, he occupied the shelter; but four months prior to visit, was readmitted to the Local Authority's hospital, together with a daughter, also a notified case.

M. P. /

54 M. P. For about two years, this patient has occupied the shelter shown in the appended photograph No. 14 It was constructed by her brother (a joiner) on her return after six months' treatment at a sanatorium. Two beds can be accommodated in the shelter and a sister occasionally occupied the second bed "for company". Now the patient is regularly at work.

Leith Burgh.

55 P. K., male, aged 45. A case of chronic phthisis. This man resided with his wife, a daughter, aged three years, and son, three months, in a one-apartment house. For a year they had lived in this house having removed from a three-apartment house as patient's father (who previously assisted them) had died. Patient was notified four years ago and since then had had eight months' institutional treatment in the phthisis wards of the poorhouse. By occupation he was a "coal trimmer", but for four years had been unable to support his wife and family. Now the parish authorities do not grant any allowance as the patient refuses to re-enter either their phthisis wards or those of the Local Authority. It will be observed that during the four years which have passed since he was notified, two children were born.

The points presented in the above case are firstly that for a prolonged period the patient had been unfit for work /

work; secondly, that when offered further institutional treatment, his dependants at the same time being assured of maintenance, he refused the offer; and thirdly, that since notification his family responsibilities had increased and he was apparently content to see his wife attempting by casual work to earn barely enough for the family to eke out an existence.

Fife County.

56 A. W., female, aged 16. Several months prior to visit, this patient was admitted to Local Authority's hospital from most unsuitable home conditions. She improved considerably, and of her own accord left the institution. At time of visit, she, together with her illegitimate infant, her mother and a brother occupied one apartment of a two-apartment miner's dwelling. The second apartment was occupied by the tenants of the house - husband and wife, two daughters and two sons. The windows of the house were closed and it was not kept in a cleanly state. The reason given why one apartment was sublet to A.W., her mother, etc., was because they could not obtain a separate dwelling owing to shortage of houses. Patient's brother was at work in the pit. This is another instance where a patient voluntarily returned from an institution to most unsatisfactory "home" conditions. It also demonstrates the undesirability of the "sub-let". At a visit about a year later it was learned that she was then in a very advanced /

advanced stage of disease.

57 R. W., male, aged 52. A case of chronic phthisis. For about eighteen months (including two winters) this patient has slept in the shelter shown in appended photograph No. 15 It was home-made and one may observe that provision in the form of a screen (rolled up) is made for unfavourable weather. The screen is improvised from the sail of a fishing craft.

The appended photograph No. 16 shews the front view of a dwelling occupied by a phthisis patient. At time of visit no one was at home, yet it will be observed that the window (right-hand) was open one half which may be held as demonstrating a keen desire to pursue fresh air methods ➡ Month of March.

Aberdeen County.

58 F. M., male, aged 34. A case of chronic phthisis. Since November 1911 this patient has occupied the shelter (Local Authority's) shown in appended photograph No.17. He is largely dependent upon a brother-in-law, but does an occasional day's work as a gardener. Prior to 1911, he was for eight years in Canada as a stone-cutter. His illness commenced there and ere returning to Scotland he had twelve months' sanatorium (six months of this spent in a tent) treatment.

59 J. A., female, aged 23, and R. A., her brother, aged /

aged 20. For one year the former patient had occupied the shelter shown in appended photograph No.18. It was supplied by the Local Authority. R. A. (brother) recently returned after seven months' sanatorium treatment, sleeps alone in the apartment indicated in the photograph by a cross. A younger brother, also a notified case has had three months' sanatorium treatment. There is a history of the mother having had a pleurisy many years ago and after each confinement of having suffered more or less from "congestion of the lungs". Now, however, she enjoys good health. Socially, the family is comfortably well off, but at time of visit, the patient, R.A., was sitting close to the kitchen fire in a somewhat heated atmosphere. The weather was not cold and one felt that he was thereby undoing any benefit he may have derived from institutional treatment.

60 G. M., male, aged 46. This patient after sixteen weeks' treatment in a sanatorium, was supplied by the Local Authority four months' ago with the shelter shown in appended photograph No. 19. He has resumed his former employment (head gardener), but more or less regularly the tuberculosis officer administers a weekly injection of tuberculin.

A. M. /

61 A. M., male, aged 39. Since October 1913 this patient has occupied the shelter shown in the appended photograph No. 20. For eighteen months he has been at full work in a paper factory. He has one and a half miles to walk to and from his work and his hours are 6 a.m. to 5.30 p.m. He did not previously have institutional treatment.

62 M. C., female, aged 35. Since 1913 (three winters) this patient has occupied the shelter (Local Authority's) shown in the appended photograph No. 21. It is placed in the garden adjoining her father's house — over 250 feet above sea level. She is confined to bed and in the photograph the district nurse who happened to be present at time of visit, is seen. In 1912, the patient had had three months' institution al treatment. Two brothers and a sister of this patient have died from phthisis. One of these brothers during the latter part of his illness also occupied a shelter, (Local Authority's) which adjoined that shown.

63 J. S., male, aged 39. A case of chronic phthisis. Seven years ago this patient had to give up work as a granite cutter. For two years he slept in a tent placed in a plot of ground attached to a cottage adjoining that shown in photograph. For five years he used the shelter (Local Authority's) shown in appended photograph No.22. Latterly he was fit only for odd jobs in the garden; he and his family (wife and three children /

children) depending largely upon the charity of friends. Since date of visit, patient has died.

64 Mrs. J. G., aged 37. This patient, together with her husband and three children occupies a two-apartment house, through and through, ground floor of a two-storey block. She has had six months' institutional treatment and on return home about six weeks prior to time of visit, the Local Authority supplied the bed (with bedding) shown in the appended photograph No.23. Although the size and position of the house are not ideal for continuing treatment, it will be observed that the window is kept wide open -- the visit was a surprise one and the weather dry but cold.

Clackmannan County.

65 J. R., male, aged 18. The shelter shown in the appended photograph No.24 was supplied by his father's employer and from time of return of the patient after 27 weeks' residence in a sanatorium to within three weeks of visit he slept in same (one winter). He ceased to use the shelter owing to the "presence of rats" and "cold weather", but one obtained the impression that he was not sufficiently persevering. Certainly in comparison with some, the situation of his shelter lent itself to continued occupancy for a longer period.

Lewis.

66 The appended photograph No.25 shows a shelter which was /

was occupied for two winters (years) by a phthisis patient (male) on his return to the Island, after treatment at a sanatorium. Ultimately, as he took a severe haemoptysis, the patient was induced by his friends to be nursed in the house. He died shortly thereafter. This shelter was made on behalf of the patient's friends.

The appended photograph No. 26 refers to a shelter which for one winter was occupied by a male patient on his return from a sanatorium. This patient then emigrated to America (about 10 years ago), and remains in good health. This shelter also was made locally on behalf of the patient's friends.

It is of no little interest to find that even in that wind swept part of Scotland these two patients had possessed sufficient determination to carry out shelter treatment. Only those who are familiar with the climate during winter can realise the amount of sacrifice of comfort which has to be made to do so. Their example should act as a stimulus to those in more favoured situations.

Linlithgow County.

6) C. McK., male, aged 39. A case of chronic phthisis. This patient resides in a one-apartment house, not through and through, situated in a row of miners' dwellings. On four occasions the patient had been in the Local Authority's hospital /

hospital, a total of 410 days. After being repeatedly guilty of "insubordination and drunkenness" he had finally been discharged. With his mother, an old age pensioner, he occupies the house. At time of visit it was in a dirty condition. The parish council grant maintenance to the patient. Since discharge from the Local Authority's hospital, he had been offered a bed in the phthisis wards of the poorhouse, but this offer was refused. We have here a patient who may live for several years, yet who, owing to vicious habits, cannot be accommodated in existing institutions. It is possible that ultimately an institution may be established where cases such as C. McK. and the one referred to on page 47 may be efficiently dealt with. Until some such step is taken, patients of that type must be left at home in most instances as the more respectable patient naturally objects to their companionship in the ordinary institution.

Ayr County.

62 J. J., male, aged 30. Patient and his wife (also a notified case), and three children resided at time of visit in a one-apartment dwelling in a tenement. The latter on the side facing the street was three storeys in height; behind, owing to the sloping ground, it was five storeys. The patient's apartment was below the level of the street (and /

(and therefore back to back with same), but it was on the first floor reckoning from the back of the tenement. About six months prior to visit he was for a month in a sanatorium. He came home as he knew that his family were in financial difficulties. - while he was in the sanatorium his wife earned 22/- per fortnight in a local factory, but had to pay 6/- of this to a neighbour for attendance on the children during her absence. Thereafter, J. J. continued at work as a labourer in a steel work for a few months, and at time of visit his wife stated that he was struggling on with difficulty. Mrs. J. was meantime recommended by the Insurance Committee for domiciliary treatment, but it was decided that unless the husband (J. J.) consented to return to the sanatorium, the home conditions could not be considered satisfactory. Latterly he consented. About eighteen months after visit, J. J. was reported to be in full employment and his wife in fair health.

65 J. W., male aged 26. Patient with his wife and infant resided in a one-apartment house in a three-storey tenement. For nine months the family had occupied this house. The rent is £3-10/- per annum, excluding rates and they are unable to afford a larger one. Patient had had three months' sanatorium treatment and returned home two months prior to visit. Originally an ironstone /

ironstone worker, he has not been able to resume this occupation. He occasionally does a day's coal-mining, but finding himself unfit for that, he hopes to get some easier task. Meantime, he and his family have a hard struggle to make ends meet. In this case we have a striking example of the hardship which this disease entails upon the family when the bread-winner is the patient.

)0 T. W., male, aged 39. Patient a sandstone quarryman, was notified in March 1914. For five months he was treated in the County Sanatorium. Some time after returning home the County Council supplied him with the shelter shewn in appended photograph No. 27 situated on a vacant piece of ground about 300 yards from his dwelling. Permission to use this land was granted by a neighbour. His house is one of two-apartments and there is no space adjoining it on which the shelter could have been placed. The patient uses a sputum flask and carries same on his person. Fully a year after time of visit he developed an acute pulmonary condition and died.

Haddington County.

)/ P. McC., female, aged 7. At time of visit, patient was in local Authority's hospital. Her parents resided in a three-apartment house in a two-storey miner's row /

row of houses: rent 8/6 a fortnight inclusive. In this house J. McP., a male, aged 20, was also notified and he likewise was in local authority's hospital. The McC. family were the householders, the family consisting of parents, brothers (of patient P. McC.) aged sixteen, twelve, and five; her sisters aged fourteen, ten, and seven; and her uncle. For two years, J. McP. (the second patient) his father and a brother had lodged with her McC. family. Two reasons were adduced in defence of the practice of accommodating so many lodgers (4 until J. McP. went to local authority's hospital), viz:- "because the McPs. had no female to look after a house" and secondly, "because they had failed to get a suitable house".

It is not uncommon in our industrial centres to find that normally "lodgers" are accommodated even in homes where the householder's family consists of several members. This is especially the case where there is a steady demand for labour in a district. So long as there is a deficiency of houses we must expect to find this practice in operation. It should be condemned wherever possible. [redacted].

Dumbarton County.

C. McP. /

72 C. McP., male, aged 29. Along with his wife and a daughter, aged six years, this patient resides in a one-apartment dwelling which is an attic in a two-storey and attic tenement. He was originally a machine-man, and was resident in Glasgow, but on his return from a sanatorium he started work as a "collector". Unable to meet his rent he came to the present one-apartment house, as he thought the environment of a one-apartment house in the county area would be healthier than such as he could afford in Glasgow. At time of visit, the patient was still obviously suffering from the disease. His total income was 10/- sickness benefit, as he was again unfit for work. The house precluded any adequate continuance of treatment. As far as could be made out the patient was painfully aware of the straits to which his illness had reduced himself and his family. Since time of visit he has had further institutional treatment and is again trying to get work as a "collector". In the interval his wife has been at work. The same house is occupied. This also is a case which would benefit by the assistance of "after care". The patient is fit for some work and if he could obtain something suitable he would in all likelihood be able and would certainly be willing to remove into a larger house.

Aberdeen Burgh.

Family /

)3 Family M., resident in a two-apartment house in a tenement. The house was visited on two occasions at an interval of eighteen months. On the first occasion the mother and a daughter, aged thirteen, both notified cases, shared one bed. A son, aged eighteen, and a sister, aged eight, were then in the Local Authority's hospital (phthisis wards). The remaining inmates of the house consisted of three daughters, aged fourteen, twelve, and eleven, and a son, aged four years. The house was not kept in a cleanly condition and there was a marked degree of untidiness. The father, a fireman at sea was "separate", but contributed 3/- per diem for the upkeep of his family. The local authority supplied a bed and cot in order to better the sleeping accommodation and as far as possible to separate the notified cases from those who did not present symptoms. At the second visit, the cleanliness of the house was improved; the eldest son was in farm service, but an additional member of the family had been notified in the interval. One was disappointed, however, to find that the window of the apartment in which the bed and cot supplied by the Local Authority were situated was closed, and that no very satisfactory explanation was forthcoming as to the reason for this. There was still a general impression of untidiness about the house.

To /

To account for the latter, it was explained that the mother was not very well able to supervise all household affairs, these being left in charge of the eldest daughter (15 years).

74 J. R., male, aged 42. Patient, together with his wife, three daughters and a son occupied a two-apartment house in a four-storey tenement. Rent 3/6 per week. The patient, a labourer, gives from 6/- to 12/- per week to his wife for household expenses. Two daughters each earned 5/- per week. The patient slept in one-apartment by himself, the Local Authority having supplied the bed. The window of this apartment was of sash type, unhung, but was open half at time of visit. At time of visit there was some suspicion that the patient was given to drink. At a subsequent visit, it was discovered that the family had removed and had not informed the Local Authority'sstaff of their new address.

75 Mrs. A. C., aged 41. Family consisted of patient, her husband, four sons and a daughter. House is one of three apartments in a three-storey tenement. The family had been resident here for a year and the statement was made by the patient that owing to her illness the neighbours at the previous address had complained to the landlord that they objected to a common use of the wash-house, and /

and notice to quit had been served. She stated also, that for the same reason, the present landlord had served notice.

Sutherland County.

" One patient has occupied shelter shewn in appended photograph No.28 since August 1912. Disease, advanced second stage; hectic temperature; profuse expectoration; sputum contained tubercle bacilli. House damp and overcrowded; and prior to use of shelter patient occupied, with a brother, a small back closet, the window of which is marked on the photograph with a cross. After occupying the shelter gradual improvement resulted: disease now quiescent, and patient is able to carry on his work as a fisherman. He still occupies the shelter.

" A second patient has occupied the shelter shewn in the appended photograph No.29 for a year. He is in the first stage of the disease and sputum was positive. House conditions fair, but badly lit and ventilated. The disease has become less active; he is putting on flesh; cough and expectoration are greatly diminished.

A /

77 A third patient has occupied the shelter shewn in the appended photograph No.30 for two years. His illness began with acute lobar pneumonia ending in what looked like acute phthisis - swinging temperature etc. and tubercle bacilli were found in the profuse expectoration. He had haemoptysis. House has low ceilings and the rooms are badly lit and ventilated. Improvement was slow but perceptible and he has resumed his usual occupation as a clerk. Now he has no cough and "feels better than ever he did in his life". He still occupies the shelter.

78 A fourth patient has occupied the shelter shewn in the appended photograph No.31 for two years. His illness began with tuberculous empyema. He was operated upon and the left lung became involved. Tubercle bacilli were demonstrated in his sputum. His housing conditions were fairly good. Now he has neither cough nor expectoration and feels very well. No signs of disease are apparent. He still occupies the shelter.

Roxburgh County.

80 H. B.,male. Patient at work at time of visit as a gardener earning 25/- per week. His first wife died two years previously from phthisis. The District Committee had supplied a shelter for her use: also medicine: and two tons of coal. Shortly after her death, patient developed sym - ptoms /

him to a sanatorium for a time. His previous institutional treatment consisted of two days as the sanatorium at the time was cleared for military occupancy.

93 N. H., female. For some months this patient, aged sixteen, occupied the shelter shewn in the appended photograph No.34. The Local Authority supplied same having purchased it from a private individual who had had it constructed for a member of his own family. N. H's home is situated in a somewhat isolated region, but she has not hesitated to sleep in the shelter.

Glasgow Burgh.

