A SURVEY OF PATIENTS WITH CHRONIC ILLNESS IN A GENERAL PRACTICE

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Mortality is a clear cut event, and from the reign of Elizabeth I it was the custom to keep a register of deaths in parish churches. In certain places the actual cause of death was given in bills of mortality. It was not until 1837 that the certification of deaths became compulsory. Morbidity on the other hand is usually assessed when the patient presents himself to the doctor. That again is a definite event, the date of which can be recorded, and it is the occasion for an attempt at diagnosis. There are however many people who suffer from definite deformity or illness who never report to the doctor with their troubles and such cases will escape the net of any ordinary survey. Even serious disease such as pulmonary tuberculosis may be missed in a number of ways. For instance the condition may be so insidious as to be virtually without any symptoms. On the other hand symptoms may be present, and the patient may ignore them, either because he fails to realize their significance, or he is afraid to reveal or admit them. Finally the patient may treat himself without any reference to the doctor. This kind of thing happens with many of the chronic diseases that are seen in general practice.

Method of Recording

The precise method employed to collect these data was as follows. It involved comparatively little work for the collecting doctors as most of the recording was done by the practice secretary. Any chronic case noted at the surgery, at the patient's home, or even in the street, was recorded over the period of the survey year. A strip of thick paper 1½ inches wide and 8 inches long was inserted into the N.H.S. envelope; this protruded well above the top of the envelope. On this slip was recorded the disease, the year in which it was first noted, and the patient's work status. If the patient had several illnesses, the main item was recorded first, with the work status, and the others after it. For example a man John Smith who was permanently off work with chronic bronchitis and emphysema, who was also deaf and hypertensive would be recorded (figure 1).

This slip of paper only took a minute or so to complete. When the card was given to the secretary she entered the patient's name, age and sex on two quarto cards. The first was the nominal roll of all chronic patients in alphabetical order. The second was the

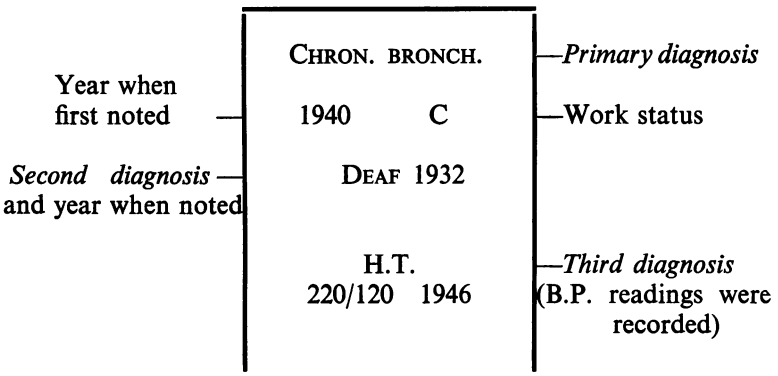

FIGURE 1.

Signal Card as it appears protruding from N.H.S. Envelope.

diagnosis card; there was a separate card for each disease. Thus John Smith's name would be entered on four cards; the nominal roll of the chronic patients with the initial S, and on the cards for chronic bronchitis, deafness and hypertension. When these entries had been made, the N.H.S. envelope was marked with a cypher to show that this patient had been dealt with. If John Smith was later shown to be suffering from diabetes mellitus this would first be checked on the nominal roll card to ensure that he had not already been so entered, and only then would details be added to the diabetes mellitus card.

If when visiting John Smith one remembered that his aged father was blind and his brother had a Pott's spine, two slips would be inserted into John Smith's envelope, each one headed by the name of the patient and the complaints. On returning to the surgery these slips would be transferred to their appropriate cards and any chronic ailment not already noted would be added.

The work status was in one of four catagories.

A — fully employed
B — light work only
C — permanently unemployed
D — bed ridden

The correlation of work and chronic illness will not be dealt with here as it is the subject of a later paper.

Nature of Survey

In this survey we have tried to record the total amount of chronic illness known to exist in a practice in patients alive during any part of 1957. The practice is one of 8,100, about 5,000 of whom are in a large village. The rest live in scattered villages within a radius of five miles. The main work is coal-mining, farming,

brick-making and shoe-making, and for the women, hosiery and shoe-making. The practice is in undulating country between 300 and 600 feet, rather exposed and subject to fog, but with no air pollution, and no silicosis.

