- Crawford, J. S. (1963). *Brit. med. J.*, 2, 119.
 Davidson, J. A. (1962). *Ibid.*, 2, 951.
 Heyns, O. S. (1959). *J. Obstet. Gynaec. Brit. Emp.*, 66, 220.
 Hingson, R. A., Cull, W. A., and Benzinger, M. (1961). *Anesth. Analg. Curr. Res.*, 40, 119.
 Johnstone, M. (1963). *Proceedings of the Symposium on Methoxyflurane*, p. 35. Queensborough, Kent.
 Lamaze, F. (1958). *Painless Childbirth*. London.
 McAneny, T. M., and Doughty, A. G. (1963). *Anaesthesia*, 18, 488.

- Mapleson, W. W. (1963). In *Uptake and Distribution of Anesthetic Agents*, edited by E. M. Papper and R. J. Kitz, p. 104. New York: Medical Research Council (1954). *The Use of Trilene by Midwives*, Memorandum No. 30. London.
 Minnitt, R. J. (1934). *Brit. med. J.*, 1, 501.
 Romagnoli, A., and Korman, D. (1962). *Canad. Anaesth. Soc. J.*, 9, 414.
 Sharpless, S. K. (1965). In *The Pharmacological Basis of Therapeutics*, edited by L. S. Goodman and A. Gillman, 3rd ed., p. 132. New York.

Patients who Reside in Common Lodging-houses

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Common lodging-houses exist in many of our larger cities and are licensed by the local health authority. A night's lodging is cheap and the facilities provided are correspondingly limited. Many clients pay for one night at a time.

There is surprisingly little up-to-date information about the size of the lodging-house population in this country, and its demands and needs in respect of medical or social care. Laidlaw (1956) traced the growth of the lodging-house system. He made a detailed study of lodging-houses in Glasgow, which at that time accommodated over 7,000 persons, of whom he interviewed 800. Sargaison (1954) surveyed living conditions in lodging-houses in Belfast, and reported on the results she obtained from a social interview with a series of 371 inhabitants over the age of 60 years. Merfyn Turner (1960) gave an interesting commentary on a London lodging-house and some of its inhabitants as seen by a trained sociologist. We require a considerable investment in sociological and epidemiological techniques if we are to bring these studies up to date and to extend them.

Clinical studies relating to the lodging-house population usually reflect the specialist's interest—for example, Whiteley (1955) reported on the psychiatric diagnosis of 100 men admitted to an observation ward from three lodging-houses in London, while Edwards *et al.* (1966) studied alcoholism in a sample group of 51 down-and-out men who were regular patrons of a soup kitchen in Stepney.

General practitioners and hospital doctors working in casualty and outpatient departments not infrequently encounter individuals residing in common lodging-houses. Since they see a broader spectrum of disease than that presenting in more specialized departments, it is worth while to look at records which can be obtained from such sources.

Method

The Sample

This study took place in a general practice in Edinburgh. In that city there exists lodging-house accommodation for approximately 1,000 persons. Five lodging-houses are situated within a radius of a quarter of a mile of the practice premises, and, though their occupants are free to consult any doctor in the area, substantial numbers of them use this practice. As a consequence, and some time before the study began, when the practice reorganized its appointment system we reserved one hour each morning during which individuals residing in common lodging-houses could present themselves as temporary patients without prior appointment.

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The sample used for this study simply consisted of all patients residing in common lodging-houses who so presented themselves during a period of six months (March–August 1964). This consecutive series of 310 persons comprised 210 who had attended on at least one previous occasion, together with 100 who were seen for the first time ever during the period of the survey.

Two categories of data were collected during the survey: (1) information recorded in respect of each person on the first occasion on which he was seen during the period; and (2) data recorded at each consultation with each patient throughout the survey period.

The nature of the information available to the doctor at the first consultation varied; in respect of the new patients no information at all existed, but with regard to two-thirds of the sample at least some information was available before the patient was seen for the first time during the period.

It is appreciated that severe limitations are imposed on the significance which can be attributed to data derived from a general practitioner's consulting-room in respect of a heterogeneous group of persons, many of whom are already selected by virtue of consulting a doctor. At the same time, the information relating to this consecutive series of patients is so striking that it was thought to be worth publishing at this stage. We hope by this means to interest others who may be working in parallel fields and may be able to assist us in the extension of our studies.