94 Mrs. F., aged 45. This patient, together with her husband and daughters, aged twelve and three years, occupied a one-apartment (10' x 12' plus bed recess) house, one stair up in a four-storey tenement. At time of visit (10.45 a.m.) the patient and her youngest daughter were in bed (an open recess bed). The window being closed the air of the apartment was very foul. The weather was cold and Mrs. F. explained that her husband objected to it being opened. The top sash was nailed, and the cords broken. The apartment was in an untidy and unclean condition. Patient had been offered hospital treatment, but had refused on /

on the plea that she was unable to make up her mind to leave her younger child. About a year ago, the latter had had "wasting", but after attending the dispensary, improved considerably. Prior to marriage Mrs. F. was a carpet weaver and for a time had been housemaid in one of the City Fever Hospitals. She had had haemoptysis onseveral occasions. Her father died from chronic bronchitis, and two years ago she nursed, for a time, a niece who died from phthisis. She asserts, however, that for years her 'cough' has been troublesome. Her sputum was examined twice with negative result. Now she considers the quantity of sputum less than formerly. She expectorates into a handkerchief or into a pail placed at the bedside. During the time her sputum was copious, a jar with disinfectant was used. Disinfectant was supplied by the Local Authority, but now the patient for some reason does not send or go herself to the dispensary for it.

The rent of the house is 11/1d per month, and the family have tenanted it for fifteen months; previously they occupied a one-apartment house: husband is earning outside labourer's wages. Health visitor asserts that both patient and husband liquor and that repeated visitation and instruction have failed to improve the condition

of /

of the house.

Here is a case where moral suasion has failed to produce an improvement in the standard of hygiene. If the health visitor's suspicions as to liquor are well-founded, the explanation is not far to seek. Compulsory removal to hospital would temporarily relieve the situation, but that would imply arrangements for looking after the two children, and there is the propsect of the return of the patient to former ways and conditions on discharge.

21. A. L., aged 21. Patient, together with her mother, step-father, and two younger step-sisters, resides in a two-apartment dwelling. The plaster on the walls of the close and stair is in bad repair. The passage leading from the stair to the door of the house is very badly lit - T-shaped. The patient sleeps in an apartment alone and although the kitchen apartment was fairly clean, her sleeping apartment was not so. At time of visit the window was closed - usual excuse that the other inmates object to its being open. Patient's own father died from phthisis. She was in the Local Authority's hospital /

hospital for three or four months about a year ago and more recently for a second period of treatment. She left the institution voluntarily "much improved". Her sputum has been examined on five occasions on four of which tubercle bacilli were found. At present, she is reported by the mother as having no sputum. She attends the dispensary regularly.

Prior to the onset of her illness, patient was employed in a merino store (dusty); her stepfather is a miner: the rent of the house is 13//4d per month.

As stated, this patient has had two spells of institutional treatment and has just returned home after three months in hospital. She left of her own request "much improved". The conditions she has returned to are far from satisfactory, the only redeeming feature being that she sleeps in an apartment alone. It will be noted also, that the plaster on the walls of the approach passage is in bad repair and the light very poor.

Mrs./

86 Mrs. W., aged 40. Patient, a soldier's wife, resides in a two-apartment house in a four-storey tenement. She was for three months in hospital on behalf of the Local Authority and returned home last November. She states that she has no sputum - no tubercle bacilli were found on two examinations. At time of visit, the house was not in a very cleanly condition. The health visitor stated that this was in marked contrast to its condition while she was in hospital. During that time a sister kept house. Mrs. W. does not look very fit and "complains of her feet". She has a family of five children to give attention to (eldest thirteen). How much of the untidiness of the house is due to carelessness and how much to inability to do household duties, is difficult to decide. In the health visitor's opinion the former is the predominating factor, but one cannot fail to consider that the other also plays a part.

87 E. B., aged 13. This patient, notified in June 1915, resided in a one-apartment dwelling, along with her mother and a younger female cousin. The father and a brother /

brother are in the army. At time of visit, the patient was in the house alone. She was untidily dressed and there was marked uncleanliness of the dwelling. Several visits by the health visitor had failed to produce an improvement in the condition of the house. Patient is reported to have no sputum. She "sometimes swallows spit", and has slight cough. Physical examination reveals only diminished respiratory murmur over the chest. The rent is 12/10d per month: separation allowance (father) 17/6d. and 3/6d (brother). We have an example here of a persistently unclean dwelling in spite of visitation by the health visitor.

88 T.S., aged 57. Patient, his wife, two sons and a grandson occupy a one-apartment dwelling, ground floor of a two-storey block. This block is situated at the back of an apparently old single-storey red-tiled block facing — Street. The apartment possesses two double-hung sash windows. The interior plaster work was in fairly good repair, but the floor of the coal cupboard was broken, and the inmates asserted that rats frequented this space. The house was not kept in a cleanly condition. The family has occupied this house for six months and according to statements made by the patient, the property in which the family /

family previously resided has been closed with a view to demolition and is now tenantless. On three occasions the patient had been in hospital on behalf of the Local Authority. After the last period of treatment he returned home - in January 1916. He gives a history of "bronchitis for a long time". He was notified as suffering from pulmonary tuberculosis in 1915. At time of visit his wife arrived and it was apparent she had been "liquoring". Patient's sputum has been examined five times with one positive result. He expectorates into an ordinary spitoon on the floor: disinfectant was supplied by the Local Authority, but the supply being finished, apparently the inmates make no great effort to get it renewed, though his wife asserted that Condy's fluid was occasionally used.

Patient is a night watchman and a son also is at work. The rent is 12/2d per month and it is claimed that a higher rented house cannot be afforded.

This is another example of bad housing and persistent uncleanliness of the dwelling.

95 T.McC., aged 55. This patient, together with his wife and two adult daughters, resides in a one-apartment house, top floor of a four-storey tenement. The property /

property has apparently been converted from larger flats into dwellings of one and two apartments. The house was not in a clean condition and the plaster above the fireplace was in bad repair. The patient has had "chronic bronchitis" for a "long time" and was notified in 1914. At time of visit patient stated that he expectorated into the sink, but during the few minutes that the visit lasted, he spat twice on to the hearthstone. The sputum has been examined once with negative result. In 1915, he was for seven weeks in the Local Authority's hospital.

The rent of the house is 11/7d per month. Both daughters are at work. Patient was a riveter until the "chronic bronchitis" commenced. Patient is obviously careless with his sputum, and when spoken to, did not seem to realise that he was doing anything amiss in so dealing with it, even in spite of some "training" in an institution. The cleanliness of the house and structural condition of the plaster were defective.

10 J.McG., aged 13. Attention is drawn to this case more from the point of view of the state of the property at this address than from any points of clinical importance. The family, consisting of parents, patient and his /

his sister, aged three months, reside in a one-apartment farmed-out house. The "farmer" resides on the premises. Access to the upper floors is obtained via an interior back stair and T-shaped lobbies. The W.Cs. open off the stair and at time of visit all the doors were unlocked and certainly one was choked - it had obviously been so for a good many hours as the solid matter had entirely settled and the water was within an inch from the top of the pan - very complete obstruction. With reference to the lobbies, that on the first floor was extremely dark, not only in the stem of the T, but also in the cross portion. Those at the second and third floors were not quite so badly lit, but yet most indifferently. All were unprovided with means of ventilation other than at the entrances to the lobbies. The rent paid to the farmer by the McG. family was said to be 5/6d a week. It should be added that eight doors (eight single apartment dwellings) open off each lobby. Apparently several houses in a back property adjoining have already been closed by the Local Authority.

?/ Mrs. A., aged 39. This patient lives alone in a two apartment dwelling, top floor of a three-storey tenement. The dwellings on the upper floors are approached by a back turret stair (squared outside and finished in white tiles) and L-shaped lobbies. The lobby on the top floor is lit fairly well /

well by skylight but that on the first floor is very dark. On each floor are single and two-apartment dwellings. As stated, patient resides alone in one of the latter type which is through and through. The floor and table are clean (work of a neighbour). One of her apartments is entirely devoid of furniture, the other contains only a table and a chair. The window of the kitchen (which is the apartment used by the patient) is of sash type. The upper sash is fixed and the lower apparently never has possessed pulleys or ropes. At time of visit, patient was in bed and although the hour was about 11 a.m. one had to approach to within a yard of the bed ere her features could be distinguished. This deficiency of light was contributed to partly by the smallness of the window, and partly by the gable of a newer tenement - distant about fifteen feet. To the right of the door on entering the kitchen, the plaster was broken and the laths exposed over an area of about one and a half square feet, and there was a similar but smaller area on the wall at the back of the bed. The health visitor stated that this was the first occasion she had seen the patient at home. Previously, she had met her on the street, and had suggested a visit to the dispensary for examination, but without success. Seven or eight years ago patient had been in one of /

of the parish council hospitals for six weeks. In all, patient has had five confinements, and last one in the Maternity Hospital. That child lived for eight months. The others were stillborn or died shortly after birth. Prior to marriage she worked in a tobacco factory.

The rent of the house is four shillings per week paid by Soldiers' and Sailors' Families' Association. Husband in army. On enquiring the reason why patient would not attend the dispensary and so perhaps pave the way for institutional treatment, she stated that probably the Soldiers' and Sailors' Families' Association would cease to give her allowance as rent and she would thus lose her house. One felt, however, that the contribution by the Soldiers' and Sailors' Families' Association could be spent to better purpose, and that in her present house she was getting a minimum amount of sunlight and fresh air as compared with what might be obtainable elsewhere for a rent at the rate of sixteen shillings per month. The health visitor was unable to say anything as to patient's habits owing to enforced infrequency of visitation. It might be added that in the block of dwellings at this address there is a second stair giving access to a similar arrangement of houses, but these were not investigated.

In /

In both, it is obvious that within comparatively recent years W.Cs. have been added, and that all of the back premises are whitewashed apparently with the idea of improving the light.

12 Mrs. A. C., aged 50. This patient occupies a two-apartment dwelling, top floor of a three-storey tenement of an apparently old type. For a livelihood she keeps lodgers and recently one has been called up for service. She anticipates that the remaining lodger will also have to go. Prior to a pneumonia six or seven years ago, she did charing.

Attention is drawn to this address for the fact that the L-shaped lobby one stair up is dark and unventilated and in fact at time of visit - about 2.30 p.m. a gas jet was burning therein. Off the lobby three two- and two one-apartment houses are entered. The rent of Mrs. C.'s house is fifteen shillings per month, and presumably the other two-apartment houses are let at the same sum.

13 T.D., aged 35. This patient, an advanced case, together with his wife and daughter (both of whom are also notified cases) resided in a two-apartment dwelling, sunk flat of a four-storey tenement. The ceiling of the apartment /

apartment is virtually on a level with the adjoining pavement (front of tenement), but at the back both apartments look on to the back yard and there the floor is on the ground level. However, opposite one of the apartments (kitchen) a wall obstructs the light and ventilation. Thus these apartments are back-to-back with, and below, the level of the street in front. The house is approached by a stone stair and a dark lobby off which enters a second house on the opposite side, presumably having the same arrangements. The patient (householder) has had in all about sixty weeks institutional treatment (in all on five occasions). The family have resided at present address for a year. They came from a dearer rented house to this one which is 12/6d per month as the patient "was off work" and the daughter who works in a stenographer's premises could not earn sufficient to keep things going (she earns 7/6d. per week). The wife and daughter were in receipt of parish relief while he was in the institution, and apparently the position now is that this relief is stopped unless and until he enters one of the parish hospitals on behalf of the Local Authority.[x] This he hesitates about doing. Meantime his wife receives milk and eggs on behalf of the Local Authority. At time of visit he was in bed and/

[x] The Parish Council for some time have boarded-out three younger children.

and stated that he intended starting work (now a tram conductor, formerly a van driver). He did not appear to be fit for work of a sustained nature. His wife sleeps in same bed in kitchen with patient, but the daughter sleeps in the apartment alone. Both mother and daughter have expectoration.

This is an instance where the householder is fit only for work in a farm colony, if at all. The wife and daughter, if suitably housed and fed, are capable of work apparently. Probably the best course re the three children has been taken and the problem is one of maintenance and suitable housing of the patient, his wife and daughter; or segregation of the first indefinitely, while his wife and daughter live on in this miserable sunless house. Even then, they may both eventually require active institutional treatment.

94 Mrs. C., aged 37. This patient, together with four children, resides in a two-apartment dwelling in a three-storey tenement. At time of visit the husband was in the Royal Infirmary suffering from cardiac disease. Mrs. C. stated that for some years he had worked only at intervals owing to this. Apart from that fact, the tuberculosis history of the family is of interest. Formerly, the family resided in Larkhall. One daughter, when aged six, was notified as suffering from phthisis and was treated

in Bellshill Hospital. Later she was in Lightburn Hospital (on both occasions on behalf of the Middle Ward of Lanark District Committee), and in the summer of 1914 (after removal to Glasgow) she received treatment in Bridge of Weir. At time of visit this daughter, now aged fourteen, was in one of the Glasgow Hospitals. A second daughter, aged sixteen, also a notified case is at present at home, but she also was in Bridge of Weir and now suffers from chorea. For one and a half years the family have resided in Glasgow at the present address. Two maternal aunts died from phthisis. Mrs. C.'s sputum is negative, as is also that of the daughter aged fourteen. The sputum of the daughter aged sixteen has not been examined.

The rent of the house is 15/1d per month. A son is in the army - 12/6 separation allowance: 5/- disablement benefit for husband, and 6/- from the Parish Council. For some years, as stated, the husband has been unfit for steady work. At time of visit the window of the kitchen was open to its fullest extent, but the lobby by which the house is approached is dark and has no through and through ventilation.

§ 5 Mrs. McG. This patient with her husband, two sons and two daughters resided in a two-apartment dwelling, two up in a four-storey tenement. The houses on the various /

various floors are approached by a close and a turret stair at the back. The plaster of the close, the stair, and the various lobbies both at this address and in the close adjoining, was in very bad repair, and the lighting of the lobbies 1 and 2 up very defective. Mrs. McG. had recently been supplied with a bed by the Local Authority. Her phthisis history is a long one dating back to 1901 when she had haemoptysis and was in the Royal Infirmary for six weeks. Again she had haemoptysis six years ago and was in the same institution for one week, being thereupon transferred to Stobhill where she was under treatment for three weeks. In 1915 she was for one month in Barnhill.

The rent of the house is 15/1d per month. Husband is a milling machine-man; the elder son and daughter are also at work, but the former will probably be called up for military service. The house was not in a cleanly condition at time of visit, but was an improvement upon the dark, ill-ventilated, badly repaired (plaster) lobbies and stair.

94 H.A., aged 43. Patient with his wife and two sons occupied a two-apartment house in a four-storey tenement. The family has resided in this dwelling for a year and removed thereto from a one-apartment house in order that /

that patient should have an apartment to sleep in alone. The Local Authority have supplied a bed and at time of visit, the window of this room was open one foot. Two years ago he was in Bellefield for four months and was in Ruchill for four months. Originally he was a "Wire drawer" but since the onset of his illness, he has worked as a Corporation employee and at present is painting railings in the public parks. Tubercle bacilli have been discovered in his sputum: patient uses a flask into which he puts a little water each time it is cleansed. He asserted that only sometimes did he carry his flask when outside as "he has only occasional spit then". At time of visit, patient was off work owing to intercostal herpes.

This case is referred to as one where the Local Authority have loaned a bed and assisted the patient in segregation and probably also with suitable employment.

(57) A. McK., aged 40. Patient, her mother aged seventy-nine, sister aged thirty-four, and niece aged four, reside in a two-apartment house, three up in a fire-storey tenement. Patient has been provided by the Local Authority with a bed, mattress, sheets and one pair blankets, and she sleeps alone in the apartment. At time of visit the window of this apartment was open one foot (weather - practically no wind) but it was observed that one cord of the /

the lower sash was broken. Patient was in Stobhill for about a year two and a half years ago and again in 1914 for five months. She is able to attend to the house, and in fact, at time of visit, arrived on completion of a message and did not seem upset after climbing the three stairs. Her sister is at work and a brother contributes allowance to his mother. Rent 3/4d per week. Prior to onset, patient was in domestic service. She expectorates into a special vessel - lately she has not come to the dispensary for a supply of disinfectant.

The case is mentioned as one where, with the assistance of a bed from the Local Authority, the patient is able to carry out treatment at home.

