

Hospital Topics

Self-administered Clinical Questionnaire for Outpatients

J. M. GUMPEL, A. M. S. MASON

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Summary

A self-administered questionnaire designed for prerecording the routine clinical information required from outpatients has been found to be acceptable to them. Such a questionnaire should greatly ease the collection and recording of basic clinical information and offer the doctor more effective use of his time. With the questionnaire more information was recorded and therefore available in the case notes than at a conventional doctor-patient consultation. No administrative problems occurred in its distribution, use, and return.

Introduction

Fletcher has recently commented that it is very easy to spend too much time on routine symptomatic inquiry in a crowded outpatient clinic and too little time in observing the patient and listening to his spontaneous talk.¹ One method that may aid the use of outpatient time in the most effective way is to ask patients to complete a simple questionnaire recording routine clinical information before their outpatient appointment. Hall has recently described such a document and found that not only did it allow him to concentrate on the patients' presenting symptoms but that reticent patients also disclosed information on paper which they might not have mentioned in a busy outpatient clinic.²

Another aspect of a formal questionnaire lies in recording in a standard manner the answers, both positive and negative, to a more comprehensive set of questions than can normally be asked in a busy outpatient clinic. The information recorded may also result in considerable saving of time for doctors who see the patient subsequently, and may provide part of the data-base for problem-oriented medical records.

We have designed a short but comprehensive questionnaire and have examined its acceptability to patients, the quantity of information recorded, and the administrative aspects of its distribution, use, and return in a district general hospital.

The Questionnaire

The questionnaire was developed with two basic aims: to remove from a doctor/patient consultation the time-consuming collection of clinical information needed as the background to the patient's presenting complaint; and to improve the recording of these details, as well as others not normally recorded, such as social class, housing, and

occupation. Six physicians were asked to list the basic information that they considered should be recorded for every new outpatient attending the hospital.

The questionnaire is composed of six sections.

- (1) The patient's presenting complaints and their duration.
- (2) Past medical history, including previous hospital attendances (where, when, diagnosis, and treatment), and direct questions about common chronic diseases.
- (3) Drug history, including details of current medication, of previous treatment—for instance, steroid preparations—and of past history of drug reactions or allergies.
- (4) Social history, including patient's occupation (recorded so that social class may be coded), accommodation, smoking and drinking habits, and foreign travel experience.
- (5) Family history including age, and illnesses suffered by the patient's first-degree relatives.
- (6) A symptomatic inquiry, comprising 28 questions (35 for women), structured for the most part on a yes/no answer basis, inquiring into the function of the major body systems.

EVALUATION

Acceptability to Patients

A preliminary study of the questionnaire with 23 hospital inpatients was undertaken. This sample contained 8 patients over 65, and 6 from social classes IV and V—two groups in whom there might have been some difficulty in completing a document of this nature. The average time taken to fill in the questionnaire was 23 minutes (range 15-37).

All the questions and words used were understood by patients, and in no cases were sections of the questionnaire left unanswered. Fifteen patients volunteered favourable comments about the document, mostly that it was extremely useful to have the time to think about their medical history before being seen by a doctor, in an atmosphere free of the anxiety and rush generated by a busy outpatient department. Five patients under 50 commented that they thought elderly patients would be worried by a document of this nature, but the eight patients over 65 who filled in the questionnaire did not find this.

In routine use in an adult outpatient clinic, some 250 questionnaires have been completed with excellent acceptance by patients. In general, they have been answered satisfactorily, and no modification has been needed. In particular, they have been useful for patients with little or no English, as they have usually been able to obtain help at home.

Information Obtained

Information collected by the questionnaire was compared with that obtained from the same patient at a previous consultation in the following way. Sixty consecutive new outpatients under the care of three physicians had been seen and their history recorded normally. At that time the respective physicians

were not aware of the proposed study. Two to three weeks after the original appointment the patients were sent a questionnaire and asked to complete it. The information recorded on the patient-completed questionnaire was compared with that on a questionnaire completed from the patient's notes by a research worker.

In no case did the patient fail to enter information that had already been recorded in the notes. On the other hand the patient-completed questionnaire consistently recorded more information than had been written down by the physician during the outpatient consultation (see table I). Much of this was potentially important information, such as smoking habits, recent foreign travel, and current medication. Probably the information had been sought in the previous consultation, but was not recorded since it was irrelevant or because of lack of time, or alternatively the information had not been sought. Often the diagnosis might have been immediately obvious and might need no further recording. Nonetheless, much potentially useful information was unavailable in the case record for subsequent physicians. No check was made on the accuracy of the information recorded by the two methods, so that if a patient recorded smoking 20 cigarettes per day in the questionnaire, and 40 per day in his notes, it was recorded only that a smoking history had been completed in both cases.

