ORGANIZED CURIOSITY

A Practical Approach to the Problem of Keeping Records for Research Purposes in General Practice

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It is perhaps not commonly realized that the family doctor's ordinary records, kept by him primarily for the purpose of treating his patient, can be utilized for research purposes. Use of the term " research " may often subconsciously influence potential workers against the principle of making use of the information they acquire, yet each family doctor in the course of a year may make a note of several thousands of small independent observations. Each of these observations will be simple, will not make demands on time and energy, but will be essential to the proper practice of medicine. These individual observations can be noted down according to an organized pattern. This pattern can be devised to meet the statistical needs of the observer, working either alone or in a group.

General practice offers many superior advantages in this field of activity. Each observer lives within rather than outside the sphere of his world of observation; in contrast to the hospital worker who, in general, records a large number of detached observations about a few, the general practitioner is able to record a very large number of simple observations about the many. Collected together and analysed much valuable information not otherwise obtainable becomes available.

At each contact between doctor and patient a decision is made by the doctor concerning the action he must take about the patient. Normally, the family doctor records some few valid and competent observations concerning the diagnosis and treatment; if, at the same time, he notes down just that little more over and above that which is immediately required, then collectively all these observations can be regarded as research.

The description to be applied to this process may more accurately be defined as Organized Curiosity, since firstly the observer is basically curious (otherwise the observations might not be made),

and secondly unless this curiosity is directed towards a certain named purpose it will be ineffective. The term organized curiosity is also less likely (because it is more apt and descriptive) to arouse apprehension in the breast of the potential worker when faced with a decision as to whether or not he or she should take part in research in general practice. With these brief observations in mind it is my purpose to outline a system of recording easily, simply and effectively the basic data required to describe the qualitative and quantitative aspects of morbidity in general practice.

A method of record keeping

The basis of the method is simple; the principle used is that of attaching analytical significance both to the *place of entry* of the observations and to the *content* of these observations; the details recorded are of the simplest nature, there is the minimum of writing. A loose-leaf ledger is used. Each sheet in the ledger is 4½in. wide and 2¾in. deep: it is ruled in feint both back and front, and with a head line on both sides. There are perforations near the margin of one vertical side.

The entry in each line covers six points of significance:

(1) Date
(2) Name
(3) Year of birth
(4) Address
(5) Condition or clinical syndrome noted
(6) Indication of number of times the episode is noted.

Age and sex are recorded without any extra effort or writing on the part of the observer by placing significance on the position of the entry. Thus, the front of each sheet is used for entries for males, and the reverse side of the same sheet is used for entries for females. Children and infants are recorded similarly, entries for boys on the front, entries for girls on the reverse of the sheet, *but* a small metal signal tag is placed on the lower lateral free edge (i.e., flat vertical edge opposite to the side which has the perforations near it). In the system described, the 14th birthday is taken as the dividing line: entries relating to children aged 14 years and under are on the loose-leaf sheet which has a metal tag attached to it, but all entries for males and females aged 14 years and one day or over are placed on the sheet without the tag. When the sheets are filed in the loose-leaf ledger, each sheet used for recording entries of children lies directly under that used for recording the same conditions in adults; it can be easily differentiated by means of the small metal tag.

Date—This is essential.
Name—Equally so.
Year of birth—This is not essential: Age in years would do,

but complications can arise where for example, a birthdate comes in the middle of a recording period; thus entries made before the birth date may show a difference of a year when compared with those made after that date. This could cause error. Again, when an analysis of several years entries are to be made, the ages are accurate only in so far as the year in which they are recorded are concerned. Frequent recalculation is therefore necessary. By contrast the year of birth is definite and constant. Though a little more time and effort may be required initially, in the long run it is easier to work with the birth year as base line. (Usually in cases of doubt it is a simple matter to refer to the age-sex register of the practice population that it is assumed the observer maintains).