The figures have been collected in three ways; firstly, when a patient consulted the doctor because of his chronic illness; secondly, when a patient presented with an acute illness and it was noted that he had also a chronic illness; and thirdly, when the patient did not present during the survey year, but the chronic illness was remembered perhaps when a relative consulted the doctor, or when the patient himself was seen in the street. It is known that 70 per cent of a practice consult the doctor in any one year. In this way possibly 90 per cent of the practice would be covered.

Some unfortunate people had many different types of chronic illness; for example, a man of sixty had deafness, hypertension, peptic ulcer and chronic depression. The classical teaching that one should avoid multiple diagnoses does not always apply in dealing with chronic illness. Thus in this series there were no less than 318 patients with a double diagnosis, 50 patients with three chronic illnesses, 18 with four, and three patients who each had five chronic illnesses.

It is realized that complete accuracy is impossible, except in certain very obvious and rare diseases such as hydrocephalus, fragilitas ossium and haemophilia. An attempt has been made to grade the reliability of the figures by dividing them into four groups.

(A) indicates the highest standard of accuracy and applies to such diseases as cancer, angina pectoris and pernicious anaemia. The next category (B) denoting moderate accuracy, includes sufferers from such diseases as chronic bronchitis and rheumatoid arthritis. The next (C) of doubtful accuracy includes such patients as those with prolapsus uteri and chronic otitis, many of whom accept their disabilities and do not report to their doctors. The fourth category (D) includes unreliable figures such as those for obesity, migraine and dysmenorrhoea.

Where there is a special interest in a disease or symptom the incidence will be raised. For example the recorded figures of diabetes mellitus was virtually doubled for part of this practice surveyed by Walker,[1] when 80 per cent of the villagers submitted to urine tests in a house to house survey. The figures for depression in this area will be higher than for most practices, because of a special interest in the symptom. In the same way a special technique will uncover unsuspected organic disease. French[2] has discovered much previously unsuspected organic heart disease by the use of the electrocardiograph in general practice.

TABLE I

Int. classn. No.	*Disease or condition*	*M*	*F*	*P*	*Estim. occur.*	*Persons per 1,000*	*Logan and Cushion*
444-447	Hypertension	67	131	198	B	24	14.7
310-318	Chronic anxiety	31	76	107	B	13	—
502.0 & 502.1	Chronic bronchitis and emphysema	85	17	102	B	13	11.1
504 & 501	Peptic ulcer syndrome	68	18	86	B	11	9.2
723	Osteoarthritis	41	44	85	C	11	11.2
241	Asthma	45	39	84	B	10	8.5
260	Diabetes mellitus	23	45	68	A	8.4	3.7
140-205	Cancer	29	35	64	A	7.9	5.0
701	Eczema	33	30	63	C	7.8	12.2
397-398	Deafness	27	30	57	B	7.0	1.8
560-561	Hernia	50	5	55	B	6.8	7.3
287	Marked obesity	7	46	53	D	6.5	11.4
353	Epilepsy	24	22	46	A	5.7	3.3
N800 } N999 }	Traumatic deformities	34	9	43	C	5.3	—
	Cerebral arteriosclerosis*	18	24	42	B	5.2	
	Congenital deformities	21	19	40	B	4.9	
	Auricular fibrillation	11	26	37	B	4.6	—
	Chronic depression	12	23	35	B	4.3	—
	Varicose eczema	11	23	34	B	4.2	—
391	Chronic otitis media	13	19	32	C	4.0	—
722	Rheumatoid arthritis	5	26	31	B	3.8	4.8
706	Psoriasis	19	12	31	C	3.8	3.3
385	Cataract	13	18	31	C	3.8	1.5
	Congenital strabismus	14	16	30	C	3.7	—
410-416	Rheumatic heart disease	11	18	29	C	3.6	1.4
526	Bronchiectasis	13	14	27	B	3.3	1.2
631	Prolapse of the uterus	—	26	26	C	3.2	6.4
420.2	Angina pectoris	15	10	25	A	3.1	3.5
001-008	Pulmonary tuberculosis	9	16	25	A	3.1	2.9
	Contact dermatitis	6	17	23	B	2.8	—
	Schizophrenia	13	9	22	A	2.7	—
354	Migraine	7	14	21	D	2.6	5.3
330-334	Cerebrovascular accident	5	16	21	A	2.6	—
363	Sciatica	17	4	21	C	2.6	3.5
	Blindness (registered)	10	10	20	A	2.5	—
420.1	Coronary artery thrombosis	13	6	19	A	2.3	3.7
290.0	Pernicious anaemia	12	7	19	A	2.3	2.0
325	Mental deficiency	13	6	19	A	2.3	0.5
434.2	Heart failure	12	6	18	A	2.2	0.8
390	Otitis externa	11	7	18	C	2.2	5.3
	Orthopaedic deformities	6	9	15	C	1.9	—
253	Myxoedema	1	14	15	C	1.9	—
291	Anaemia, iron deficiency	1	14	15	D	1.9	5.7
322	Alcoholic addiction	9	4	13	C	1.6	0.2
	Ulcerative colitis	7	6	13	A	1.6	—
584-585	Gall bladder disease	3	10	13	C	1.6	2.9
350	Parkinsonism	8	3	11	B	1.4	0.9
010-019	Tuberculosis (non-pulmon.)	7	4	11	A	1.4	0.8