Many of the additional details on the patient-completed questionnaire were useful not only as background information to the patient's presenting complaint, but also as important diagnostic pointers. As examples, a patient presenting with symptoms of anaemia reported a long history of aspirin ingestion, and a patient with joint symptoms recorded a past history of psoriasis. In both of these cases the use of the questionnaire could have resulted in a considerable reduction in the time taken to reach a diagnosis. In addition the poly-symptomatic neurotic patient is speedily identified.

Quantity of Information Recorded in Patients' Notes compared with That Obtained by a Self-administered Questionnaire

Information	Physician A		Physician B		Physician C		All	
	Quest.	Notes	Quest.	Notes	Quest.	Notes	Quest.	Notes
(a) Number of patients on which information was recorded								
Smoking Habit ..	20	6	20	9	20	3	60	18
Alcohol Ingestion ..	20	3	20	9	20	0	60	12
Occupation ..	20	8	20	0	20	1	60	9
Accommodation ..	20	2	20	0	20	0	60	2
Foreign Travel ..	20	2	20	16	20	0	60	18
Family History ..	20	6	20	17	20	9	60	32
(b) Additional facts discovered per patient by patient completed questionnaire								
Previous illnesses ..	0.8		0.7		1.2		0.9	
Current medication ..	0.7		0.2		0.8		0.6	
Symptoms ..	4.1		2.4		5.2		3.9	

Acceptability to Physicians

No formal evaluation of this document's acceptability to physicians has been attempted. One of us has used the questionnaire for over nine months and has found certain definite advantages. The recording of the patients' basic medical background and symptoms has been made in a standard and easily scanned manner. Checking the information given is the work of a minute or two and allows the patient time to familiarize himself in the room. It is immediately apparent if a particular section of the form has not been completed. When scanning the questionnaire further details about the data recorded can be requested, which if asked during the patient's recounting of his symptoms might seem irrelevant to the patient and interrupt his train of thought. Checking completed, the physician is then able to spend the rest of the interview discussing the problem presented by the patient in a more leisurely manner, spared the time and tedium of routine

questioning. The questionnaire is addictive, as a sense of deprivation may be felt in its absence.

Administrative Aspects

At Northwick Park Hospital, patients request outpatient appointments via a patient information centre and the details of the appointment are sent by post with a form for registration details. The questionnaire has been sent out at the same time as these two documents. Over 250 patients have been managed in this way; 95% response rate has been achieved and there have been no particular administrative problems nor criticisms from patients. The questionnaire is filed in the notes at the same time as the referring letter.

Discussion

The acquisition of clinical information is an essential part of the diagnostic process, but the longhand recording of this data is lengthy and frequently tedious. The volume of new patients attending outpatient clinics in a district general hospital is now such that of necessity physicians spend less time with each patient, with a consequent loss of spontaneity between doctor and patient. Thus any part of the doctor/patient interview which can be completed before the outpatient visit will allow the time saved to be spent counselling the patient.

Several standard questionnaires are in use, especially in the U.S.A., but are usually considerably longer, such as the Cornell Medical Index, or are psychiatrically orientated; some are computerized.³ In general, with increasing complexity of questionnaire, acceptance by the physician decreases.⁴ Hall² has used a short questionnaire for recording routine clinical data which is given to the patient when an outpatient appointment is made. The aim of his document is to reduce the time a physician spends in the routine questioning of patients. The Northwick Park questionnaire is similar but more comprehensive than that described by Hall, the additional information being a full history of smoking and alcohol intake, foreign travel experience, drugs taken, and living accommodation. There are also differences in style. Hall favoured the bald statement of a symptom (for example, loss of weight) with a yes/no answer, while our questionnaire contains simple questions of fact (for example, what is your weight now?; what has been the most you have ever weighed?) As a consequence our questionnaire covers four sides of standard paper as against the two of Hall's document. Hall originally asked patients about their past medication but found this information to be of little value. Patients using our questionnaire have completed this section frequently more adequately (except in spelling) than either the referring letter or the outpatient notes.

Routine recording of a new case-history in this way, and including such factors as occupation, smoking history, and a drug history may prove valuable for the clinical researcher. Occupation has been recorded in such a way that social class coding may be possible and validation of this method of social class recording is planned as well as a study of the accuracy of the questionnaire in inpatients and of time-saving for house officers. An additional advantage of a standardized questionnaire is that all the doctors who see the patient can quickly discover relevant clinical details. This is particularly important in outpatients, where a succession of different doctors may see the same patient during the follow-up period.