Address. The need to note this is a vexed question and one that arouses discussion. *But* if not noted, how can the individual concerned be identified with accuracy in say 3 or 6 months time, let alone 3 or 5 years hence? Without an address, an identification number is needed; this requirement leads inevitably to the use of complicated processes; such complications argue directly against the simplicity which is a characteristic feature of this system. Again, it is much more likely that the observer, a family doctor looking after patients that he knows, will know also their addresses. The relevant details can usually be noted swiftly. Lastly, what is not commonly realized is the extent to which patients move in and out of a given practice population over a period of time. It is sufficient to mention here that reliable figures are available which show that the range of movement of the practice population varies from 8 to 20 per cent per annum. In effect this means that on the average one entry in ten will refer to a patient who has moved in each year the record is kept. It is easily seen that when records are kept for some years, unless there is an effective method of identification of the individual patient to whom the entry refers, for all practical purposes the information will be of much less value, and hence the conclusions drawn will be worth even less.

Condition or clinical syndrome noted. The International Classification is used. The diagnostic terms (which include definite pathological conditions, syndromes, and symptom-complexes) are marked in clear lettering on the base-line of each sheet. As a rule only two or three diagnostic terms are included on each sheet; for common conditions only one term per sheet is used. Each diagnostic term has a number 1, 2, or 3 clearly marked after it. When an entry is made on a line, the number of the diagnostic term to which the entry refers is marked clearly on the line after the address.

Episode of condition diagnosed. In order to make a quantitive as well as a qualitive survey of morbidity, space is provided on the