Method of Assessment at First Attendance

On the occasion of the *first* attendance at the surgery during the study period certain social and clinical data were recorded in a standard fashion.

The social data included the patient's name, age, sex, civil status, religion, length of stay in lodging-house, contact with other relatives, occupation, occupational state, and source of income.

The clinical data were obtained by a rigidly standardized history-taking. Because of his dual role of providing medical care and taking part in a planned survey the doctor was, however, free to supplement this questionnaire and to carry out such physical examination as he regarded as clinically relevant to the patient's presenting symptoms. He was also, of course, free to use information acquired in respect of those patients who had already been seen at some time before the survey began.

The clinical impression derived from years of experience with lodging-house patients was that there is an unusually high inci-

dence of chronic bronchitis, pulmonary tuberculosis (mainly quiescent), chronic alcoholism, epilepsy, gross mental illness which had required inpatient treatment, arthritis, cardiovascular disease, and major and chronic disease of the central nervous system. These patients often present with major organic and psychiatric conditions which are either static, with permanent sequelae, or are progressive and irremediable. This is in contrast with patterns of consultation in a less-selected general practice population, where there are usually a substantial number of acute, self-limiting, and simple, resolving conditions. With this in mind, after a series of pilot investigations, we devised an abbreviated method of history-taking which would enable us, for the purpose of this study, to identify at the initial consultation individuals who could be placed in one or more of 10 categories. The criteria to be satisfied in respect of each of these ten conditions were arbitrarily defined. The 10 conditions were used for the purpose of this study as diagnoses to be established or rejected at the first consultation with each patient. These were not regarded as fully established final diagnoses in the classic sense, but the criteria were rigid enough to identify certain gross pathological conditions in this group of patients. The criteria used for this first screening examination were as follows:

Chronic Bronchitis.—A history of cough and spit of at least two years' duration either continuously or at least throughout the winter months.

Pulmonary Tuberculosis.—Pulmonary tuberculosis diagnosed at any stage in the patient's life and confirmed radiologically, provided it had progressed beyond the primary complex stage.

Cardiac Disease.—This is recorded only when one or more of the following are present in patients under the age of 65: congenital heart disease; valvular disease of the heart; angina pectoris; coronary thrombosis; congestive cardiac failure.

Arthritis.—Any form of arthritis in which the diagnosis has been made in hospital and/or has been confirmed by x-ray examination.

Malignant Disease.—Patients in whom malignant disease has at any time in the past been diagnosed by a doctor.

Mental Illness.—Earlier experience with patients reporting from common lodging-houses suggested that there was a high incidence of gross psychiatric disorder and many individuals with multiple pathology. It was frequently almost impossible to distinguish between cause and effect when considering, for example, the clinical diagnosis in a man with a long history of fits who had for several years failed to maintain himself in employment, was a chronic alcoholic, and had been discharged from the Services as a "psychopathic personality." It was decided for the purpose of this study to ignore or exclude simple uncomplicated neuroses or behavioural disorders as such and to seek evidence only of gross psychiatric disturbance. For this purpose we decided to treat the following four conditions as a group—namely, mental defect, chronic alcoholism, epilepsy, and psychiatric disorder. The criteria used were as follows:

Mental Defect: Patients in whose case there is evidence that they have been found previously by formal test to have an I.Q. below 70 or who have attended a special school for the mentally handicapped or have been inmates of an institution for the mentally handicapped.

Chronic Alcoholism: Patients who concede that excessive consumption of alcohol sustained over a period has been associated with one or more of the following—loss of employment, break-up of family, imprisonment, or recurrent ill-health.

Epilepsy: Patients who have had a diagnosis of grand mal made by a doctor and for which treatment has been prescribed. When this diagnosis was accepted by the interviewing general practitioner "epilepsy" was recorded.

Other Psychiatric Disorders: Any person who has been an inpatient in a mental hospital.

These four conditions were for the purpose of this study recorded as if they were mutually exclusive. "Psychiatric disorder" is therefore limited to patients who have been in a mental hospital at some time in the past and who have not been placed in one of the other three categories.

Central Nervous System.—Any organic disease of the central nervous system not included in the above.

All of these 10 conditions had to be sufficiently advanced to satisfy the criteria laid down for the screening procedure at

the brief initial examination. Our findings are therefore likely to underestimate the prevalence of these diseases in this series of patients.