58 J. O'P, aged 30. This patient is of some interest owing to the long history of his illness. He entered the naval service fourteen years ago where he served for seven years - principally in the tropics. In 1909 he was admitted to a Naval Hospital with chest symptoms and was then discharged from the Navy. For a year thereafter he served in the merchant service when his symptoms became pronounced. For six months during 1910 he was in Stobhill and again for five months in Shieldhall during 1915. Prior to admission to the latter he had had very severe haemoptysis. In the intervals of his hospital life, he resided

with /

with two brothers who were at work, he attending to the house. One of these joined the army and since them, patient and the remaining brother have been in lodgings at various addresses. Ultimately they came to reside with their present landlady. Two months ago she and her family removed to the present three-apartment house. In order to better patient's accommodation, the Local Authority have supplied patient with a bed, but a son of the landlady, aged sixteen, shares the apartment which rather detracts from the value of the arrangement. The inmates of the house are landlady, her son and daughter aged sixteen and fifteen; a lodger aged sixteen, and patient's brother of the same age. Patient is in receipt of the Lanfine pension - twelve shillings per month. Now patient is fit only to get about a little. He uses a sputum flask - no disinfectant. Tubercle bacilli have been demonstrated in his sputum.

99 M.F., aged 18. Two apartment house in a three-storey tenement occupied by patient and six others. She sleeps in bed to self - parents in same apartment. She expectorates into "sink or flask". Her father is a labourer in Parkhead forge and the family are moderately well off. Patient was in Ruchill for nine months and "medically discharged", 10th July, 1915. At time of visit, she /

she looked thin and anaemic and a brother had suspected pleurisy. She is in receipt of an allowance of milk and eggs on behalf of the Local Authority. When notified (29th May, 1911) this was an early case, but now there are signs of cavity. " To occupation " patient served as assistant in a hairdresser's shop. At time of visit, the house was clean but not tidy.

Here we have a case where after nine months' institutional treatment, domiciliary treatment is being given. " The arrangements re bed " cannot be taken exception to as long as the family and house preserve their present proportions. There could, however, be some improvement in the method of disposal of sputum and in the tidiness of the house.

/// Mrs. McK., aged 22. House one-apartment two up, four-storey tenement. Patient was in the Local Authority's hospital for six weeks and came home of her own accord as "the cup of tea in the morning had been stopped and the food generally was curtailed". The occupants of the house are the husband, a son aged three, and patient. The husband is employed in the chemical works and it was remarked that he had been very much annoyed at his wife for coming home. She has been supplied with a bed by the Local /

Local Authority on which she sleeps alone. At time of visit patient was sitting at the fireside: the window being open one and a half feet. She complained of deafness there is said to be some ear discharge. This appeared to be an advanced case. On inquiring whether medical advice had been sought re the deafness, it was explained that meantime she had no medical attendant.

Patient expectorates into a "chamber" or flask containing disinfectant - lysol. "Many" tubercle bacilli were found on examination. She gives a history of "pleurisy" two years ago.

The case is cited as another instance where a patient voluntarily returned from hospital to unsuitable home conditions.

Mrs. F., aged 27. Patient, her mother, two daughters, aged five, and ten years, and illegitimate son aged one and a half years, reside in a two-apartment house, two up in a four-storey tenement. Patient recently returned from hospital, where she was under treatment for eight weeks, as "she thought the children were not being "properly attended to in her absence". The health visitor's opinion was that these fears were groundless. She sleeps in an open recess bed in the kitchen with her mother, and the son occupies a small bed in the centre of the kitchen.

Her /

Her husband died from phthisis four years ago. The window was open nine inches at time of visit. The plaster of the stair and walls of the close is broken in parts and on the ground floor 1st right there is a badly lit T-shaped lobby. The patient had copious purulent sputum. At time of visit there was about four ounces of sputum on a double sheet of newspaper lying on the floor at the bedside and the leg of a chair was in contact with the sputum. This and similar accumulations of sputum were supposed to be cremated. The patient explained that she had been advised by her practitioner (parish medical officer) to spit into paper and cremate it. The above appeared to be her interpretation of the injunction. The patient stated that at first she used a jar with disinfectant.

The rent of the house is nine shillings per month. Parish relief 9/- per week, and 7/6d. a week obtained for illegitimate son.

Here is a patient who, although practically confined to bed, came out of hospital of her own accord. Her apartment was kept fairly well flushed with air, but nothing less than segregation in one of the apartments could be considered satisfactory. Presumably the method of disposal of sputum has now been rectified. In discussing the occurrence with the medical officer of health, he indicated that as far as supervision by the Local Authority's /

Authority's staff was concerned, he considered that they were not officially relieved by the parish medical officer, and that the latter visited in such cases merely in connection with the granting of parish relief.

102. Mrs. A. McC., aged 33. Two-apartment house, second floor, four-storey back tenement. Inmates - patient, husband, son aged eight, and daughter aged six years. Patient shares a half-open recess bed in kitchen with husband. The window, of double hung sash type, was open one foot at time of visit. Patient was born in Glasgow but when a child the family removed to Aberdeen. There she was in farm service and returned to Glasgow, fifteen years ago. This is mentioned as she stated that "when she came to Glasgow and was married, the housing she then experienced was in sharp contrast to that to which people of the same class were accustomed in Aberdeen". Her husband is a labourer and presumably at marriage rented the usual type of house frequented by that class. Towards the end of 1915, patient was admitted to the Local Authority's hospital, but voluntarily returned "as she was anxious about the welfare of her family". She asserted that during her absence, her husband felt the strain of cooking for himself and family. She also stated that she could have arranged for some one to attend to these matters but that /

that he did not like the idea. Patient looks a bit worn out and stated she would appreciate further treatment.

103 D.C., aged 48. Patient with his wife, five sons and two daughters, resides in a two-apartment dwelling in a four-storey tenement. He has a bed in one apartment for his own use, and the elder sons are accommodated in a second bed in same apartment. At time of visit the window was open six inches, but although the apartment was fairly clean, there was a marked element of cheerlessness about it. He was in bed at time of visit, but is occasionally able for a day's work - labourer in the shipyards. Originally he was employed in a wood factory (at the circular saw). He attends the dispensary fairly regularly. A son aged two years is a notified (peritonitis) case but has improved much in health. Patient was admitted to the Local Authority's hospital but complained of the food, and remained under treatment for six weeks only. Tubercle bacilli are present in his sputum - he spits into flask - no disinfectant meantime as "could not obtain any at last visit to dispensary".

The rent of the house is 17/9 per month. The family receive 16/- per week from the parish council and patient is irregularly at work. Whether a longer period of residence in the institution would have restored him to his /

his former working capacity is unknown, but this is another instance of the type of patient who prefers his more or less comfortless home quarters to the cleaner and more cheerful surroundings of an institution.

/04 M.McM., aged 19. This patient, notified in May, 1915, occupies with her mother a two-apartment house in a four-storey tenement. She sleeps in same bed with her mother. For fifteen months they have occupied this dwelling, but prior to that and from the time the father died two and a half years ago, the family resided in a sub-let. A brother is in the army - reported "missing" - mother in receipt of separation allowance. The mother also does cnaring, and patient receives insurance benefit. Previously the latter worked in a printing works. She was in the Local Authority's hospital for five and a half months and left "own accord" much improved and hopes to start work soon again. At time of visit, - 11 a.m. - she was in bed and did not look fit for much work. The rent of the house is fifteen shillings per month and if the income is as stated, there must be much difficulty in giving her proper nourishment; yet the patient of her own accord returned from hospital. She take precautions with her sputum.

M.M. /

105 M.M., aged 16. House is one of two apartments, in a four-storey tenement. Patient returned from Ruchill "own request" in August 1915, after three months' treatment. At time of visit, she slept in open recess bed in kitchen with mother and youngest sister (aged two years) - this has been the arrangement "since the cold weather began". Previously she slept on a couch in the apartment alone. The occupants of the house in addition to patient are the parents and a younger brother and sister. The mother suffers from lupus of the nose. Patient, who is stated to have very little sputum, is an early case, but is somewhat hoarse. She expectorates into the sink. The father is a steel smelter and the family are supposed to be "fairly comfortably well off." This patient's dislike to a couch is not unique and one can quite understand it in cold weather. It seems unfortunate that she returned from hospital to such conditions at her own request.

106 J. McB., aged 55. Patient resides in a two-apartment dwelling, ground floor, four-storey tenement, approached by door in close. Patient sleeps in bed (open recess) in kitchen with his wife. Two adult daughters sleep in the apartment. For twenty-five years patient has been a steel grinder to occupation. At date of visit he /

he was expecting to be admitted to hospital. "Many" tubercle bacilli were found in his sputum at one examination. His method of disposing of it was to use a vessel (open) containing dry sawdust. The latter was cremated daily. The sputum was copious.

For some time patient refused to go to hospital. Shortly after visit he was admitted, but remained there only a few days, returning voluntarily to the old unsatisfactory conditions.

107 W.S., aged 58. This patient resides with his married daughter, her husband and two of a family in a two-apartment dwelling in a four-storey tenement. One of the apartments is reserved for the patient's own use. At time of visit he was practically confined to bed and was waiting on a bed in hospital - his daughter seemed very anxious that he should go as she felt the strain of attending to him, and also appreciated possible danger to her family. He was admitted to the Local Authority's hospital on the day following the visit, but came out three days later. The house was scrupulously clean and well looked after. Tubercle bacilli were present in his sputum. He expectorated into a pail or chamber containing disinfectant.

Originally in business for himself - tailor's cutter /

cutter - he had had to give that up owing to illness - onset about three years ago, and has resided with his married daughter, whose husband is a labourer, for two and a half years. As stated, patient was admitted to hospital, but remained there three days only.

This is another instance demonstrating the unwillingness of a patient to submit to institutional treatment, even to benefit those upon whom he is dependent.

/18 M.D., aged 34. For some weeks patient has resided in his brother's house - one of two apartments in a fairly new four-storey tenement. His brother (with wife and three of a young family) have given patient the sole use of one apartment. Patient was in Lanfine Home for several months on behalf of the Local Authority, and returned at his own request to this address seven weeks ago. Previously he was a porter on the railway (carriage cleaning) and has not yet re-started work. He expectorates into a flask containing disinfectant and carries this on his person when out of doors. The sputum is positive.

At time of visit his brother's wife was interviewed. She seemed very anxious about the safety of her children, as the patient could not be induced to reserve cutlery and dishes for his own use and would not sterilise those /

those he did use. He attends the dispensary regularly.

This case demonstrates how a patient much favoured by relatives yet will not exert himself to do all that is needful in the way of precautionary methods, in spite of the fact that he had had several months' training in an institution.

Mrs. McI., This patient with a son aged sixteen, and two daughters, aged fifteen and thirteen, resides in a two-apartment house, ground floor of a four-storey tenement. Seven years ago her husband died from phthisis and patient had nursed him. She sleeps with a daughter in open recess bed in kitchen, the apartment being reserved for the son's use. At time of visit the kitchen window was open six inches. The house was scrupulously clean and decorated with several vases of home-made artificial flowers - the patient and her daughters make these, but not for sale. Patient states that now she has no sputum. The elder daughter is a semi-invalid with "rheumatism and heart". The son is now at work, but since her husband died she has subsisted on parish relief (she now gets sixteen shillings) and the charity of church agencies. The rent is 13/7d per month and the family have occupied the present house for two years. The health visitor stated that /

that the house was always clean, tidy, and cheerful looking.

Reference is made to this case as it appears to be an instance where parochial relief has been put to good purpose, and the appearance of things is much superior to what one generally finds in the average household which ranks for parochial relief in the larger towns.

110 S. McN. Patient with her father and niece resides in a two-apartment dwelling, top floor of a five storey tenement. She sleeps in open recess bed in kitchen - father and niece in other apartment. Patient is practically confined to bed, seems very ill and is waiting on a bed in the Local Authority's hospital. Meantime her mother is in the Royal Infirmary with "pleurisy". In 1915, patient was in Bellefield for three months returning in November. Now, as atated, she seems very ill. At time of visit the window was open nine inches. One interesting event in the history of this case is the fact that when employed in a book binding factory, a fellow workgirl, who had a bad cough and spit, was employed at a machine in close proximity to which patient frequently came in the course of her work. For two weeks at least this patient worked there, and her fellow employee expectorated "often" into a box of paper shavings. ~~Which~~ were removed once a day. Patient considers these circumstances to be the source of her infection.

E.M. /

111 E.M., aged 17. House three apartments, top floor, four-storey tenement. Inmates - mother, sisters, nineteen, eleven, two and a half, and nine months; brothers, fourteen, nine and five. Father was off work for about eighteen months with "tumour of bowel"; four months ago family removed from a two-apartment house to give him better accommodation. He died a month thereafter. Rent 24/6d. per month. Patient, who previously worked as a milk girl, entered a munitions work (tinsmiths). On three or four days per week her hours were 6 a.m. - 9 p.m. - other days 6 a.m. - 6 p.m., with breakfast, dinner and tea hours off. She earned 13/6d. per week. The elder sister is at the same work - testing air tightness of service tin vessels. Without overtime the wages were 8/- per week. At onset of patient's illness, she was admitted to the Parish Council hospital where the existence of phthisis was discovered, and was discharged three weeks ago. Now she is waiting on a bed in one of the Local Authority's hospitals. Her elder sister - at work - is said to be "anaemic." Patient, this sister, and a younger sister, sleep in the same bed. The parish grant some assistance.

The case is referred to principally to shew the hours worked by those who are keep to do overtime in order to /

to increase their wages (in this instance in order to support the family). 13/6d. does seem a grossly inadequate wage for these hours.

112 Mrs. B., aged 39. Patient and her family consisting of five daughters (eldest seventeen) and son aged four, reside in a two-apartment house, top floor in a four-storey tenement. The patient sleeps in open recess bed in the kitchen with three children. At time of visit the house was clean, but the window was closed. Her husband died from phthisis and the parish council grant nineteen shillings per week. The elder daughter is now earning ten shillings per week. The patient was offered institutional treatment but was unable to accept same "owing to family responsibilities". She attends the dispensary regularly. Her sputum has been examined twice with negative result. She expectorates into paper, which is cremated, or into the sink.

This case is mentioned as one where a patient feels that household ties are too great to enable her to partake of the benefits of institutional treatment.

113 Mrs. G., aged 40. Patient with husband, daughter and four sons resides in a two-apartment house in a four-storey /

storey tenement. She sleeps in open recess bed in kitchen with husband. The latter is in the employment of the Local Authority. The house was clean at time of visit and the window open half. This patient, whose sputum is positive, has been in hospital on two occasions. On the first she returned home of her own request: the second time she returned in October 1915, after three weeks' residence, "owing to the illness of a child who recently died from 'meningitis'". At time of visit patient was able for household duties. She expectorates into paper or rag which are then cremated. She attends the dispensary regularly - stage II. This is another example of the mother who has had to sacrifice institutional treatment for household duties.

//4 Mrs. A., aged 36. This patient resides with her husband and two daughters, aged eleven and nine (a daughter aged fifteen months sleeps in a neighbour's house, but was present at time of visit) in a one-apartment dwelling top floor of a four-storey tenement. She was notified only eight days before visit, and arrangements had been made for institutional treatment. Patient had pleurisy three years ago, and later, acute symptoms of phthisis appear to have become pronounced. Prior to marriage she was in domestic

service /

service. There is only one (open recess) bed in the apartment in which she, her husband, and two daughters sleep. The house - scanty furniture - was clean at time of visit. This cleanliness was due to the exertions of neighbours. The window was closed, one cord of top sash being broken. At time of visit patient requested that it be opened. The rent of the house was 13/7d. per month - for three years family has occupied this one-apartment house. Husband is a labourer in the iron works.

It is anticipated that patient will be immediately removed to hospital for segregation. The proper time to have given treatment to such a case as this was at the onset of the pleurisy, yet according to information obtained, she had been attended by a medical practitioner for a year prior to being notified.

115 H.M., aged 36. Patient and his parents reside in a one-apartment dwelling two up in a four-storey tenement. He has a folding down bed for his own use. The family has occupied this house for two years. Before that they rented a house of two-apartments, and it was "owing to patient" that removal to a lower rented house was undertaken. The father is a shoemaker, and patient, prior to the onset of symptoms, followed the same occupation. Now the /

the latter is a labourer.

Here we have an instance apparently of reduced income, through illness of a son, leading to inferior housing accommodation.