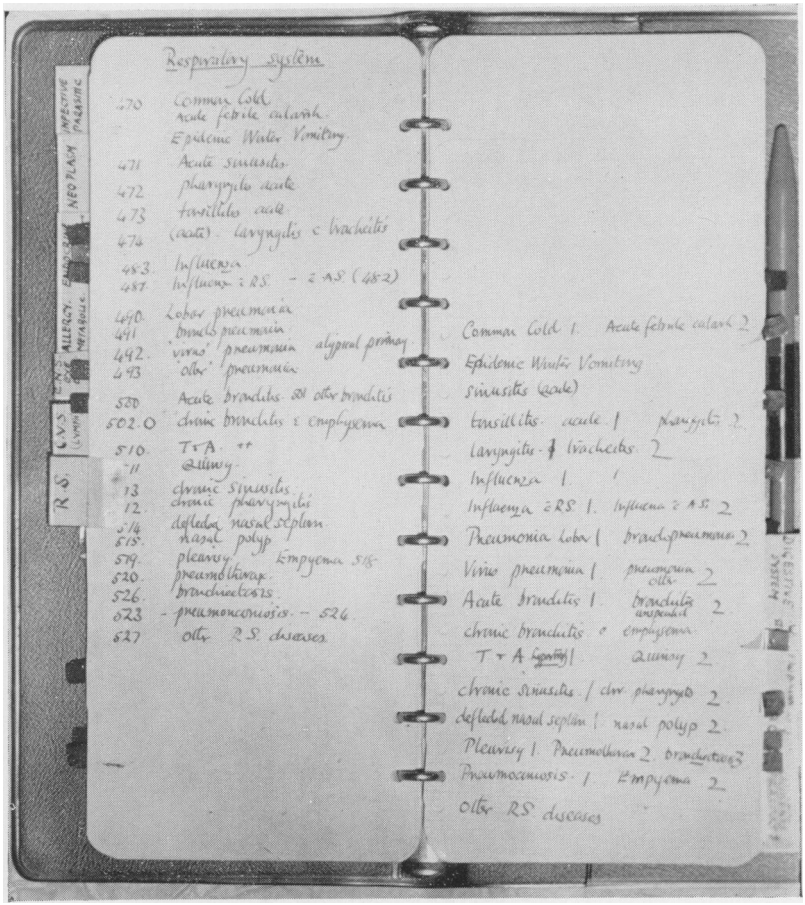

Figure 1

THE LOOSE-LEAF LEDGER USED BY THE AUTHOR

line of entry for a mark to be made indicating the number (amount) of episodes noted for the period during which the record is kept. Each episode is indicated by a slanting vertical stroke (to differentiate it from the number 1). The " gate " is used: i.e., if there are 5 episodes during the recording period, then these would be shown as four slanting strokes and one transverse one, thus: ~~////~~ . Lastly, provision is made at the end of the line of entry for noting the International Classification reference numbers of other significant conditions from which the patient may be suffering. Thus, the elderly female hypertensive diabetic, with cataract, bunions, and fractured femur following on a fall at home, would be recorded under diabetes (since this was the basic condition) on the reverse of the sheet, and the International Classification reference number for hypension (440), cataract (385), bunion (740), fractured femur (An.14), fall at home (AE.141), would be inserted after the other data. A full and true record would thus be made swiftly and would be instantly available at all times.

In this way, without any extra consumption of time and energy when making the entry, the observer is able at all material times to differentiate instantly between entries for men, for women, for boys, and for girls, i.e., the age/sex differentiation is continuous and constant, and is always valid and competent when analysing the record. It is but the work of moments to make the appropriate entry at the time of consultation, when writing up the patient's medical record. It is not claimed that everything seen and noted is recorded. What is claimed is that the method enables the observer to record swiftly and effectively, almost the whole extent and range of diagnosable morbidity.

The loose leaf ledger

A standard commercial loose-leaf ledger suitably modified is used, together with visual signals as described above: the ledger contains 12 divisions, each based on the International Classification.

The loose-leaf sheets in each division lie overlapping one another, so that the bottom $\frac{1}{2}$in. only of each sheet is clearly visible. It is on this lowest and visible $\frac{1}{2}$in. x $4\frac{1}{4}$in. space of each sheet that the diagnostic terms are written. Each division of the ledger can accommodate some 20 sheets—overlapping in this manner from above downwards. Thus, when the ledger is open a number of sheets each with the bottom $\frac{1}{2}$in. visible, can be seen. Since each sheet accommodates some two or three diagnostic terms, it is seen that there is space for some 60 diagnostic terms per division, or for 12 divisions, it is possible to differentiate qualitatively to the whole extent of some 720 diagnostic terms if so desired (I use approx. 450). On each sheet there is space for 10 lines of entry on each side, i.e., 20 lines per sheet. Since the ledger can hold some 250 sheets plus

12 dividing cards (each card separating one section or division from its neighbour), there is therefore room for 250 x 20 or 5,000 entries.

Each piece of card used to separate one division from the next is 10½in. x 3in. When the ledger is opened at any one division, the dividing card falls to the left-hand side, and the loose-leaf sheets overlapping each other lie to the right.

On the face of the card visible in this manner, are written in clear bold lettering all those diagnostic terms (up to 60 in number in that section) which are entered up on the loose-leaf sheets opposite. By each diagnostic term is marked the International Classification reference number of that term. On the free edge of the dividing cards, clearly written " thumb-tags " referring to the content of that division (i.e., C.V.S., R.S., G.U.S., C.N.S.) are affixed.

When wishing to make an entry, the appropriate thumb-tag is found in a moment, and the ledger flipped open at the appropriate division. All the diagnostic terms used in that section are clearly visible on the left hand side (together with their International Classification numbers) and on the right-hand side all the diagnostic terms are clearly visible written on the loose-leaf sheets; again in a moment the appropriate sheet is found, those above it are flipped out of the way, and the entry made on the front or reverse side. When any sheet has more than 10 entries on it, front or back, a new sheet is made out and inserted directly over it. The cover is stoutly built of long lasting material—its cost was half that of the total outlay. It will stand up to a considerable amount of wear and tear—one has been used daily for two years and is as good as new. The ledger is 11in. x 5in. x 1in. thick when full. It is solid enough when opened to permit entries to be made without difficulty when holding the book in the car, as well as using it when on the desk. The stout cover protects it from harm. I believe that such a method of recording basic data, or any modification thereof, is far more effective than a punch-card system, for by reference to the loose-leaf book, a classification of conditions seen is built up. The full clinical details are recorded on the individual record card EC8. There are many gaps in this method, but it is better to have a system that offers some information easily, within the limits of our capacity to compile records, than a theoretically more efficient system which saps interest more rapidly because it demands too much time and energy. This method of keeping records can utilize with equal facility either the WHO International Classification or the College sponsored Classification of Disease (1959). A discussion of the merits and advantages of these classifications is not relevant in this paper.