Data Collected at Surgery Consultations

It is to be pointed out that, apart from the screening carried out at the initial contact with each patient, the routine work of diagnosis and treatment continued at any subsequent attendance. For study purposes, however, certain additional data were recorded at the first and at any subsequent consultation with these patients. This information was collected in loose-leaf ledger form and included, for each contact with the patient, the doctor's diagnosis at that consultation and the action taken by him in respect of prescribing, certification, and referral to hospital or to statutory or voluntary social agencies.

We can now answer three questions about this consecutive series of 310 persons—namely, What kind of people were they? What kind of diseases did they present? What picture emerges from an examination of their patterns of consultation?

Findings

What Kind of Persons?

The basic social characteristics of this series of patients are set out in Tables I to V. The main features are as follows: males outnumber females by 4 to 1; nearly half of the patients are in

TABLE I.—Age and Sex Distribution

Age in Years	Males (%)	Females (%)	Total (%)
Under 25	4.4	6.8	4.8
25-45	27.5	33.9	28.7
45-65	50.6	42.4	49.0
65+	17.5	16.9	17.4
Total (= 100%) ..	251	59	310

TABLE II.—Duration in Residence at Present Address

Length of Stay	Males (%)	Females (%)	Total (%)
Under 1 week	24.7	23.7	24.5
1-4 weeks	13.1	23.7	15.2
1-6 months	19.9	13.6	18.7
6-12	10.8	8.5	10.3
1-5 years	16.7	13.6	16.1
5+	14.8	16.9	15.2
Total (= 100%) ..	251	59	310

TABLE III.—Marital Status

Marital Status	Males (%)	Females (%)	Total (%)
Married	6.4	16.9	8.4
Single	60.5	33.9	55.5
Widowed	10.0	10.2	10.0
Divorced	3.2	5.1	3.5
Separated	19.9	33.9	22.6
Total (= 100%) ..	251	59	310

TABLE IV.—Employment Status

Employment Status	Males (%)	Females (%)	Total (%)
Employed	33.1	15.2	29.7
Unemployed	55.0	64.5	56.8
Retired	11.9	20.3	13.5
Total (= 100%) ..	251	59	310

TABLE V.—Source of Income

Income Source	Males (%)	Females (%)	Total (%)
Wage	32.7	15.2	29.4
National Insurance ..	16.7	5.1	14.5
National Assistance ..	41.1	61.0	44.9
Old age pension ..	13.5	15.2	13.8
Other income	2.8	11.9	4.5
Total (= 100%) ..	251	59	310

the age group 45 to 65 years; a quarter had been resident for less than one week, while 38% of males and 47% of females had been resident for less than four weeks at the time of consultation—for both sexes 58% had been resident under six months, though 31% had been residing in a particular lodging-house for more than one year.

Sixty-one per cent. of males but only 34% of females were single. However, 23% of males and 39% of females were either divorced or legally or socially separated from their spouses. Thirty-three per cent. of male and 15% of females were gainfully employed at the time of consultation, but 55% of males and 65% of females were unemployed. Seventy per cent. of males and 52% of females were classified as unskilled, using the General Register Office classifications. Table V indicates that 59% were in receipt of National Insurance or National Assistance benefits. Nearly half of the patients stated that they had no contact with any member of their family.

This consecutive series of consulting patients presents, therefore, a very different picture from what is offered by 300 consecutive consulting patients in the average general practice (General Register Office, 1956). The preponderance of males (particularly over the age of 45), their social mobility, their precarious financial status, and their social isolation are all striking features.

What Kind of Diseases did they Present?

Table VI lists the frequency with which any of the selected list of 10 conditions was recorded at the initial examination. A striking feature is the incidence of chest conditions and gross mental illness. Fifty-four (17%) had chronic bronchitis. Thirty-two patients (10%) had at one time been diagnosed as having pulmonary tuberculosis. In half of these the condition was healed or quiescent, but 17 were still under surveillance, of whom seven were undergoing active treatment.