116 W.McN, aged 15. Patient resides with his parents and sister in a two-apartment house in a four-storey tenement. He has an apartment for his own use; and in fact the family removed from a one-apartment house to give him this accommodation. He was notified in 1913, but for some years prior thereto suffered from a tuberculous knee, which is now cured. On examination, his sputum was found to be positive: he expectorates into pieces of paper which are cremated - or into the sink. His mother asserted, however, that he had sputum "only in the morning".

The case is mentioned as one where the family removed from a one- to a two-apartment house to give the patient better accommodation.

117 J.M., aged 32. This patient has an apartment reserved for his own use. His room possesses two double hung sash windows, both of which were closed at time of visit. His wife, in addition to attending to the house, the patient and four children, earns £1 per week in a chocolate /

chocolate factory. The house is kept very clean and orderly and according to the health visitor, she is a very capable person. The health visitor obtained for him the Lanfine pension - 12/- per month. Meantime, he is confined to bed and has very copious sputum - many tubercle bacilli present. He expectorates into a mug with disinfectant. Two years ago patient was for four months in the Local Authority's hospital and later was re-admitted but remained only five weeks. He states that he has had a "bad chest" since he was fourteen years of age.

Reference is made to the case as demonstrating the manner in which his wife appears to be successfully endeavouring to attend to household affairs with one hand, while earning one pound per week with the other.

PART III.

Summary Statement of Home Conditions in an Industrial Parish in Lanark County of Patients who were suffering from Tuberculosis in its pulmonary or non-pulmonary form.

In the early part of 1914, visits were made to the homes in one of the more industrial parishes in Lanark County of all known notified cases of tuberculosis. It was intended later to similarly visit every notified case in given areas typical of the general home circumstances of tuberculosis patients in Scotland, but owing to the depletion of the Local Authorities' medical and other staffs due to the war, this, so far, has not been possible.

For convenience of description, the homes are divided into A. those in which the patient was suffering from pulmonary tuberculosis, B. from tuberculosis of the non-pulmonary form, and C. those where the patient was in an institution at date of visit.

A. Homes in which the patient suffered from pulmonary tuberculosis:-

(a) One apartment	("Open" cases		6
	("Closed" cases	("open" when notified	5
		(Not "open" when notified	2

(b)/

(b) Two apartments	"Open" cases		5
	"Closed" cases	"Open" when notified	7
		Not "open" when notified	10(+2)*
(c) Three or more apartments	"Open cases		7
	"Closed" cases	"Open" when notified	2
		Not "open" when notified	2

(a) Patients residing in one-apartment houses (Total 13):-

Looking at the environmental conditions of the patients in detail it was found at time of visit that of the 6 "open" cases one, a child, had a cot for his own use and one, an adult male, occupied the house alone; in the others, the bed was occupied by one or more of the remaining inmates of the household.

Of the "Closed" cases two (sons of the householders) had a bed for their own use.

With reference to the cleanliness and ventilation of the house the following shows these conditions as found at time of visit:-

House clean, window open 6" or more	4
" " " " less than 6"	2
" " " closed	2

* Three cases in one house.

House not clean, window open 6" or more 2

" " " " " less than 6" 2

" " " " closed 1

In three of the "open" cases a pocket sputum flask was used by the patient, but only one of these carried same on his person when outside. One patient expectorated into an ordinary saucer: one used a "mug": one thought she had no sputum but probably swallowed what little there was. Three of the "closed" cases made use of a sputum flask, while in the house: three were reported to have no sputum: and one used pieces of paper which were cremated.

As regards previous treatment (and assumed training in preventive methods) of these thirteen patients, the following shows this:-

(1) "Open" cases:-

1 patient had been 1-2 months in the L.A's. hospital - (1911-12

2 patients had been 3-4 months in the L.A's. hospital - (1912 one case. (1912-3 one case.

1 patient had been on 4 occasions in the L.A's. hospital - (first in 1909 (last in 1912.

1 patient had been seven months in the L.A's. hospital - (two occasions (1911 & 1912.

1 patient had not been in hospital (adult female refused offer).

(2) /

(b) "Closed" cases:-

1 patient had been nearly a year in L.A's. hospital	-	(four occasions)
2 patients had been 1-2 months in L.A's. hospital	-	(one case in 1913 (one case in 1912.
1 patient had been 2-3 months in L.A's. hospital	-	(in 1912.
1 patient had been 3-4 months in L.A's. hospital	-	(in 1912.
*2 patients had been less than a month in L.A's. hospital	-	(one only three (days.

* In one of these the patient, who was admitted in 1908, left after five days' residence as he "could not get laudanum".

Looking at the patients' conditions more from the sociological point of view it was noted that the rents of the houses varied from 2/- (inclusive) to 2/8d per week. Most were paid every four weeks; one was paid quarterly and one annually. In the last-mentioned the rent was £7 not including rates, and there was a small scullery attached.

As regards income, etc., and considering first the six "open" cases, two were the principal breadwinners, one of these being employed as an attendant in a public house; the other was a hammersman who had been steadily at work since his discharge from the Local Authority's hospital /

hospital over two years prior to visit. Of the remaining four, one, originally a miner, was able only for a light job at 16/- per week; a son was in full employment as a miner; and a daughter earned 8/-. According to this patient's statement he and his family had been compelled owing to his illness to move from a two-into the present one-apartment house as he was unable to afford the higher rent. In the former house his wife and one daughter had died from phthisis (one six, the other four years, prior to visit). At the time of visit, a daughter and a son were supposed to be infected, and an offer to treat the former institutionally had been refused as "she had to keep house". Altogether the family consisted of the father, two sons, and two daughters. At time of visit an odour of drink could be felt, and patient admitted that "so long as he had money he would drink". It was obvious that something more than diminished earnings due to illness kept this family tied down to a one-apartment house. In a second instance, the patient, was a son of the householder, was aged ten years, [illegible] father was able only for occasional work as a miner owing to an affection of the eyes. The family consisted of the parents, three younger brothers and two sisters. In a third instance the wife of the householder was the patient, and the latter was addicted to occasional /

occasional drinking bouts. The fourth patient was the wife of the [redacted] householder and had been notified as far back as 1908. She refused several offers by the Local Authority to undergo institutional treatment. Since notification, two children had been born (one on morning of visit). The family, consisting of parents, one daughter, two sons, and two step-daughters, had resided in this one-apartment house for three years. At that time they removed from a house of two apartments (due to coal strike). At time of visit the husband was at full work, but whether he had exerted himself to obtain better home conditions for his family and invalid wife (who had just been confined) could not be determined.

Of the seven "closed" cases, in one, the patient (previously a miner and unable to follow this occupation) has a wife and four young children. There is every likelihood that if some suitable employment could be obtained, he could work at that. At time of visit the Parish Council granted 17/- per week. This family had removed from a three- to the present one-apartment house owing to loss of income from illness. In a second instance the patient was a son, aged 16, of the house holder, who had "recovered" from a pleuritic attack and was a pony driver (coal mine). The /

The father (amputated leg) had had 10/- parish relief for over ten years, and the mother did charring occasionally. For twelve years this family had occupied a one-apartment house and had intended removing to one of two apartments, but so far has not been able to meet the additional rent. In a third instance the patient, a son, aged nineteen, notified three years previously, was at work at time of visit. The father since 1904 has been continuously on the parish roll. He had not been notified, but suffered from "chronic cough". For over ten years this family has occupied a one-apartment house. In a fourth instance the patient was the householder, and with his wife and three of a family for ten years had occupied a one-apartment house. For several years he had not been at work (he consumed 6d. worth of laudanum per diem) and received 12/-per week from the parish. A son aged fourteen earned on an average 8/6. It was the opinion of the tuberculosis officer that the opium habit was more responsible for the incapacity to work (with consequent poverty) than the phthisical condition. In the remaining three instances, the patient was the wife of the householder and, at time of visit, attended to domestic duties. The husband was in full employment, and no satisfactory explanation was forthcoming why an effort had not been made by him to provide better accommodation. In one instance the family had been for eight years in a

one /

one-apartment house.

(b). Patients residing in houses of two apartments (total 22, see (b) table p.117). Looking at the environmental conditions of the patients in detail it was found at time of visit that of the five "open" cases, one slept in an apartment alone; one had a bed for his sole use, two lodgers also sleeping in a separate bed in same apartment; in three instances, the patient slept in same bed with spouse - other members of the family sleeping in same apartment. In one of the last-mentioned the remaining apartment was unoccupied, it being stated that "they could not afford to obtain the necessary furniture".

Of the "closed" cases, seven slept in a bed alone (in all of these other inmates shared the same apartment); the remainder shared a bed with one or more members of the family, and in three of these the second apartment was reserved for the use of one or more "lodgers", the accommodation for the family being thereby virtually reduced to the level of a one-apartment house.

As regards the cleanliness and ventilation of the dwellings the following shows these conditions as found at time /

time of visit.

House clean, window open 6" or more	6
" " " " less than 6"	5
" " " closed	3
House not clean, window open 6"	1
" " " " " less than 6"	1
" " " " closed	6

The weather at time of visit was not specially unfavourable.

In four of the "open" cases a pocket sputum flask was used by the patient (two carried same on their person when outside) and one patient expectorated into a vessel or on to a piece of rag which was burned. Fourteen of the "closed" cases were reported to have no sputum; three used a sputum flask; one expectorated into the fire direct, and one into paper which was burned.

As regards previous institutional treatment (and assumed training in preventive methods) of these twenty-three patients, the following shows this:-

(1) "Open" cases:-

2 patients had been 1-2 months in the L.A's. hospital	-	(1913-4 and (1913.
1 patient had been 2-3 months in the L.A's. hospital	-	1913
1 patient had been 3-4 months in the L.A's. hospital	-	(1909 and (1913.
1 patient had been 5-6 months in the L.A's. hospital	-	(1909 and (1913.

(2) "Closed" cases:-

4 patients had not been in the L.A's. hospital.		
5 patients had been 2-3 months in the L.A's. hospital	-	one on two occasions.
3 patients had been 3-4 months in the L.A's. hospital	-	two on two occasions
2 patients had been 4-5 months in L.A's. hospital		
1 patient had been 5-6 months in L.A's. hospital		
1 patient had been 6-7 months in L.A's. hospital		
1 patient had been 10 months in L.A's. hospital	-	four occasions also four months in another sanatorium.

It will thus be observed that only in four instances had institutional treatment not been taken advantage of by the patients.

Considering now these patients' conditions more from the sociological point of view it was noted that the rents /

rents of the two apartment houses visited varied from 2/9 (inclusive) per week to £13 per annum (5/- per week). The majority were paid weekly or monthly.

As regards income, and examining first the five "open" cases, in three the patient was the householder (paternal parent), and two were wives of the householder. Of the former, one patient was in receipt of compensation under the Workmen's Compensation Act which dated to a period prior to the onset of his phthisis, and a daughter earned 10/- per week. In another instance the patient was at work at the pit head, his wife used one of the apartments as a small shop and two lodgers were also boarded in the house: in the third the patient was unfit for work owing to his illness, a son aged twenty-three, "paid for his board", and the parish council granted 15/- per week (patient, wife and three young daughters). The last-mentioned patient slept in one of the apartments, alone.

Of the families in which the patient was classified as not "open": in one, a daughter, aged seven was also notified. Her father had recently died from phthisis, leaving destitute the mother, two brothers and three sisters The Parish Council granted the family 16/- per week and an uncle was accommodated as a "lodger". The daughter patient, presumably a pre-tubercular case, was at school at time /

time of visit and supposed to be well. In a second family the notified case was a daughter aged fifteen who was at work at the pithead. The father suffered from "bronchitis and asthma" and the parish granted him 8/- per week. In the house was accommodated a widowed sister, together with four of her family. This sister and her family received 10/- parish relief -; the deceased husband had been "delicate" prior to marriage. A second widowed sister also resided in the house who occasionally did a day's work earning about 4/- per week. In a third instance the patient, a miner, was the bread-winner. At the commencement of his illness (eighteen months prior to visit) he had been off work for about four months, ten weeks of which he spent in the Local Authority's institution. He was able to resume work of a lighter nature without suffering any depreciation in wages. In a fourth instance the patient lodged with a family who "took an interest" in him. He had been able to resume his former occupation as a miner. A fifth patient, a male aged twentyfive (dependant on his father) notified in 1907 and who had been for varying periods in four of the Local Authority's hospitals and also for four months in a sanatorium outwith the purview of the Local Authority, had endeavoured in the intervals to work at tasks lighter than his original employment (miner). In this /

this he had met with little success. In temperament he was impatient, and it could not be claimed of him that he had taken full advantage of the institutional treatment granted. In another family, two children had been notified and a third was discovered at visits by the tuberculosis officer. When notified these children were removed to the Local Authority's tuberculosis wards as the mother was dying at home from phthisis. At time of visit (about a year after the mother's death) the household affairs were looked after by an aunt who with her husband lodged in the house. In the remaining households the patient was a dependant (including four wives) of the bread-winner and concerning them no special comment is called for under this heading.

Patients resident, at time of visit, in three or more apartment dwellings (total 11, see[(c)] table p.117). The following shows previous institutional treatment undertaken on behalf of these patients.

1 patient had had 1½ weeks institutional treatment
3 patients " " 2-3 " " "
2 " " " 3-4 months " "
1 patient " " 4-5 months " "
2 patients " " 6-7 months " " - 1 occasion.
2 " " not been treated in an institution.

From /

From this it will be observed that in two instances only had no institutional treatment been undertaken.

Concerning the environmental conditions of the patients it was found that of the seven "open" cases, five had an apartment for their sole use, one slept same bed with spouse and one had a bed for his sole use, two lodgers also being accommodated in his apartment.

Of the four "closed" cases, one had an apartment for his own use, a second patient's room was occupied during the day by his father who was on the "night shift". Two patients slept same bed as spouse.

As regards the cleanliness and ventilation of the dwellings the following shows these conditions as found at time of visit:-

House clean, window open 6" or more	2
" " " " less than 6"	4
" " " closed	3
House not clean, window open less than 6"	1
House not clean, window closed	1

As regards method of disposal of sputum, some soiling of the floor in one case was found at time of visit. The patient, a Pole, resident in a four-apartment house, was in an advanced stage of the disease and had refused institutional treatment. One patient, said to have little sputum /

sputum, expectorated into the fire direct; one used a bedroom chamber; three used a sputum flask, (when outside one of these carried the same on his person); and one expectorated into paper which was cremated. In one instance the method of disposal was not determined.

From the sociological point of view, it was noted that one patient was the sole support of an aged mother. He was a miner prior to the onset of his illness (beginning of 1912), and on three occasions had had institutional treatment (total six months). In the intervals he worked as a "checker", and was so employed at time of visit. He attended the dispensary, but his capacity for continuing work was doubtful. A second patient (a Pole) was the householder who was himself unfit for work. The house was of three apartments and in it were accommodated his wife, a married brother and three lodgers, (Poles). A third patient had met with an accident about a year prior to the onset of his phthisis and was in receipt of compensation under the Workmen's Compensation Act. A son was employed as a miner. In a fourth instance the patient, an ex-insured person and a son of the householder, was aged sixteen. He was notified a year prior to visit and at that time received institutional treatment. However, he had remained only about two weeks in the institution. He had not worked since. He had an apartment for his own use and was reported /

reported as having no sputum. His father was an Old Age Pensioner; his mother received 3/- and he himself 5/- from the parish. Two brothers at work as farm servants also contributed to the upkeep of the household, which probably explains the comparatively good home conditions of this patient. In the remaining instances the patient was a dependant, and from this point of view, the circumstances call for no special comment.

In addition to the above, one patient, reported to have good home conditions, was not visited.

B. Non-Pulmonary Tuberculosis. - Seven visits were made to houses in which the patient suffered from non-pulmonary tuberculosis. Six of the dwellings were of two apartments and one was of three apartments. The following is a brief summary of the conditions found at time of visit:-

(1). A mother, (a Pole family thirteen years in Scotland) had tuberculous sinuses on hand, neck, shoulder and arm (onset eighteen months prior to visit). These were dressed daily by the district nurse - patient previously had been five weeks in Local Authority's tuberculosis wards. Two daughters, aged twelve and eight, had also undergone institutional treatment - one for tubercular peritonitis, the other for pre-tuberculous symptoms. At time of visit the former was well, the latter still had a slight cough.