Basing my observations on experience of the above method of

recording, I would like to consider the method of recording details of conditions seen (morbidity), for statistical analysis in general practice. Whatever approach is used, it can be affected by several factors of which the chief are:

1. Not every family doctor has an interest in these subjects.
2. Each practice is affected in its constitution eventually by the personality and interests of its medical member(s).
3. Many practices, good from the aspect of epidemiological study, will not be included in any scheme.
4. Even though practices vary, it is probable that the composite picture presented by the relatively few practitioners taking part in epidemiological studies will not be the same as that presented if all the large number remaining outside the study were to be included. The validity of conclusions based on observations made by self-elected groups of observers may be questioned. Their application to the vast majority of practices not so investigated can be doubted. In order to obviate this serious criticism, the sample must be large enough for all these differences to cancel out, and so for the conclusions reached to be valid for all.
5. A system that attracts enthusiasts only is probably not as effective finally as one that embraces less study and effort and encourages a larger number to take part in morbidity recording.

One is doubtful, therefore, of the eventual value of a punch-card system of recording. Designed in relatively recent times to meet a particular need for collating information gathered as a multitude of individual items, it is in danger of stultifying epidemiological observation in general practice. In hospital practice, patients as separate clinical problems are considered by different observers at differing times and even in different places. The family doctor observes his patients as individual human beings in their own environment over a period of years; his conclusions, when recorded during an investigation, are more related to the individual patient's personality, and, to that extent, less capable of being defined within a system of strict mechanical classification. The system described overcomes this difficulty by providing the necessary freedom to the recorder.

APPENDIX

Classifications Used:

(Divisions are based on the main sections of the International Classification)

1. Infective and parasitic diseases: Virus diseases: Immunizations and vaccinations
2. Malignant and benign tumours
3. Allergic, endocrines, metabolic and nutritional disorders
   Disorders of the blood and blood-forming organs
   Mental, psychoneurotic and personality disorders
4. Disorders of the central nervous system—of the eye; of the ear

5. Disorders of the cardiovascular system (including lymphatic system)
6. Disorders of the respiratory system
7. Disorders of the alimentary system (including liver, gall-bladder and pancreas)
8. Disorders of the genito-urinary system
9. Pregnancy, childbirth, puerperium, congenital and early infancy disorders
10. Disorders of the skin, cellular tissue, bones and limbs
11. Symptoms: accidents, poisoning, violence, fractures, dislocations and wounds
12. Spare (classification space for personal interest).

(Twinlock PR10 is the pocket ledger used)
Examples of typical entries are:

	(1) *Date*	(2) *Name*	(3) *Year of birth*	(4) *Address*	(5) *One of conditions marked on loose-leaf (1, 2, or 3)*	(6) *Episodes of condition diagnosed*	(7) *I.C. reference number of other conditions diagnosed*
(A)	1.8.59	J. B. Smith	1910	509 Tower Green, Penketh	2	/	722*
(B)	3.8.59	J. Jones	1809	220b Baker Street, Sankey	1	~~////~~	450* 520*
(C)	5.8.59	A. B. Roe	1929	1 North-South St., Penketh	3	//	—

(*International Classification reference number of other significant condition from which the patient may be suffering.)

Yorkshire Faculty Journal,

December, 1959.

This number contains an account of the faculty annual general meeting, and the names of the new faculty board. A diary of post-graduate lectures and conferences, occupying almost five pages covers meetings of interest in Yorkshire and adjoining areas. There follows an account of practice in Lagos, some notes on a Pfizer lecture by H. Daintree Jonson on *The Diagnosis and Management of Dyspepsia*, some observations on the Leeds medical curriculum by Dr A. U. MacKinnon, and an account of the College's Medical Recording Service.

This journal is an excellent example of what can be done in the faculties.