We have not formally attempted to measure the acceptability of the questionnaire to doctors working in outpatients. Hall felt that each clinician would want to design his own questionnaire, but this can pose a major logistic problem in despatching several different questionnaires from the same hospital. The questionnaire we have described was purposefully designed to be of use in any outpatients clinic regardless

of speciality interest, and there was general agreement about its content among the clinicians who helped design it.

We would like to thank our colleagues, medical and non-medical, at Northwick Park for their co-operation in this study, in particular Mrs. E. Goldenberg and Dr. T. W. Meade.

References

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- ² Hall, R., *British Medical Journal*, 1972, 1, 42.
- ³ Rockart, J. F., McLean, E. R., Hershberg, P. I., and Bell, G. O., *Archives of Internal Medicine*, 1973, 132, 348.
- ⁴ Mayne, J. G., Martin, M. J., Taylor, W. F., O'Brien, P. C., and Fleming, P. J., *Annals of Internal Medicine*, 1972, 76, 923.

MEDICAL HISTORY QUESTIONNAIRE

IN CONFIDENCE

SURNAME:
 FORENAMES (all)
 WHEN ANSWERING QUESTIONS PLEASE RING APPROPRIATE ANSWER e.g. YES/NO
 DATE.....

PRESENT PROBLEMS

What are your main complaints now and for how long have they been present?

COMPLAINT	LENGTH OF TIME
1.
2.
3.
4.

When did you last feel well?

IN THE PAST

Have you ever attended a hospital as an out-patient or in-patient before? (Except childbirth) YES/NO

If YES—please fill in the table below as fully as you can.

CONDITION/DISEASE	HOSPITAL ATTENDED	YEAR	TREATMENT/OPERATION
(Example: Stomach Ulcer	Willesden General	1963	Gastrectomy ..)
.....

Have you or any member of your family ever had tuberculosis (T.B.)? YES/NO

Have you ever had rheumatic fever? YES/NO

Do you have (or have you had) treatment for:

- 1. Diabetes or sugar in the urine? YES/NO
- 2. High blood pressure? YES/NO
- 3. Arthritis? YES/NO
- 4. Bronchitis or chest trouble? YES/NO

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TREATMENT HISTORY

Are you taking any drugs/medicines/tablets (including sleeping pills and painkillers) at the moment YES/NO

If YES—which drugs?

(Please bring them with you to out-patients)

Have you ever been treated with Steroid drugs? (Cortisone, Prednisone) YES/NO

Have you ever had any bad reaction or allergies to a drug? YES/NO

If YES—which drug(s)?

OCCUPATION

—MEN, and all WOMEN who are WAGE-EARNERS: please enter details of your present occupation (or previous if not currently at work).

TYPE OF WORK
 (Example: Head Clerk)

BUSINESS OR INDUSTRY.....
 (Example: Insurance)

POSITION	Self employed	Otherwise employed
	Manager	Supervisor Foreman

—WOMEN who are not wage-earners: please enter details of your husband's occupation.

—For CHILDREN AND STUDENTS: please enter details of father's occupation.

ACCOMMODATION

Do you live in:
 A house A flat
 A bungalow Other Accommodation
 How many bedrooms are there in your home? (Specify).....

SMOKING AND DRINKING

Please record your present smoking habits. If you used to smoke and have given up, please record in the column labelled IN PAST what your habits used to be.

	NOW	IN PAST
Manufactured cigarettes : Number/day
Hand-rolled cigarettes : Ounces/week
Pipe tobacco : Ounces/week
Cigars (large, small) : Number/day
Non-smoker :

Please record your APPROXIMATE alcohol intake

Beer	Pints/week
Spirits	Measures/week
Wine (incl. sherry)	Glasses/week

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FAMILY HISTORY

Please fill in details about your parents, husband/wife, sisters, brothers and children.

RELATIVE	ALIVE OR DEAD	AGE (now or at death)	SERIOUS ILLNESSES SUFFERED
e.g. Sister.....	Dead.....	57.....	Heart attack, bronchitis....
.....

Are there any conditions that run in your family? YES/NO
 If YES, specify:

FOREIGN TRAVEL

Have you travelled outside the BRITISH ISLES in the last TWO YEARS? YES/NO

If YES:

Country visited	Date
.....
.....

Have you ever travelled to or lived outside EUROPE? YES/NO

If YES:

Country visited	Date
.....
.....