TABLE VI.—Frequency of Group 1 Diseases

Group 1 Disease	Males (%)	Females (%)	Total (%)
Chronic bronchitis ..	17.5	17.0	17.4
Pulmonary tuberculosis ..	11.9	3.4	10.3
Cardiac ..	4.8	6.8	5.2
Arthritis ..	8.4	10.2	8.7
Malignancy ..	4.4	3.4	4.2
Mental deficiency ..	1.6	3.4	1.9
Chronic alcoholism ..	9.6	8.5	9.4
Epilepsy ..	5.2	1.7	4.5
Psychiatric ..	11.5	15.2	12.3
C.N.S. ..	7.2	5.1	6.8
None of these ..	41.0	42.4	41.3
Total (100%) ..	251	59	310

Attention is drawn to the prevalence of malignant disease. In respect of 13 patients (4% of the series) malignant disease was recorded. Many of these patients were of course known to have been previously diagnosed in a hospital or clinic before reporting for the first time to this practice. In eight of the 13 the site of the primary growth was the lung, in two the large bowel, and in one each the pharynx, the skin, and lymph nodes. Five of them died during the period of the survey.

Eighty-seven patients (28%) satisfied the criteria for being included in the group showing gross manifestation of mental illness, 38 having gross psychiatric illness, while 29 conceded that chronic alcoholism was a major problem.

In the whole series six out of 10 patients satisfied the criteria for inclusion in one or more of these 10 selected major illness categories.

Consultation Patterns

During the six-month period the 310 patients accounted for 1,422 consultations. At each consultation the doctor recorded

one clinical diagnosis. It is emphasized that this was the doctor's own diagnosis, written in his own words in the course of routine clinical practice, as contrasted with the arbitrarily defined list of 10 conditions referred to above for use at the first examination. The doctor's consultation diagnoses were coded, the full international list being used, then grouped into one or other of the 16 main sections of this list. While because of the mobility of some of these patients it is not possible to give consultation rates on patients at risk for a specified period of time, an analysis of these consultation diagnoses gives additional information about the spectrum of disease presented by this consecutive series of patients. The results are given in summary in Table VII. This illustrates the preoccupation of the doctor during his routine consulting sessions with mental illness, respiratory disease (in particular chronic bronchitis and the sequelae of pulmonary tuberculosis), diseases of the musculo-skeletal system, and the after-effects of injury and violence. Also in contrast with more usual patterns of consultation in general practice is the relatively low number of consultations for upper respiratory infection.

TABLE VII.—Number of Consultations Made by 310 Patients Over a Period of Six Months

Diagnosis	No. of Consultations	
I. Infective	93	Pulmonary tuberculosis 86
II. Neoplasm	49	Cancer lung 34
III. Allergy. Endocrine ..	7	
IV. Blood	25	
V. Mental	205	Epilepsy 78; Eyes 7; Ears 8
VI. Central nervous system ..	131	Cardiac 59
VII. Circulatory	102	Chronic bronchitis 74; upper
VIII. Respiratory	184	respiratory tract infection 59
IX. Digestive	86	
X. Genitourinary	27	
XI. Pregnancy	16	
XII. Skin	78	
XIII. Bones and joints ..	171	Rheumatoid arthritis 24; osteo-
		arthritis 13; fibrositis-myositis
		70
XIV. Congenital	3	
XV. Infancy	0	
XVI. Symptoms and ill-defined ..	96	
XVII. Accident—poisoning—	149	Fractures 59; other injuries 82
violence		
	1,422	

The relevance of mental illness to consultation patterns is again probably underrepresented in Table VII, since at least some of the consultations which were attributable to ill-defined symptoms and some of the consultations given such labels as "fibrositis," "myositis," and some of the consultations labelled epilepsy would require to be looked at more closely in order to present a precise picture of the proportion of consultations which could be attributed to the mental-illness group.

Therapeutic Action.—An analysis of the action taken by the doctor at these 1,422 consultations in respect of prescribing, certification, and referral to hospital or other agencies is given in Table VIII. At more than half of the consultations the patient received a certificate, and at less than half was a prescription given—a high certificate rate and a low prescribing rate for general practice (General Register Office, 1956). At 135 consultations (9.8%) the patient was referred to hospital. This represents a high referral rate compared with 3.1% found in another study in this practice (Scott *et al.*, 1960).