(2). A male, aged 36, suffered from hip joint disease /

disease with sinus. On two occasions he had been in the Local Authority's tuberculosis wards. The onset of the condition was towards the end of 1912. He was in receipt of compensation under the Workmen's Compensation Act, and his wife worked occasionally. The family consisted of patient, his wife and two children.

(3). A male, aged 9, abdominal tuberculosis. Shortly after notification this patient had had eight months' treatment in the Local Authority's tuberculosis wards. His parents removed from a one- to a two-apartment dwelling so that he might have better accommodation, and for some time this ideal was acted up to. At time of visit, however, the house was not in a cleanly condition and the second apartment was not in use - apparently instruction previously learned had been forgotten by lapse of time. The improvement in the patient's condition is therefore likely to be jeopardised.

(4). A female, aged 10, wrist joint case with sinus. Shortly after notification this patient was treated for a time in the Local Authority's Hospital and thereafter operated upon in a local cottage hospital. At time of visit the sinus was still discharging but she was able to attend school. Two years previously a brother had died from "phthisis and bladder" tuberculosis.

(5) /

(5) Female, aged 17. A case of spinal tuberculosis without abscess. She was notified in 1910 and at that time was for three months in one of the Local Authority's tuberculosis hospital wards. Her father died from phthisis some years ago. At time of visit the patient was not at work (for some time she had been at work at the pit head) and was sitting at the kitchen fire. The house was not in a cleanly condition. The family (patient, mother, brother aged twelve, step-father and step-sister aged five) occupied said kitchen and the second apartment was reserved for a lodger. From the conditions as described, it may be inferred that they are not conducive to that preservation of health which is essential to prevent a recurrence of the disease.

(6). Female aged 10, - a suppurating cervical adenitis case, now healed. In this case the parents had sent the child to friends in a rural district in Ireland. After a sojourn of some months there, the sinus healed. At time of visit the parents appeared to take an interest in her health.

(7) Female aged 18 - tuberculous sinus of foot. Patient, an insured person, was in domestic service at time of onset of disease. For a period of about eight months (two occasions) she was in the Local Authority's tuberculosis /

tuberculosis wards. The family - parents, patient and five other members - removed from a two- to a three- apartment house in order to give her better sleeping accommodation. Financially that arrangement was possible, her father and two brothers being in full employment.

C. Visits to homes of patients (pulmonary cases) who, at the time were undergoing institutional treatment. Three such were visited. The first, was of two apartments, the room facing the street being used as a small shop. Some five and a half years previous to visit, patient had been for four months in a sanatorium. He paid his own expenses and thus depleted his savings. At that time he resided in a Burgh on the East Coast of Scotland and was earning fairly good wages as a lace worker. About a year later he had an additional three months' treatment in a sanatorium. Thereafter he was unfit for his occupation and latterly depended upon his wife's efforts as a shopkeeper. At time of visit, he was in one of the Local Authority's institutions on their behalf.

The second home was a single apartment. The family consisted of patient's wife and four young children. Notified in 1911, the patient, aged 31, a miner, was treated in one of the Local Authority's institutions that year, again in 1912, and on two occasions in 1913. Between these/

these occasions he had been able to follow his occupation. Recently, however, he had been confined to bed, was nursed by his wife and maintained by the parish. Three weeks prior to visit he was re-admitted to one of the Local Authority's institutions. Patient's youngest child was nine months old, and was thus born and nurtured under most unfavourable circumstances.

These histories are typical of the tragedy which follows a patient and his family when the bread winner suffers from this disease, especially in a chronic form and of such severity as to incapacitate him from following his occupation.

The third patient was a youth, aged eighteen, who, in the previous year, had had five months' institutional treatment on behalf of an adjoining Burgh Insurance Committee. Originally a miner, he was employed in a "bar" after discharge. A fortnight prior to visit he was re-admitted to hospital as his symptoms were returning. His mother had recently died from phthisis. The house was kept in a cleanly condition and the father and a brother were in full employment.

From the above summary, it will be observed that under A, B and C, visits were made to 53 houses in this Parish; in 46 the notified cases were of the pulmonary type and /

and in 7 of the non-pulmonary. As there were three in one family in two instances, the total number of cases was 57 (48 pulmonary and 9 non-pulmonary). The population of the parish was 16,821 (census). These cases represent all notified cases which at time of visit were at home and were under the supervision of the public health staff.

Of the pulmonary cases, it will be observed from the table on pages 116-117 that 18 or 37 per cent were "open" and therefore presumably actively infective if proper precautions were not observed. From the same table it may be noted that of the 30 classed at time of visit as "not open" in 14 or 46 per cent tubercle bacilli had at some time been present in the sputum.

In the summary description of the cases given in the preceding pages one finds that in 12 instances the patient had been the principal bread-winner at time of onset of the illness. It is gratifying to observe that of these 8 had been able to resume their previous employment and 4 were at work of a modified nature. In 4 instances, however, parish relief had had to be sought for destitution apparently the direct result of illness. In 3 additional cases the patient was in receipt of compensation under the Workmen's Compensation Act for accidents prior to the onset of the pulmonary tuberculosis. Of six cases notified in children

under /

under 10 years of age, four had apparently become free from symptoms.

With reference to previous institutional treatment, it may be noted in the tables on pages 118-119; 125 and 128 that only in 7 instances (1 accommodated in a one-apartment house, 4 in a two-apartment, and 2 in a three or more apartment house) had the patients not been in an institution. Much credit is due therefore to the activities of the Local Authority and the County Insurance Committee in that direction. On the other hand, in visiting the houses of these patients one was impressed with the fact that in many instances they had returned to conditions in which it is impossible to adequately continue the good work done in the institution. Thus in the majority of those resident in one-apartment houses a higher rent to give the patient better circumstances could not be faced. On the other hand in three instances the drinking or drug habits of the patient or guardian so depleted the income of the household that there was probably no real desire to improve the conditions. In one instance, where the breadwinner was in full employment, there was no satisfactory statement as to why a larger house had not been obtained. It has to be remarked however, that in the area under review that scarcity of better-class workmen's houses, which is so frequently /

frequently found in our busy industrial centres, existed. Where such a condition is present it may be accepted as a truism that the householder whose income is crippled by the existence of disease has all the greater task, however willing, to improve his environmental circumstances.

Turning now to precautions against infection taken by the patient and his friends, one finds from the summary of the cases in the preceding pages that in one only was there evidence at time of visit of soiling of the floor by sputum. It was seen, however, that a special vessel was in use and that the occurrence was accidental. One "open" case resident in a one-apartment house expectorated into an ordinary saucer without disinfectant. She had not had the advantage of institutional training, and was a chronic case, having been under the observation of the Local Authority since 1908. In addition to the above two patients, there were twentyfive who also had sputum. Of these, sixteen used a proper sputum flask, and four of this number carried the flask on their persons when at work or otherwise absent from home. Unfortunately, it has to be confessed that the carrying of a flask is still thought to be a species of disgrace, and there is also a fear in the minds of patients that it may jeopardise their employment. In other words promiscuous expectoration in the popular /

popular imagination is a privilege, and when an attempt is made at improvement by the "conscientious" patient there is a dread of "blackmail". When by education, this habit of depositing sputum anywhere (and too often that implies everywhere) comes to be looked upon as a disgrace, we shall find all consumptives with expectoration using a portable receptacle. Until then only a small percentage are likely to do so. Taking the facts into consideration one was not surprised that in this area such a small percentage of patients made use of a sputum flask on all occasions.

Cleanliness and ventilation of the dwelling must also be classed among precautionary methods. From summaries on these points given on pages 117-118; 124-129, one sees that over 38 per cent of the one-apartment and over 36 per cent of the two-apartment houses were not in a cleanly condition. It should be explained, however, that in two instances the patient was the mother and therefore unfit to properly supervise the household affairs. In the majority, however, one felt that the health visitors and other staff of the Local Authority were faced with great difficulties in inculcating a higher standard of cleanliness. One was disappointed to find so many instances where fresh air methods were not being practised. The visits were made in the month of March and the weather was fine for that time /

time of the year. By two or three householders it was stated in explanation that the "healthy" inmates over-ruled the desire of the patient to keep the dwelling well-flushed with air: in others, neglect of what had been taught the patient in the institution or at home appeared to be the cause.

It might be added that only in connection with five houses was there a piece of ground adjoining whereon a shelter could have been erected, and in only one of these had the tenant a right to the use of said space.

Finally, it may be stated that in an area such as that described, the after-care of the phthisis patient who has not been completely restored to health is rendered very arduous firstly, by the difficultly of supplying suitable employment and thus enabling him (if the patient is the bread-winner) to properly nourish himself and his dependants; in the second place by the fact that the patient's home circumstances are seldom adaptable to the continuance of appropriate hygienic conditions; and thirdly, the patient and his friends too often neglect to carry out the precautionary methods - cleanliness and ventilation especially - which are inculcated not only in the institution, but also by visits to the homes by the public health staff.

Non-pulmonary /

Non-pulmonary cases. The description given on pages 131-134 of the conditions found does not warrant any amplification.

PART IV.

Procedure in vogue in the areas of different Local Authorities for the disinfection of premises occupied, and clothing etc. which have been used, by patients suffering from tuberculosis.

In order to obtain information as to the methods of disinfection in vogue throughout Scotland the following queries were sent to the staffs of all Local Authorities.

"Inquiry into the Method of Disinfection of Infected Clothing and Dwellings.

A. Wearing apparel, bedclothes, bedding etc. infected by persons suffering from the ordinary infectious diseases, viz:- typhoid fever, diphtheria, scarlet fever, measles, whooping-cough, chicken-pox, etc.

(1) Is it the practice to remove to one or more central stations[x] any or all of such articles for disinfection by - (a) steam; (b) gaseous disinfectants? (if so, mention kind and procedure); (c) liquid disinfectants? (if so, give details of dilutions, duration of exposure to the disinfectant etc.).

(2) If the reply to A (1) is in the negative, mention in detail the procedure adopted.

Note.- If disinfection of clothing is carried out in the home, state the name and dilution of disinfectant usually employed and the duration of exposure to the disinfectant.

[x] The name and situation of these should be stated.

(3) What measures are taken for the disinfection of the dwelling (apart from the clothing).

B. Wearing apparel, bedclothes, bedding etc. infected by patients suffering from tuberculosis. If the procedure in cases of pulmonary tuberculosis differs from that adopted in cases of non-pulmonary, please give details of the differentiation.

(1) Is it the practice to remove to one or more central stations any or all of such articles for disinfection by - (a) steam; (b) gaseous disinfectants? (if so, mention kind and procedure); (c) liquid disinfectants (if so, mention kind and dilution and duration of exposure).

(2) If the reply to B (1) is in the affirmative, state the circumstances in which such action is taken, i.e. death, removal, admission of the patient to an institution, etc. State also the method of disinfection of the dwelling in these circumstances.

(3) If the reply to B (1) is in the negative, or if all disinfection of clothing, etc. is not carried out by the methods therein stated, please mention in detail any other procedure that is adopted in dealing with the infected articles and the dwelling, giving name of disinfectant used and manner of application (dilution, duration of exposure, etc.).

C. /

C. If disinfection of dwellings or clothing is ordinarily carried out in the case of other diseases such as ophthalmia neonatorum, scabies, ringworm, cancer, etc., give details."

Replies were received from 194 Burgh and 106 County and District Local Authorities. For the purposes of this Thesis, it has been considered desirable to limit observations upon the replies to those classified under B. For simplicity of classification, and also in the belief that the points at issue are thereby brought out most forcibly, the Local Authorities have been subdivided into (a) those where it is the usual practice to remove the pulmonary tubercle-soiled articles to one or more central disinfecting stations for steam disinfection; (b) those in which such removal is never carried out; and (c) those at which it is occasionally done. The following Tables I, II, and III are framed upon that classification, and from the totals at the end of each Table it will be observed that under (a) 17 County or District and 46 Burgh Local Authorities are classified; under (b) the figures are 56 and 90 and under (c), 32 and 58 respectively. It should be added here that most of the larger Burghs are classed under (a).

It /

It may be noted in the details of Tables II and III that a considerable variety of methods of disinfection of the infected articles are in practice. A not unusual procedure is to resort to cremation, expecially in the most rural areas, and in fact one has to acknowledge that in certain parts of the Highlands, not only is the clothing not infrequently cremated, but also all household utensils and effects after a death from "consumption". In addition, dwellings have been "deserted" by the relatives in the belief that they would escape a like fate. The appended photographs, Nos. 35 and 36 at the parts marked by a cross, depict the sites of dwellings which, in the knowledge of the local medical officer of health, were "deserted" in that manner.

A fairly common method of disinfection in practice in the areas of Local Authorities classed above as (b) and (c) is steeping of the articles in a solution of disinfectant. Thus from Table IV which has been drawn up to shew the number of hours the articles were so steeped, one observes that in the areas of 166 Local Authorities this practice is in vogue - if they were not dealt with otherwise. The importance of the information contained in Table IV lies in the fact that it reveals the number of hours of exposure of the articles to the liquid disinfectant. Thus in the areas of about /

about 60 Local Authorities the steeping is for a less period than 12 hours. In this connection, one might quote the observations of Roepke and Busch[x] upon experiments conducted by them with luquid solutions of Rohylsoform. They concluded (basing their experiments upon biological data) that for clothing "lightly" infected with tubercle bacilli, steeping for 12 hours in a 2% solution of the disinfectant was desirable, and for 24 hours if "heavily" infected (such as handkerchiefs with visible droplets of sputum). In some experiments[x] whereby active tubercle bacilli were exposed to solutions of chinosol and chinosol formaldehyde 1-1000 to 1-4000 for a period of as long as 24 hours, and then testing biologically it was found that the bacilli had not been killed. It would appear to be desirable when steeping of infected articles in solution of disinfectant is the method employed, that a reasonably safe margin of time should be allowed. - probably at least 24 hours. The person conducting the process /

x "Der Wäsche die Disinfektion Tuberkuloser" - Zeitsch. f. Tuberk, 1909

x Blüdhorn, Deutsche Med. Woch. 1911, Vol. 2.

process of disinfection should see that his instructions are carried out to the letter. If one looks at Table V, which shews the large variety of dilutions of disinfectants in use in areas where no clothing is removed to a central station for disinfection, one gains the impression that the kind of disinfectant and its dilution are the prime factors. It might be observed here that on consulting the labels of a considerable number of "samples" of disinfectants it was noted that no guidance was given to the time of exposure. As long, therefore, as there is no definite guidance on the point, local officials are almost certain to act according to the personal equation and in spite of much and well-intended use of disinfectant, inefficient disinfection of tubercle - stained material (pillow cases might be cited as of great importance) may result.

Returning to the question of cremation of articles, while the qualifying statement that the materials so dealt with were not worth preserving, one is impressed with the frequency of the practice as revealed in the details of Tables II and III.

Looking now at the procedure in operation in the areas of the various Local Authorities for disinfection of the dwelling, one may see in Tables I, II, and III that /

that spray of a solution of the disinfectant alone, or followed by a gaseous disinfectant were favourites. The spraying was generally done by a hand or other form of sprayer, but in the Tables, the Ligner's apparatus was classed as a spray. Gaseous disinfectants include such methods as the usual burning of sulphur; and vaporising of formaldehyde by heat or permanganate of potassium, or heating of tabloid. One is not surpised to find a large variety of methods in use for disinfection of premises, as the means have to be adapted to suit the circumstances. Thus to similarly deal with a thatched cottage and a house of the most modern type may be quite uncalled for. In using a vapour, however, its readily diffusible properties should be remembered and, as was shewn by the late R. Koch[x] in some experiments with burning sulphur ($S.O_2$) the amount remaining in an apartment rapidly diminishes. Thus a sufficiency of sulphur was burned calculated to produce a percentage volume in the room of 10.56. About a hour later, this percentage was only 4.05, and after 3½ hours, 1.8. The air of the room was saturated with moisture. Samples of anthrax spores etc. were /

x New Sydenham Soc., Vol. CXV.

were placed in various parts of the room. After 24 hours' exposure, with the exception of one sample which grew more slowly than the rest when planted upon a nutrient medium, the organisms were unaffected.

In this connection also, and as shewing the resistance of tubercle bacilli to dry heat, the following might be quoted:— "■ Eight recently isolated human strains from cultures on glycerin-egg medium were used. After being suitably ground up in an agate mortar and dried, weighed quantities (.025 gramme) were introduced into narrow test tubes suitably drawn out so that when immersed in boiling water no vapour reached them. After the heating, suitable biolcgical tests were done, when it was found that dry heat at 100°C for twenty minutes diminished the virulence of the bacilli, and complete destruction occurred after heating from thirty to forty-five minutes."