*This figure includes 12 severe dements, 4 men, 8 women.

Table 1 shows the estimated incidence per thousand patients to two significant figures, of all the conditions with an incidence greater than one per thousand. The first column gives where possible the International Classification number. The figures are shown in three columns, male (*M*), female (*F*) and persons (*P*). The next column shows, where possible, the figures from Logan and Cushion,[3] which, it should be noted are of patients *consulting* per thousand, in one year, and not the incidence of patients per thousand *known* to have the condition, a figure which we have tried to record. Conditions are recorded in order of incidence.

The following rarer conditions have an incidence of less than one per 1,000 and these are not compared with the figures of Logan and Cushion.

TABLE II

Int. classn. No.	*Disease or condition*	*M*	*F*	*P*
713	Alopecia, complete or areata	4	4	8
	Congenital heart disease	2	5	7
288	Gout	5	1	6
020-029	Syphilis	2	4	6
	Detached retina	5	1	6
345	Disseminated sclerosis	1	4	5
	Other demyelinating diseases	2	3	5
613	Hydrocele	5	–	5
	Paraphrenia	1	3	4
590-594	Chronic nephritis	2	2	4
252	Hyperthyroidism	3	1	4
	Psychopathic personality	3	0	3
722.1	Ankylosing spondylitis	3	0	3
	Chronic osteitis	2	1	3
	Paraplegia	1	2	3
214	Fibroids uteri	–	3	3
	Hydronephrosis	3	0	3
	Compensation neurosis	3	0	3
387	Glaucoma	1	2	3
253	Cretinism	0	2	2
204	Leukaemia	1	1	2
	Lupus erythematosus	0	2	2
295	Pseudo-haemophilia	1	1	2
	Henoch's purura	0	2	2
581	Cirrhosis of the liver	2	0	2
	Heart block	2	0	2
	Other myocardial degeneration	1	1	2
	Chrohn's disease	1	1	2
	Aneurysm	1	1	2
	Multiple fibromatosis	1	1	2
	Fragilitas ossium	0	1	1
	Keratitis	1	0	1
731	Paget's disease	0	1	1
201	Hodgkins disease	1	0	1

If all chronic diseases are grouped into broader categories the incidence in order of frequency is as follows. The figures are compared with those of Logan and Cushion for all diseases, both acute and chronic.

TABLE III

Type of disease	*B & W Chronic diseases*	*Logan and Cushion All diseases*
1. Cardiovascular disease	41.0	68.4
2. Bone and joint disease	30.1	86.8
3. Respiratory disease	29.4	264.2
4. Psychiatric disorders	24.8	50.0
5. Skin diseases	22.0	105.6
6. Gastro-intestinal diseases	21.4	107.0
7. Neurological diseases	18.7	119.8
8. Metabolic disorders	18.3	50.8
9. Ear, nose and throat disease	11.0	These are
10. Eye diseases	11.0	included in 7
11. Cancer	7.9	5.0
12. Blood disorders	4.8	14.3
13. Congenital diseases	4.9	2.0
Total	245.0	

Figures are persons per 1,000

When adjustments were made for the numbers of patients suffering from two or more chronic diseases, it was shown that about 20 per cent of the practice population were suffering from a chronic disease of one form or another. It can be seen on comparing the figures of these two surveys, that cardiovascular disease assumes a position at the top of the list in chronic disease and respiratory disease is third instead of heading it by a long lead as it does in the survey of all types of illness.