It is pointed out that previous or coexisting attendance at hospital departments was used as part of the criteria for establishing the diagnosis of one or more of the selected list of diseases. Our high referral rate of 9.8% is therefore an under-

TABLE VIII.—Referrals

Action Taken	% of Consultations
Prescription issued	43.3
Certificate	52.3
Referral to hospital	9.8
„social agency	5.0

Total consultations (= 100%), 1,422.

estimate of the use made of hospital services for this group of patients, since many had been attending before being seen by us and did not require a new referral. Forty per cent. of the patients in this series had attended a hospital outpatient department on at least one occasion during the survey period, and at 36% of all consultations the patient was at that point in time actually attending one or other of the local hospital outpatient departments. Furthermore, it is common experience that many individuals residing in common lodging-houses when taken suddenly ill or suffering from acute traumatic episodes either report direct to the casualty department or are taken there by the police. This group of patients, therefore, are high consumers of hospital outpatient services.

Comment

In this study we have attempted to obtain some objective data to support or refute earlier clinical impressions of the patterns of pathology presented to a general practitioner by patients residing in common lodging-houses.

The technique used by the general practitioner in screening patients at their first attendance requires further study and evaluation. In a second series each new patient, in addition to being seen by the general practitioner, is being examined independently by another doctor. This examination includes the recording of blood pressure, chemical and bacteriological examination of the urine, routine haematology, liver-function tests, blood urea, and syphilis flocculation reaction, as well as routine cardiography and chest radiography. These patients also have presented to them a standardized psychiatric questionnaire—symptom-sign inventory (Foulds and Caine, 1965). We will use some of this material to check the validity of the simpler clinical screening.

As in our preliminary study, most of the reported studies of lodging-house patients deal with categories of individuals already selected because they have consulted a particular medical or social agency. To obtain a more balanced picture of the quantitative and qualitative aspects of the problem we require to apply social and epidemiological methods to the population as a whole or to a suitable random sample. Such a study has now been planned.

We cannot generalize from this material to the lodging-house population as a whole, since we do not know the factors which determine the selection of patients coming to our consulting-room. Nevertheless, the evidence we present in this paper is that at least a proportion of these patients are highly mobile, are social isolates, and are high consumers of medical and social services. It is suggested that some attention might profitably be given to the problems of communication between hospital outpatient departments, as well as between these departments

and the general practitioner and statutory or voluntary agencies in the community, so as to minimize unnecessary referral and unnecessary repetition of examinations and tests.

Summary

The results are given of a study of a consecutive series of 310 individuals who were resident in common lodging-houses in Edinburgh and who had consulted a local general practice. In this series males outnumbered females by four to one. A high proportion (26%) were divorced or separated from their spouses, many were highly mobile, and most were social isolates. This group showed a high incidence of chronic bronchitis and of pulmonary tuberculosis and its sequelae. Some 28% had gross mental illness and 4% were found to have malignant disease. Apart from these conditions a high proportion of the consultations were for the late effects of trauma. The group as a whole were high consumers of medical and social services. At 10% of consultations the patient was referred to the hospital services. Forty per cent. of the patients had attended a hospital department at least once during the six-month period of the survey.

A method is described by which a doctor may carry out a simple screening of patients from common lodging-houses whom he is seeing for the first time. This is essentially a sharply focused history, but the results in the series would appear, so far at least, to justify the adoption of the method either by a general practitioner or by a doctor working in a casualty or outpatient department.

Two of us (P. G. G. and D. C. M.) were responsible for the clinical examination and recording, but we are all three indebted to our colleagues in the department, in particular Dr. C. A. Gibbs and Miss E. A. Warren, for advice and criticism in planning a series of studies of which this is the first.

REFERENCES

- Edwards, G., Hawker, A., Williamson, V., and Hensman, C. (1966). *Lancet*, **1**, 249.
- Foulds, G. A., and Caine, T. M. (1965). *Personality and Personal Illness*. London.
- General Register Office (1956). *Studies on Medical and Population Subjects*, No. 9. H.M.S.O., London.
- Laidlaw, S. I. A. (1956). *Glasgow Common Lodging Houses and the People Living in Them*. Glasgow.
- Sargaison, E. Miriam (1954). *Growing Old in Common Lodgings*. London.
- Scott, R., Anderson, J. A. D., and Cartwright, A. (1960). *Brit. med. J.*, **2**, 293.
- Turner, M. (1960). *Forgotten Men*. London.
- Whiteley, J. S. (1955). *Lancet*, **2**, 608.