Probably, much of the efficiency in certain of the methods in use lies in the after-math of cleaning up with soap and water. Finally, as has been remarked in connection with the procedure adopted for dealing with clothing /

■ Charles Krumwiede: journal of Infectious Diseases Vol. 9: p. 115, 1911.

clothing, the person conducting the disinfection of premises should see that the method employed is thoroughly carried out. Thus, if a spray is employed, every corner must be reached; if a vapour, the after-cleansing, washing down, etc. must be particularly attended to.

TABLE I

shewing, in instances where it is the practice of the Local Authority to remove clothing, bedding etc. infected by tuberculosis patients to oneor more central stations for steam disinfection, the procedure adopted to disinfect the patient's apartment or house.

	District or County L.A.	Burgh L.A.
Spray or vapour of disinfect. used to disinfect apartment or house.	-	8
" and " " " " " " " " "	1	8
" or " or both " " " " " "	2	-
Vapour of disinfectant " " " " "	2	15
Spray of " " " " " "	9	15
Apartment washed with solution of disinfectant.	3	-
	17	46

TABLE II

shewing the method of disinfection in ins... clothing, etc. infected by tuberculosis ... the Local Authority for steam disinfecti...

...e no bedding, ...s removed by

		District or County L.A.	Burgh L.A.
Spray of sol. or vapour of disinfect.to apartmen... o...	infected articles steeped in sol. of disinfectant.	5	5
" " " " " " " " " "	infected articles boiled.	-	1
" " " " " " " " " "	†infected articles cremated.	-	5
" " " " " " " " " "	infected articles cremated.	-	1
" " " " " " " " " "	*infected articles cremated or steeped in sol. of disinfect.	5	1
" " " " " " " " " "	infected articles damped with sol. of disinfectant.	-	4
" " " _____ " " " " "	infected articles " cremated.	2	3
" " " _____ " " " " "	infected articles damped with spray of disinfectants.	-	3
" " " _____ " " " " "	*infected articles cremated or steeped in sol. of disinfect.	10	11
" " " _____ " " " " "	infected articles steeped in sol. of disinfectant.	5	4
" " " _____ " " " " "	infected articles boiled.	-	1
Vapour of disinfectant _____ " " " "	infected articles removed for disinfection by disinfects. and washing.	-	1
" " " _____ " " "	bedding and bedclothes generally cremated; other clothing steeped in sol. of disinfect..	1	3
" " " _____ " " "	infected clothing, if not cremated, is washed in disinfect.	-	1
" " " _____ " " "	bedding and beclothes cremated.	-	2
" " " _____ " " "	bedding and bedclothes cremated; other articles steeped in sol. of disinfect. or *cremated.	-	1
" " " _____ " " "	bedding and wearing apparel cremated; bedclothes steeped in sol. of disinfect	-	1
Vapour of disinfectant _____ to apartment ... house:	Infected clothing washed in sol. of disinfectant.	-	
" " " _____ " " "	Infected clothing steeped in sol.of disinfect.	3	
" " " _____ " " "	Infected clothing cremated.	1	
" " " _____ " " "	Infected clothing also exposed to vapour of disinfect	1	
" " " _____ " " "	Infected clothing either boiled or steeped in sol. of disinfectant.	-	
" " " _____ " " "	† Infected clothing cremated or washed in sol.of disinfect	1	
" " " _____ " " "	†Infected clothing cremated or steeped in sol. of disinfectant.	6	
Spray of sol.followed by vap. of disinfect.to apar... or house:	bedding and bedclothes cremated, other infected articles steeped in sol. of disinfectant.	2	
" " " " " " " " " " " "	bedding &c. cremated.	-	
" " " " " " " " " " " "	*bedding &c. cremated, other articles steeped in sol.of disinfect.	-	
" " " " " " " " " " " "	Infected articles steeped in sol. of disinfectant.	2	
" " " " " " " " " " " "	Infected articles damped with sol. of disinfectant.	1	
" " " " " " " " " " " "	Infected articles washed in sol. of disinfectant.	1	
" " " " " " " " " " " "	Infected articles †cremated or steeped in sol. of disinfectant.	6	
Spray of sol.of disinfect. to apart. or house and ...lls &c. washed with dis...fect.	Infected articles steeped in sol.of disinfectant.	2	
" " " " " " " " " "	Infected articles *cremated or steeped in sol. of disinfect.	-	
Vapour of disinfect.to apart. or house and walls &c. washed with disinfect.	Infected articles washed in sol.of disinfect.	-	
" " " " " " " " " "	Infected articles steeped or washed in sol. of disinfectant.	-	
" " " " " " " " " "	Infected articles †cremated or steeped in sol. of disinfectant.	-	
" " " " " " " " " "	Infected articles steeped in sol. of disinfect.	-	
Vapour of disinfect. to apartment or house and walls &c. washed with disinfectant.	Infected articles cremated.	-	2

TABLE II

shewing the method of disinfection in instances where no bedding, clothing, etc. infected by tuberculosis patients, is removed by the Local Authority for steam disinfection.

		District or County L.A.	Burgh L.A.
Spray of sol. or vapour of disinfect. to apartment or house:	infected articles steeped in sol. of disinfectant.	5	5
" " " " " " " " " " "	infected articles boiled.	-	1
" " " " " " " " " " "	+infected articles cremated.	-	5
" " " " " " " " " " "	infected articles cremated.	-	1
" " " " " " " " " " "	+infected articles cremated or steeped in sol. of disinfect.	5	1
" " " " " " " " " " "	infected articles damped with sol. of disinfectant.	-	4
" " " _____ " " " " " "	infected articles cremated.	2	3
" " " _____ " " " " " "	infected articles damped with spray of disinfectants.	-	3
" " " _____ " " " " " "	×infected articles cremated or steeped in sol. of disinfect.	10	11
" " " _____ " " " " " "	infected articles steeped in sol. of disinfectant.	5	4
" " " _____ " " " " " "	infected articles boiled.	*	1
Vapour of disinfectant _____	infected articles removed for disinfection by disinfects. and washing.	-	1
" " " _____ " " " "	bedding and bedclothes generally cremated; other clothing steeped in sol. of disinfects.	1	3

"	"	"	_____	"	"	"	"	infected clothing, if not cremated, is washed in disinfect.	-		1
"	"	"	_____	"	"	"	"	bedding and beclothes cremated.	-		2
"	"	"	_____	"	"	"	"	bedding and bedclothes cremated; other articles steeped in sol. of disinfect. or cremated.	-		1
"	"	"	_____	"	"	"	"	bedding and wearing apparel cremated; bedclothes steeped in sol. of disinfect	-		1
Vapour of disinfectant			_____	to apartment or house:				Infected clothing washed in sol. of disinfectant.	-		2
"	"	"	_____	"	"	"	"	Infected clothing steeped in sol.of disinfect.	3		6
"	"	"	_____	"	"	"	"	Infected clothing cremated.	1		3
"	"	"	_____	"	"	"	"	Infected clothing also exposed to vapour of disinfect	1		3
"	"	"	_____	"	"	"	"	Infected clothing either boiled or steeped in sol. of disinfectant.	-		1
"	"	"	_____	"	"	"	"	† Infected clothing cremated or washed in sol.of disinfect	1		1
"	"	"	_____	"	"	"	"	† Infected clothing cremated or steeped in sol. of disinfectant.	6		1
Spray or sol.followed by vap. of disinfect.to apart.or house:								bedding and bedclothes cremated, other infected articles steeped in sol. of disinfectant.	2		1
"	"	"	_____	"	"	"	"				

Spray or sol. followed by vap. of disinfect. to apart. or house:	bedding and bedclothes cremated, other infected articles steeped in sol. of disinfectant.	2	1
" " " " " " " " " " " "	bedding &c. cremated.	-	3
" " " " " " " " " " " "	×bedding &c. cremated, other articles steeped in sol. of disinfect.	-	1
" " " " " " " " " " " "	Infected articles steeped in sol. of disinfectant.	2	4
" " " " " " " " " " " "	Infected articles damped with sol. of disinfectant.	1	2
" " " " " " " " " " " "	Infected articles ⊙ washed in sol. of disinfectant.	1	-
" " " " " " " " " " " "	Infected articles † cremated or steeped in sol. of disinfectant.	6	-
Spray of sol. of disinfect. to apart. or house and walls &c. washed with disinfect.	Infected articles steeped in sol. of disinfectant.	2	3
" " " " " " " " " " " "	Infected articles ×cremated or steeped in sol. of disinfect.	-	2
Vapour of disinfect. to apart. or house and walls &c washed with disinfect.	Infected articles ⊙ washed in sol. of disinfect.	-	1
" " " " " " " " " " " "	Infected articles steeped or washed in sol. of disinfectant.	-	1
" " " " " " " " " " " "	Infected articles † cremated or steeped in sol. of disinfectant.	-	1
" " " " " " " " " " " "	Infected articles steeped in sol. of disinfect.	-	2
Vapour of disinfect. to apartment or house and walls &c. washed with disinfectant.	Infected articles cremated.	-	2
" " " " " " " " " "	Infected articles ⊙ washed in sol. of disinfectant	-	1
" " " and whitewashing of apart. or house:	Infected articles steeped in sol. of disinfect.	1	-
" " " or limewashing of apart. or house.	Infected articles † cremated or boiled.	1	-
Spray of sol. (and vapour occasionally) of disinfect. to apart. or house.	Infected articles steeped in sol. of disinfect.	-	1
		56	90

× Depends on utility of the articles.

† Generally cremated.

⊙ After exposure to disinfectant applied to the apartment.

TABLE III

shewing (in instances where it is the practice of the Local Authority in occasional instances to remove the clothing, bedding, etc. infected by tuberculosis patients to one or more central stations) the procedure adopted to disinfect the patients' apartments or houses or bedding etc. not so removed.

Infected articles	Apartment &c. disinfected by	Clothing not removed.	County or District Local Authority.	Burgh Local Authority.
Occas. removed	Vapour of disinfect.	steeped in sol. of disinfect.	2	4
" "	Spray or Vapour	" " " " "	2	3
" "	Spray of Disinfect.	" " " " "	-	2
As a rule cremated	" " "	" " " " "	-	1
Occas. removed As a rule cremated.	Vapour of disinfect.	" " " " "	1	4
Occas. removed As a rule cremated.	Spray of disinfect.	" " " " "	2	-
Occas. removed As a rule cremated	" or vapour "	" " " " "	1	-
Occas. removed As a rule cremated	" and " "	" " " " "	-	4
Removed in a few instances.	" " " "	" " " " "	2	4
Occas. removed if useful: as a rule cremated.	" of disinfect.	" " " " "	1	1
Removed in rare instances.	" " "	" " " " "	-	1
Generally removed	" " "	" " " " "	-	2
Generally removed: when no removed are cremated.	" & vapour of "	" " " " "	1	-
Generally removed if within 12 miles of disinfector.	" and vapour	" " " " "	1	-
Generally removed	Vapour of disinfect.	" " " " "	1	-
In a few instances removed on request	Spray of disinfect.	" " " " "	2	-
Removed if impracticable to disinfect at home.	" of disinfect.	" " " " "	4	-
Removed in 30% of total disinfections for tuberculosis.	Vapour of disinfect.	" " " " "	-	1
Removed when patient changes address: after death they are cremated.	Spray of disinfect.	" " " " "	-	1
Removed for cremation	" " "	" " " " "	-	1
Bed-clothes removed; bedding & wearing apparel cremated.	" " "	" " " " "	-	1

Bed-clothes removed; bedding & wearing apparel cremated.	" " "	" " "	-	1
Removed if useful: as a rule cremated.	" " "	" " "	-	2
Removed if useful: as a rule cremated	" & vapour of "	" " "	-	1
Removed if Local Authority's officials consider necessary.	Spray of disinfect.	Steeped in sol. of disinfect.	8	1
Removed if Local Authority's officials consider necessary	Vapour of disinfect.	" " " " "	-	3
Occas. removed	" " "	" " " "	1	4
Occas. removed: as a rule cremated	" " "	Soap supplied by Local Authority for washing.	-	1
Occas. Removed: as a rule cremated.	" " "	Either cremated or scalded.	-	1
Occas. removed: as a rule cremated	Spray of disinfect.		3	1
Removed in a few instances.	" " "		-	1
Removed if Local Authority's officials consider necessary	" " "	Washed in disinfect.	-	1
Removed if Local Authority's officials consider necessary	Vapour of "		-	1
Removed in 65% of total disinfections for tuberculosis.	Spray & vapour "		-	1
Removed either for steam disinfection or cremation.	Spray of disinfect.		-	1
Removed either for steam disinfection or cremation.	" or vapour (or both) of disinfect.		-	1
Removed in a few instances (in the majority personal clothing is cremated)	Spray of disinfect.		-	8
			32	58

Table IV shewing number of hours during which such articles of bedding, personal clothing, etc. as are considered to be infected by tuberculous patients are steeped at home in solution of disinfectant. The Table refers to this procedure as carried out in county, district, or burgh areas where it is occasionally the practice to remove infected articles to one or more central stations for steam disinfection, and also those similar areas where removal for the latter purpose is never carried out.

Duration of steeping in solution of disinfectant at home.	Number of Local Authorities.
¼ of an hour	1
½ " "	1
½ hr. to 1 hr.	1
1 hour	1
1½ to 2 hrs.	1
2 hours	4
2 hours at least	8
2½ "	1
not less than 3 hrs	3
4 hours	10
4 " at least	3
4 to 6 hrs	1
not less than 5 hours	1
6 hours	7
not less than 6 hrs	3
8 hours	12
9 to 10 hrs	1
10 hours	1
6 to 12 hours	2
10 hours	1
6 to 12 hours	2
10 hours or longer	1
10 to 12 hrs	1
At least 12 hours	4
About 12 hours	2
12 hours	19
16 hours	1
12 to 24 hours	4
About 24 hours	1
24 hours	29

Overnight /

Duration of steeping in solution of disinfectant at home.	Number of Local Authorities.
Overnight	17
Overnight if possible	2
For a day	1
2 to 3 days	1
A few hours	7
Several hours	2
3 hours then boiled	1
At least one hour, then boiled (if articles will endure boiling)	1
5 hours then boiled	1
Disinfectant left for householder to use	1
Time not stated	5
	166

TABLE V.

Names of Disinfectant used in the areas of certain Local Authorities where no clothing is removed for disinfection. The dilution of the disinfectant and the number of hours of steeping are shewn.

B U R G H S.

Formalin or 1 part Jeyes fluid to 100 parts water - 12 hours

ol 1 part - 10 parts water - 12 "

bo - half and half 6 to 12 "

bolic Acid - neither strength nor time stated

wick fluid - 1-100 - 8 to 12 "

lin 1 part - 200 water - 12 "

l - part - 200 water - minimum 8 hrs. (2 local authorities)

l ½ oz. to gallon - no time stated

infectant left with instructions

bolic 2½ oz. to 1 gallon - 12 hours

malin 1% - 12 "

bolic 1 - 40 - several hours.

ol or Izal ½ oz. - gallon - at least 1 hour.

ol or Izal supplied for washing after exposure to formalin vapour for 3 hours.

lgerm, Eukotas, McDougall's M.O.H. Fluid dilution not stated - 5 "

ol dilution not stated; time not stated

phur fumes - four hours, then washed in ½ oz. Izal - gallon water carbolic soap in addition.

ol 1 pint - 50 gallons - overnight

bolic /

B U R G H S (Contd.)

olic	2 oz.- gallon or Izal 1½ oz.- gallon or Pharos strength not stated: time for all -	10 hours.
n	2 oz. or Jeyes fluid 3 oz. to 3 gallons water - at least	4 "
	1-100 for several hours.	
lin	4% - time not stated	
les	spread out and sprayed or fumigated with formalin 2% or Izal 1-400, thereafter steeped in Izal for in strength advised in the containers.	24 hours
lin	1-30 -	8 hours.
carbolic	1-30 at least	6 "
as	(R. Young & Co., Glasgow) 1-100 -	24 "
gall's	M.O.H. Fluid (twice the strength advised)	6 to 12 "
lin Vapour	6 hours then steeped in Sol. Jeyes Fluid 1½ oz. to gallon water - time not stated	
lin Vapour	(2 tablets per 100 cu.ft.) then Cyllin 2% solution - time not stated	6 "
lin Spray	1-40: then steeped in Sanitas-Bactos 1-40 - not less than	3 "
lin	1% left with instructions to steep for	24 "
lin Spray	40% diluted to 1-40 in apartment "sealed" and left for	6 "
or Killgerm	1-200 - not less than	4 "

ing hung up, sprayed with 5% formaline, then exposed not less than 3½ hours to vapour from formaquette of s permanganate and formalin (40%): then a disinfectant supplied and allowed to steep in this for 9-10 hours re washing

ved /

B U R G H S (Contd.)

rayed with formaline or exposed to vapour of same; either time nor strength stated. (2 Local Authorities).

uko-Vapo" instructions "Place one Euko-vapo in a tin or bowl and pour over it the contents of this tin. This quantity is sufficient to act as a germicide for a room of 1,500 feet".