It should be noted that in the following diseases our figures were considerably higher than those of Logan and Cushion.

TABLE IV

	Our figures	*L. and C. figures*
Hypertension	24.0	14.7
Epilepsy	5.7	3.3
Diabetes mellitus	8.4	3.7
Cancer	7.9	5.0
Deafness	7.0	1.8
Cataract	3.0	1.5
Rheumatic heart disease	3.6	1.4
Bronchiectasis	3.3	1.2
Mental defect	2.5	0.5

The figures for epilepsy and diabetes in our survey are of high accuracy as the cases were cross-checked by outside surveyors. The cancer figure was higher because it included all persons known to have had a cancer, and not merely the patients consulting in a single year. One old man has survived an excision of the rectum for 30 years. Persons rarely come to the surgery to consult about blindness or deafness because they accept them as chronic and incurable disabilities.

The following diseases showed a higher incidence in Logan and Cushion's figures, and here we conclude we have blind spots in our powers of observation. Quite clearly there are more cases of iron deficiency anaemia than we have recorded.

TABLE V

	Our figures	*L. and C. figures*
Eczema	7.8	12.2
Marked obesity	6.5	11.4
Prolapse of the uterus	3.2	6.4
Otitis externa	2.2	5.3
Anaemia, iron deficiency	1.9	5.7

Uses of the Chronic Register

There are three main purposes in maintaining such a register. (1) It enables a practice to maintain a record of all chronic illness which will grow more accurate as the years pass, as long as new cases are added and patients dying or leaving the practice are deleted. (2) It is most useful for personal research. When one of us wrote a paper on coronary artery disease, all known cases of angina, and coronary thrombosis were available on the card index.
(3) It is useful to other research workers. In the last five years requests have come in for the numbers of patients suffering from pernicious anaemia, ulcerative colitis, and alcoholism in this practice. The answer was forthcoming in a matter of minutes. In a projected survey on hypertension, it was suggested that only cases with a diastolic pressure of 120 and over should be included. The question then arose as to whether or not this criterion would be too exclusive. A reference to our register showed that some 42 cases would qualify for such a survey, and it took precisely 2½ minutes to work this out.

Summary

(1) A method of compiling a register of chronic disease is described.
(2) The figures after a year are given and compared with those of Logan and Cushion.

(3) There are some differences between the figures and these are discussed.

(4) The uses of such a register are enumerated.

We would like to record our thanks to Dr W. J. Meldrum and Dr H. F. Cantwell for their willing co-operation in compiling the register, and to Mrs. Beatrice Gretton, our secretary, who did most of the hard work of completing the cards.

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3. Logan, W. P. D. and Cushion, A. A. (1958). Studies on Medical and Population Subjects No. 14. *Morbidity Statistics from General Practice.* Volume I (General). H.M.S.O.

Nursing the Late Cancer Patient at Home. JEAN AITKEN-SWAN, A.M.I.A., A.H.A., *The Practitioner* (July 1959), **183**, 64.

This paper is a report on 200 interviews carried out by an almoner who was attempting to assess the relatives' reaction to a recent experience of cancer in the family, and the effects on the public's general knowledge of the disease.

The family doctor's part is brought out well. " What relatives particularly liked in a doctor was that he would visit often and that he would come when he said he would. Their gratitude was all the greater as they fully appreciated that there was really nothing he could do and that he was busy." Conversely, the most frequent complaint among the 16 per cent who had fault to find was that the doctor would not visit. One relative said, " If only he had come and given the patient coloured water it would have been better than nothing." Other relatives complained of the patient being told the diagnosis or somehow getting the impression that there was no more to be done. Another complaint was that the relatives were not told the diagnosis. In 77 per cent of the cases investigated the relatives were satisfied with the patient's medical care at home— " a magnificent tribute to general practitioners ". The predominant feeling was that all that could have been done had been done. The majority of families did not appear to expect much help.

A better system of communication between hospital doctor and relatives is said to be needed.