Dougall's M.O.H. Fluid 1-200 - at least 2 hours (3 Local Authorities)

sinfected according to directions by Jeye's Fluid

rticles spread out in apartment; formalin tablet vapour -35 to 1000 cub.ft. or sulphur candles 1 lb. to 1000 ft.; addition are sanitas sprayed with Izal 1-400. Izal, rleolin, Cyllin or Sanitas soap supplied for washing

Dougall's M.O.H. Fluid 1-300 at least 4 hours
Young & Co.'s Germocene Fluid 1-200 " 6 "
Gardner & Co.'s Bactocene " 1-200 " " "
ye's Corporation No. 10 " 1-200 " " " } One small Burgh's alternatives.

Dougall's M.O.H.Fluid
rmocene Fluid
llgerm & Co. 's Fluid
ctocene Fluid } 1-200 - not less than 12 hours generally.
One Local Authority's alternatives.

rmocene Fluid 1-200 - 24 hours, prior to washing

al 1 pint - 2 gallons 3 hours

rbolic 1-20 1 hour.

al (1 bottle to 20 gallons) - 24 hours.

othes /

B U R G H S (Contd.)

thes hung up and exposed to vapour of formalin 30 to 1000 cub.ft. then soaked for 24 hours in aldehyde 2 oz. - gallon	
aline or M.O.H. Fluid 1-20 - "for a day"	
thing hung up and formaline tablets (number not stated) erized; walls lime-washed or re-papered	10 hours
olic 1-40 -	10 "
alin spray 4 oz. to gallon, then steeped in Cyllin ½ oz. - gallon -	several hours.
ermocene 5% -	6 "
olic Acid 1-60 or Condy's Fluid with carbolic soap	½ hour
ng Solution Carbolic or Lysol -	24 hours
aldehyde (40%) 1-40 - then washed with carbolic soap.	4 "
's Fluid - strength not stated -	2½ hours
y with formaline Solution 6 oz. to gallon then soaked in Cyllin (strength not stated) -	"overnight"
½ oz. - 10 pints -	"overnight"
Vapour - 12 hours then Kerol 1 oz. to gallon for washing	
1-250 -	24 hours
l (Pearson's Antiseptic Co.) 1-160 -	3 "
thing hung up: then sprayed with Izal 1-100: then (1½ lbs. per 1000 cub.ft.) then steeped in Izal 1-200	3 "

D I S T R I C T S /

D I S T R I C T S.

lin Vapour then steeped in Elswick Fluid 4 oz. to 4 gallons -	4 hours.
2 oz. - 3 gallons water -	4 "
or McDougall's M.O.H. Fluid 1-100 -	8 " (2 Local Authorities)
lin Spray 4% - 4 hours; steeped in 4% solution -	12 hours
's Fluid or Sanitas - Bactox. 1 wine-glass to gallon - not less than	4 "
line Vap. by permanganate - one pint to ½ lb. of the latter per 1000 cub.ft. thereafter soaked for a night in 1-100 to 1-150 McDougall's M.C.H. Sanitas Bactox	
's Eucalypthanes Fluid 1 pint to 5 gallons -	24 hours
lin vapour 50% stronger than advised by instructions on McDougall's vap. lamps then 12 hours in McDougall's M.O.H. Fluid 10%	
cles spread out and sprayed with formalin 2% or Ixall 0 then steeped for 24 hours in Solution of Ixall in ngth advised on the containers	
's Cyllin; Jeye's Fluid or McDougall's M.O.H. Fluid or Kerol 1-80 to 1-160 -	12 hours.
1-40 24 hours; Jeye's 1-40	at least 24 hours
hing spread out: gaseous formalin (permanganate sh) or $S.O_2$ overnight, then soaked in formaline 1-40 yllin overnight diluted according to instructions.	
vapour - 4 hours; then soaked in Elswick Fluid 1-50 for 12 hours then washed in a running stream.	
lin 1-40 or Cyllin diluted according to instructions on flasks - overnight.	
ugall's M.O.H. Fluid 1-200 -	2 hours at least. (2 Local Authorities)

o-cresol /

D I S T R I C T S (Contd.)

o-cresol; Kerol; Karbo or Bactecene 1-200 - a few hours.		
erm Fluid Teacupful to gallon - overnight - Instructions left by Sanitary Inspector.		
ldehyde (40%) 4 oz. on Formaquette for 4 hours; then steeped Izal ½ oz. to 10 pints water -		time not stated.
1 bottle - 20 gallons -		24 hours.
vapour - 6 hours, then Izal 1 bottle to 20 gallons.		24 "
alin ½ oz. - gallon	about	12 hours
in 1-400 -		12 hours (5 Local Authorities).
Vapour then steeped in Carbolic Acid 1-40 or 1-60 for ½ an hour.		
ong" Carbolic or Thymo-cresol for 24 hours then boiled		(2 Local Authorities).
in 1% -		12 to 24 hours
's Fluid 1-160 -		6 hours.
yed with formalin 6 oz.-gallon: then steeped overnight in Cyllin (strength not stated).		
½ oz. 9-10 pints - overnight.		
tas-Okol ½ oz.-gallon -		6 hours.

APPENDIX.

Duplicate Notifications of Tuberculosis.

The Board have been consulted with reference to the liability of Local Authorities to pay fees to medical practitioners where a case has been notified more than once. In reply, they referred to their Regulations, where in Article IV (3) it is clearly stated that a medical practitioner or school medical officer shall not notify a case .... if he has reasonable grounds for believing that the case has already been notified.

Pauper Phthisis Case recommended for Institutional Treatment in Poorhouse. Shelter supplied. Question as to whether Local Authority or Parish Council were responsible for cost.

One local authority unable meantime to provide institutional accommodation other than in poorhouse phthisis wards to a man in receipt of parish relief. This accommodation refused by the patient. The local authority provided a shelter. Question was raised whether the parish council should not be asked to supply the necessary bedding for the shelter. Board held that local authority should defray the cost of this, and that such outlays should form a competent claim /

claim on the Tuberculosis Maintenance Grant.

Loan of Beds and Bedding by Local Authorities to Tuberculosis Patients treated at home.

Several Local Authorities for some time have supplied beds and bedding to certain tuberculosis patients at their homes. This was done to assist in segregating the case. Thus in some instances it is found that in a two-apartment house, one of the apartments is not used by the family owing to various reasons such as absence of furniture (bedding), inability to keep two fires going in winter, - the necessity for warmth is the corollary to deficiency in bed or body clothing, etc.

The question was raised whether expenditure incurred by such local authorities on "loaning" beds and bedding could rank against the Tuberculosis Maintenance Grant. After consulting the Treasury, it was decided that it could not so rank, [redacted].

Grant for shelters supplied by Local Authorities at or near the Patients' Houses.

Their opinion on above being asked, Board explained that the cost of shelters for use at or near the patients' homes /

homes forms a proper charge upon the Tuberculosis Maintenance Grant, but that unless these are provided in connection with and administered from a hospital or other institution no capital grant is payable.

Grant for disinfection of houses; notification fees and general administrative expenses in connection with tuberculosis.

The Board consider that the above cannot be held as part of treatment, and accordingly expenditure by a local authority on these items cannot be allowed to rank against the Tuberculosis Maintenance Grant.

Reciprocal Responsibilities of Local Authorities with reference to tuberculosis patients who change their place of abode.

The Board's opinion was asked with reference to a patient who, some months prior to entering an institution, removed from the area of one local authority to that of another; they held that the local authority in whose area the patient was resident at time of removal, was responsible.

Infective /

Infective phthisis case employed in the milk trade.

The patient while suffering from symptoms of phthisis and with tubercle bacilli in his sputum, assisted his father in a retail dairy business. In an action taken by the Local Authority in the Sheriff Court, the dairyman plead guilty and was fined £2.

Powers of Local Authorities to provide Domiciliary Treatment.

The Board were asked what powers they had to require Local Authorities to provide domiciliary treatment for cases of tuberculosis. In reply it was indicated that while Section 66 (1)(d) of the Public Health (Scotland) Act, 1897, did not lay an obligation on Local Authorities to provide domiciliary treatment, no tuberculosis scheme would be considered as satisfactory which did not include provision for the same.

Cash payments in Domiciliary Cases.

It came to the notice of the Board in one case that a Local Authority was making cash payments to a patient /

patient in order that he might supply himself with "special foods". The Board indicated disapproval of this course and gave instructions that "food" supplied as medicines should be given only under the direction of the medical officer of health or tuberculosis officer.

Respective Obligations of Local Authorities and Parish Councils re treatment of Poor Law Tuberculosis Cases.

On several occasions the Board's advice has been sought regarding the above. The Board have held that the duty of providing treatment for theses cases rests with the Local Authority. If the patient is a pauper, the Local Authority is responsible only for treatment. If the treatment is in the Sanatorium, it necessarily includes entire maintenance: but if treatment is at home, it includes only medical and nursing attendance and such medicines and special foods as are exclusively necessary for the treatment of the the tuberculosis. Lodging, clothing and ordinary sustentation fall to be provided by the Poor Law Authority. Pauper tuberculosis patients receiving treatment at home should be medically supervised and have their treatment prescribed by the tuberculosis officer /

Officer or other medical practitioner by arrangement with the Local Authority. In one case it was indicated that the Board would be willing to agree to a proposed arrangement whereby the tuberculosis officer would send slips to the Inspector of Poor authorising him to supply patients with special foods as medicines.

Treatment of Tuberculosis in Poorhouses.

As a temporary arrangement pending the provision by Local Authorities of the institutional accommodation proposed under their schemes, the Board have in several instances approved the use of Poorhouses for the treatment of tuberculosis. It was explained that these institutions were not approved for the purposes of Section 16(1)(a) of the National Insurance Act, 1911, but that as Local Authorities are now relieving parish councils of their responsibility for treating pauper tuberculosis patients, it had been found convenient for their treatment to be continued in the Poorhouses. So far as payment for treatment of these cases is concerned, the usual arrangement is for the Local Authority to pay the parish council or poorhouse authorities a fixed sum per week per patient. In all cases, Board make it a condition that the treatment of cases must /

must be under the responsibility, and to the satisfaction of, the Local Authority.

Provision of Clothing for tuberculous paupers.

The Board's opinion was asked as to the powers of a Local Authority to supply clothing to such patients. In reply it was indicated that a Local Authority did not appear to be empowered to provide clothing for cases of tuberculosis treated at home except as regards those provided with shelters. In the latter circumstances the Local Authority might competently defray the cost of blankets for use in the shelter. The Board also stated that the duty of providing clothing for pauper cases treated at home would appear to rest with the parish council, whereas regarding those treated in institutions, the Local Authority was entitled to provide any necessary clothing for use in the same. However, the latter body could not demand as a condition of admission to the institution that the patient must first be provided with proper clothing though they might reasonably expect the parish council to provide the necessary clothing.

Cases /

Cases of Tuberculosis in receipt of parish relief unlikely to receive further benefit by remaining in Local Authorities' Institutions.

Where it is desirable to discharge patients from the Local Authorities' Hospitals on the ground that the beds are occupied by any case classed under the above, Board have agreed in a few instances that, when such patients have not a suitable home, the parish council should receive them into the poorhouse and there provide ordinary sustenance, clothing, etc., the Local Authority providing any necessary treatment.

List of Sanatoria and Institutions for treatment of Tuberculosis approved by the Local Government Board for Scotland, in terms of Section 16 of the National Insurance Act, 1911, as at 26th August, 1915.

ABERDEEN COUNTY.

Aberdeen City Infectious Diseases Hospital (Tuberculosis Wards)	122 beds
Aberdeen City Dispensary (at City Hospital)	
Aberdeen County Dispensary, Aberdeen	
Mrs Smith's Convalescent Home and Sanatorium, Newhills	24 beds
Thomas Walker Hospital, Fraserburgh (Pulmonary)	12 beds
(Non-Pulmonary)	12 beds
Royal Aberdeen Hospital for Sick Children - Temporary premises at Kepplestons - (Non-pulmonary)	
Peterhead Burgh Infectious Diseases Hospital - (Observation Block)	4 beds

ARGYLL COUNTY.

Argyll County Sanatorium Oban	30 beds
Campbeltown Joint Hospital (Two Wards)	7 beds
West Highland Cottage Hospital, Oban (Non-pulmonary)	

AYR COUNTY.

Ayrshire Sanatorium (Glenafton)	88 beds
Heathfield Infectious Diseases Hospital, Ayr (Tuberculosis Pavilion)	10 beds

Kaimshill/

Kaimshill Cholera & Smallpox Hospital (Kilmarnock) 12 beds

Kilmarnock Burgh Dispensary

Kilmarnock Royal Infirmary (Non-pulmonary)

Biggart Memorial Hospital Home for Children, Prestwick (Non-pulmonary)

Ayr County Hospital (Non-pulmonary)

Ayr Burgh Tuberculosis Dispensary.

BANFF COUNTY.

Chalmers Hospital, Banff (Pulmonary) 8 beds
(Non-pulmonary) 48 beds

Turner Memorial Hospital, Keith

BERWICK COUNTY.

Gordon Infectious Diseases Hospital (Tuberculosis Wards) 4 beds

BUTE COUNTY.

Victoria Hospital, Rothesay, (Non-pulmonary)

CAITHNESS COUNTY.

Wick Joint Fever Hospital (Shelter) 1 bed

CLACKMANNAN COUNTY.

Clackmannan County Hospital (Non-pulmonary)

DUMBARTON/

DUMBARTON COUNTY.

Dumbarton Joint Fever Hospital (Tuberculosis Pavilion)	18 beds
Helensburgh Burgh Smallpox Hospital	10 beds
Lanfine Home, Kirkintilloch	44 beds
Helensburgh Burgh Infectious Diseases Hospital (Tuberculosis Wards)	5 beds
Broomhill Home Kirkintilloch, (Non-pulmonary)	

DUMFRIES COUNTY.

Dumfries Burgh Smallpox Hospital	8 beds
Lochmaben Joint Infectious Diseases Hospital (Tuberculosis Wards)	12 beds
Thornhill Infectious Diseases Hospital (Tuberculosis Wards)	4 beds
Dumfries & Galloway Royal Infirmary (Non-pulmonary)	
Westmorland Consumption Sanatorium, Grange-over-Sands.	

ELGIN COUNTY.

Dr Gray's Hospital, Elgin (Non-pulmonary)	
Elgin Joint Smallpox Hospital	10 beds

FIFE COUNTY.

Cameron Infectious Diseases Hospital, Buckhaven (One Pavilion)	4 beds
Kirkcaldy Burgh Sanatorium	16 beds

Thornton/

Thornton Smallpox Hospital	18 beds
St. Michael's Infectious Diseases Hospital, near Leuchars (Tuberculosis Wards)	14 beds
Ovenstone Infectious Diseases Hospital, Pittenweem (Shelter)	12 beds

FORFAR COUNTY.

Convalescent House, Arbroath Infirmary, (Non-pulmonary)	
Greenbank House, Arbroath Infirmary, (Non-pulmonary)	
Dundee Municipal Tuberculosis Dispensary	
Sidlaw Sanatorium, Auchterhouse, (Pulmonary)	20 beds
(Non-pulmonary)	24 beds
Forfar Infirmary (Non-pulmonary)	
King's Cross Infectious Diseases Hospital, Dundee	90 beds
Arbroath Joint Infectious Diseases Hospital (One Pavilion)	8 beds
Montrose Royal Infirmary (Non-pulmonary)	
Noranside Sanatorium	60 beds

HADDINGTON COUNTY.

Haddington County Combination Smallpox Hospital	16 beds

INVERNESS COUNTY.

Grampian Sanatorium, Kingussie	18 beds
Inverness Burgh Tuberculosis Dispensary	

Northern/

Northern Infirmary, Inverness	(Tuberculosis Wards)	8 beds
do.	do. (General Wards - Non-pulmonary)	
Inverness-shire Sanatorium, Bridge of Oich		28 beds

KINCARDINE COUNTY.

KINROSS COUNTY.

Coppins Green Sanatorium, Milnathort	47 beds
Ochil Hills Sanatorium, Milnathort	40 beds

KIRKCUDBRIGHT COUNTY.

LANARK COUNTY.

Bellefield Sanatorium, Lanark	52 beds
Dispensary at Blantyre Fever Hospital	
Glasgow Corporation Dispensaries:- Brown Street; 37 Elmbank Crescent; Black Street; 128 Adelphi Street; Granville Street; Govan Chambers.	
Hairmyres Sanatorium Buildings	10 beds
and Open Air School Pavilion (Children)	24 beds
Knightswood Infectious Diseases Hospital, Anniesland (Tuberculosis Pavilion)	20 beds
Lightburn Joint Infectious Diseases Hospital (Tuberculosis Wards)	30 beds
Tuberculosis Hospital, Uppertown, Longriggend	38 beds

Coathill/

Coathill Infectious Diseases Hospital, Coatbridge	
(Tuberculosis Block)	28 beds
(South Pavilion)	20 beds
Tuberculosis Dispensary at Coathill Hospital, Coatbridge.	
Motherwell Burgh Infectious Diseases Hospital (Tuberculosis Ward Block)	18 beds
Tuberculosis Hospital, Stonehouse	52 beds
Tuberculosis Sanatorium, Shotts	48 beds
Upper Ward District Hospital, Carluke	12 beds
Shieldhall Infectious Diseases Hospital, Govan, (Tuberculosis Pavilion)	24 beds
Airdrie Burgh Reception House	7 beds
Ruchill Infectious Diseases Hospital, Glasgow, five Pavilions	170 beds
County Infectious Diseases Hospital near Motherwell	32 beds
Tuberculosis Dispensary at County Hospital, Motherwell	
Douglas Cottage Hospital (Non-pulmonary)	
Hamilton Burgh Dispensary	
Dalserf Infectious Diseases Hospital	
Wishaw Burgh Infectious Diseases Hospital (Tuberculosis Pavilion)	14 beds
Wishaw Tuberculosis Dispensary	
Tuberculosis Dispensary, Cambuslang	

LINLITHGOW/

LINLITHGOW COUNTY.

Tippethill Smallpox Hospital near Armadale	12 beds

MIDLOTHIAN COUNTY.

Edinburgh City Fever Hospital (Tuberculosis Pavilions)	231 beds
Leith Dispensary (South Fort Street)	
Leith, East Pilton Infectious Diseases Hospital (Tuberculosis Pavilions)	75 beds
Royal Victoria Hospital Farm Colony, Lasswade	23 beds
Royal Victoria Dispensary, Edinburgh	
Edinburgh Hospital for Women and Children (Non-pulmonary)	
Woodburn Sanatorium Edinburgh	43 beds

NAIRN COUNTY.

ORKNEY COUNTY.

PEEBLES COUNTY.

Manor Valley Sanatorium Peebles	30 beds

PERTH COUNTY.

Dunblane Consumption Hospital	8 beds
Hillside Homes, Perth	49 beds
Perth Burgh Infectious Diseases Hospital (Tuberculosis Pavilion)	8 beds

Perth/

Perth Royal Infirmary (Non-pulmonary)

Crieff and District Cottage Hospital (Non-pulmonary)

RENFREW COUNTY.

Bridge of Weir Sanatorium	147 beds
Gockston Smallpox Hospital, Paisley	30 beds
Greenock Corporation Tuberculosis Dispensary	
Johnston Combination Infectious Diseases Hospital (Tuberculosis Pavilions)	46 beds
(Chalets)	8 beds
Paisley Burgh Fever Hospital (Tuberculosis Pavilion)	8 beds
Port Glasgow Tuberculosis Dispensary	
Greenock and District Combination Infectious Diseases Hospital, Gateside (Tuberculosis Pavilion)	15 beds
Paisley Municipal Dispensary	
West Renfrewshire Combination Smallpox Hospital	17 beds
Blawarthill Fever Hospital (Two Wards)	16 beds
Darnley Joint Fever Hospital (Tuberculosis Pavilion)	36 beds

ROSS AND CROMARTY COUNTY.

Seaforth Sanatorium, Conon Bridge	18 beds

ROXBURGH COUNTY.

Anderson Sanatorium, Hawick	10 beds

Hawick Cottage Hospital (Non-pulmonary)

SELKIRK/

SELKIRK COUNTY.

Meigle Sanatorium, Galashiels — 10 beds

STIRLING COUNTY.

Falkirk Infirmary (Non-pulmonary)

Stirling Royal Infirmary (Non-pulmonary)

Stirling Royal Infirmary Convalescent Home (Non-pulmonary)

Falkirk Tuberculosis Dispensary

Temporary Dispensary at 1 Viewfield Place, Stirling.

SUTHERLAND COUNTY.

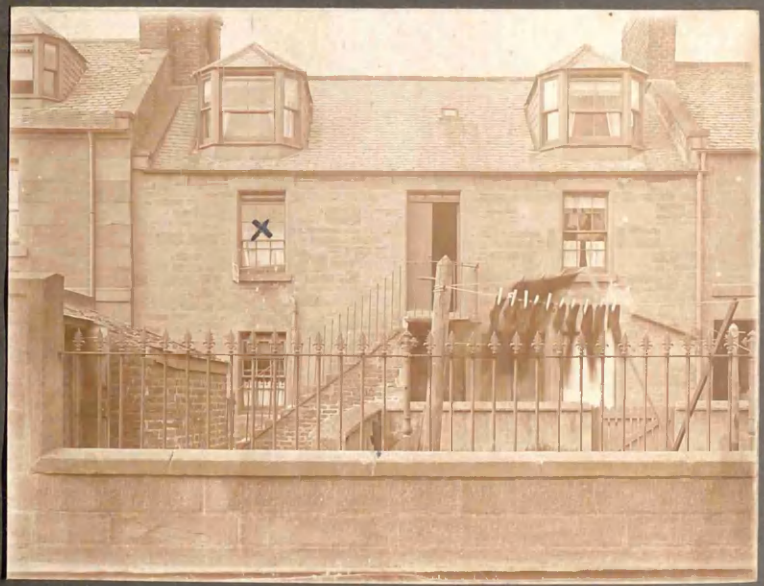
WIGTOWN COUNTY.

ZETLAND COUNTY.

Gilbert Bain Memorial Hospital, Lerwick, (Non-pulmonary).

1.

2.



3.

RENFREW COUNTY.

A.A., Adult female: shows position of patient's bed and open condition of windows. At time photograph taken weather was cold and showery.

4.

Wishaw Burgh.

One apartment dwelling occupied by patient M.R. is marked with a cross. See pp. 30-32 of Text.

5.

6.

STIRLING COUNTY.

E.A., Adult female: shelter supplied by the local authority and been occupied by patient during an entire winter, with exception of 2 nights when wind was exceptionally strong. Had had 4 months sanatorium treatment previously.

7.

STIRLING COUNTY.

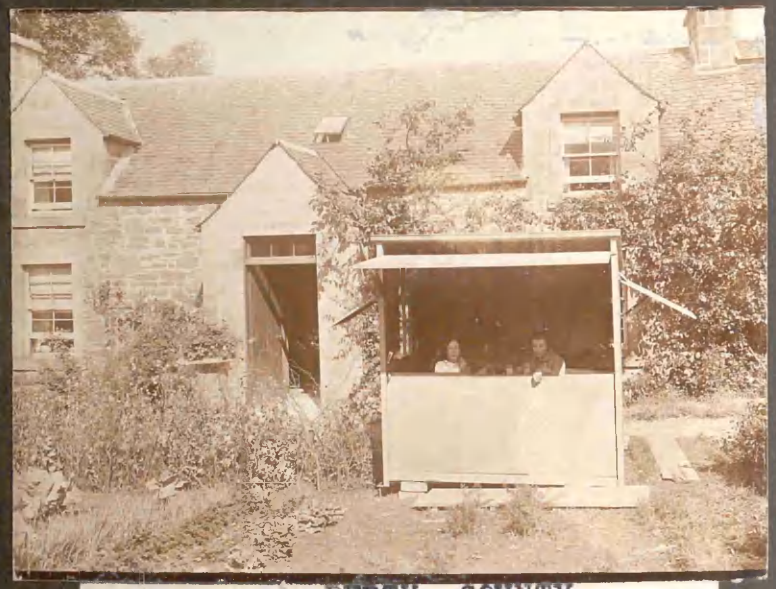
H.K., Shelter supplied by patient's relatives - occupied for one winter.

8.

STIRLING COUNTY.

A.F., Adult male: non-pulmonary case; occupied shelter for 9½ years.

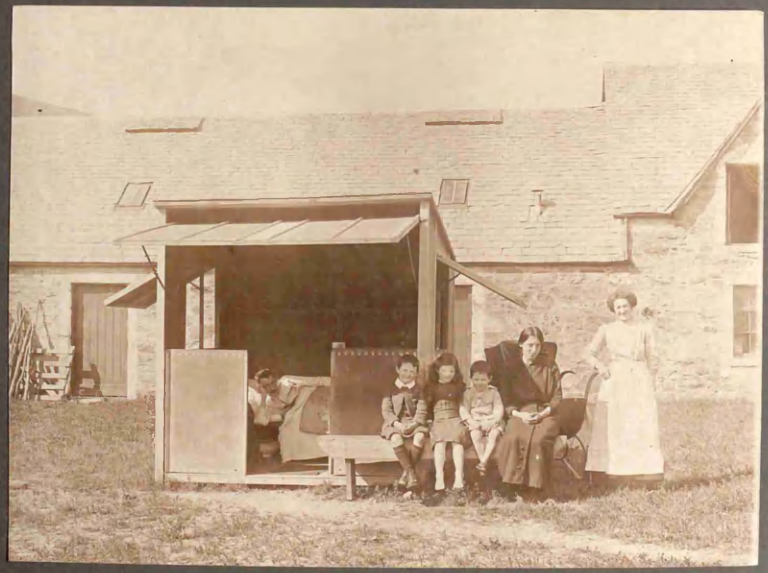
9.



PERTH COUNTY.

A.M. & J.M. sisters: occupied shelter for 6 weeks - still under treatment.

10.



11

DUMFRIES COUNTY.

J.I., Adult male: for some months occupied shelter shown.

12.

DUMFRIES COUNTY.

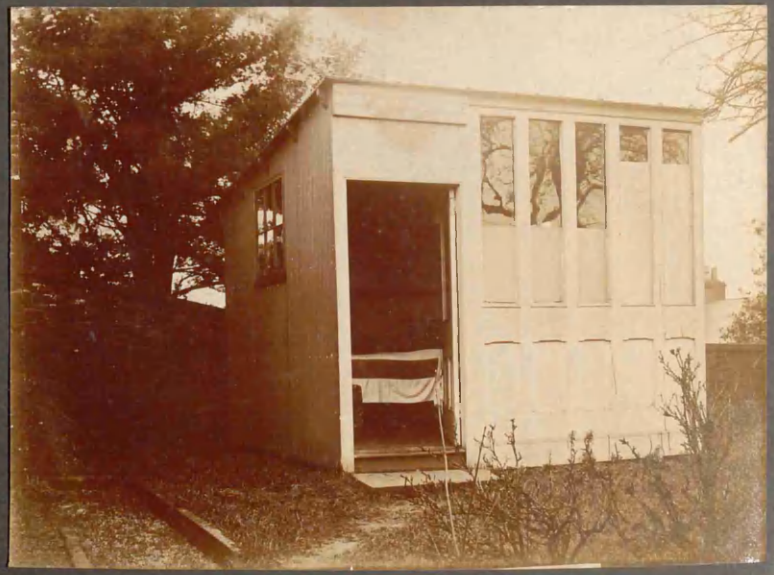
J.M., Adult female: from 1910 to 1915 patient occupied shelter winter and summer.

13.

DUMFRIES COUNTY.

J.C.H., Adult male: for 2 years occupied shelter winter and summer. Chronic case and was re-admitted later for institutional treatment. Prior to being supplied with the shelter he had been on two occasions in a sanatorium.

14.



15.

16.

17

ABERDEEN COUNTY.

F.M., Adult male: since 1911 has occupied shelter which was supplied by the local authority. He is now at work but still uses the shelter.

18

ABERDEEN COUNTY.

J.A., Adult female; for two years patient has used shelter continuously. A younger brother also suffers from phthisis and slept alone in the room shown with open windows.

ABERDEEN COUNTY.

G.M., Adult male; after treatment in a sanatorium patient was supplied with a shelter which he has occupied for about 18 months. He is at work as a gardener.

ABERDEEN COUNTY.

A.M., Adult male: since October, 1913, has occupied shelter: for 2½ years has been steadily at work in a paper factory - hours 6 a.m. to 5.30 p.m. Recently he and his family flitted to another house, the shelter being also removed there.

21

22

ABERDEEN COUNTY.

J.S. Adult male; for two years patient slept in a tent; for the succeeding five years he used this shelter supplied by local authority. Patient has since died.

23

ABERDEEN COUNTY.

J.G., Adult female: bed loaned by local authority: photo. shows its position relatively to window and condition of window: weather dry cold, and visit a "surprise" one. Patient at present in institution, her leg having had to be amputated.

24

25

LEWIS.

Shelter occupied for two years by a male patient on his return from a sanatorium. A few days prior to his death, he developed laryngitis and was induced by his friends to be nursed in the house.

26

LEWIS.

Shelter occupied for one winter by a male patient on his return from a sanatorium. About 11 years ago he emigrated to America and remains in good health.

27

AYR COUNTY.

T.W., Adult male: had previous sanatorium treatment; for about 15 months has used shelter which is about quarter of a mile distant from his home. His family bring him food.

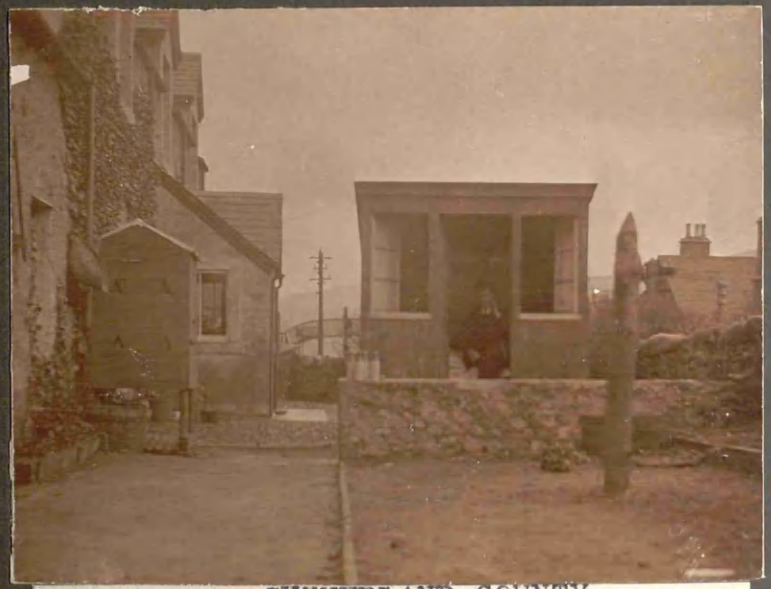
Patient took pneumonia & died August 1916

28

SUTHERLAND COUNTY.

Shelter occupied since August 1912. Now at work again as a fisherman and still uses shelter. Previously he slept with a brother in a small back apartment.

29



SUTHERLAND COUNTY.

Shelter occupied since August 1915: still under treatment.

30

SUTHERLAND COUNTY.

Shelter occupied since April 1914: has resumed occupation as a clerk and still uses shelter

31

SUTHERLAND COUNTY.

Shelter occupied since April 1914: still under treatment.

32

33

ROXBURGH COUNTY.

J. R. Male; shelter hired by Insurance Committee from Local Authority: occupied same for about a year: took measles and progress retarded: re-admitted to sanatorium.

34

ROXBURGH COUNTY.

M.H. Female: for some months has occupied shelter.

35

36