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SYMPTOMS ENQUIRY

Have you a good appetite? YES/NO

Has there been any change in your appetite? YES/NO

What is your weight now (approximately)?sts.....lbs

What has been the most you have ever weighed (approximately)?sts.....lbs

How often each week do you have your bowels open? Times/week

Has there been a recent change in the frequency of your motions YES/NO

Has there been a change in the appearance of your motions? YES/NO

Do you regularly take any 'medicine' to help open your bowels? YES/NO

Have you noticed any blood in your motions? YES/NO

Do you have any pain or discomfort in the abdomen (tummy)? YES/NO

Have you experienced any nausea (feeling sick) or vomiting (being sick) recently YES/NO

Do you have to get up most nights to pass water? YES/NO

Do you have any difficulty in passing your water? YES/NO

Have you noticed any change in how often you pass your water? YES/NO

Have you noticed any change in colour or blood in your water? YES/NO

Do you have a cough? YES/NO

Do you get any pain or discomfort in your chest? YES/NO

Do you find you are more short of breath than other people of your age? YES/NO

Have you noticed that your ankles become swollen? YES/NO

Do you get headaches more frequently than other people? YES/NO

Do you have any fits, faints or dizzy spells? YES/NO

Do you have any trouble with your eyes or get double vision? YES/NO

Do you have any weakness or difficulty in moving your arms and legs? YES/NO

Do you have any pains or 'pins and needles' in your arms and legs? YES/NO

Do you have any pain or stiffness in the joints? YES/NO
 Do you have any skin trouble? YES/NO
 Do you have any difficulty in getting off to sleep at night? YES/NO
 Do you wake up early before you have to get up? YES/NO

FOR WOMEN ONLY

How many pregnancies have you had?

If you have had children:
 Did you have any complications during your pregnancy? YES/NO
 Have you still got your periods? YES/NO
 If so: How frequently do your periods come on? Every.....days
 Are your periods regular? YES/NO
 How long does each period last?days
 Do you take, or have you taken the contraceptive pill? YES/NO

Computers in Medicine

Computer-based Hypertension Clinic Records: A Co-operative Study

L. J. BEILIN, C. J. BULPITT, E. C. COLES, C. T. DOLLERY, B. F. JOHNSON, C. MEARNs,
 A. D. MUNRO-FAURE, S. C. TURNER

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Summary

A computer-based medical record system has been developed to help with research into hypertension and the management of patients with hypertension. Standard medical records are replaced by data collection forms and case notes printed by the computer. A computer-generated document for recording information at follow-up visits contains an up-to-date summary of the important clinical features with warnings of risk factors. A blood-pressure graph and a letter for the general practitioner are produced on request. The system has been used in three clinics for two years and is being tested in general practice. Information on 900 newly-referred patients has been recorded and at present data on 30 to 40 new patients and 160 follow-up visits are added each month.

Introduction

Special clinics have been set up in several centres for the care of hypertensive patients since the introduction in 1950-1 of effective drug treatment for hypertension. Though a few

studies have been made of patients attending hypertension clinics, research and management have suffered from inadequate standard clinical records.

We have developed a new computer-based records system to aid research and management of patients with hypertension by providing an accurate, detailed, and readily retrievable set of "longitudinal" data. The committee responsible was composed of physicians from three hospitals, a medically qualified computer scientist, and two programmers with paramedical training. Preliminary accounts of this work have been given.^{1,2}

Outline of System

At the patient's first visit the clinician records his findings on a special input form (the initial input form) and not in standard case notes. Nevertheless, the form contains a history, details of the examination and investigation, and a decision about treatment and long-term supervision. At the computer centre a case note is printed and returned to the clinic; a subset of data is stored on magnetic tape; a follow-up input form is printed for the doctor; and a blood-pressure graph is printed (fig. 1).

After the patient's next visit the completed follow-up input form is returned to the computer centre where the data are added to the computer file, the clinical case note is brought up to date, and a further follow-up input form is produced together with a new blood-pressure graph and a letter to the general practitioner. The case note printings form the clinical case record.

Method of Recording Data

Information is recorded on the input forms in English in coded boxes, or by encircling code numbers, or by entering simple standard codes. Codes distinguish between a negative observation and one that is missing. When the information is in numerical form—for example, the blood-pressure reading—the number can be written in the appropriate place. But symptoms, diagnoses, and drug names are written and the computer converts them into a numerical code using a dictionary against which it compares the plain language entry.

Department of the Regius Professor of Medicine, Radcliffe Infirmary Oxford

L. J. BEILIN, M.D., M.R.C.P., Honorary Consultant Physician and First Assistant

Medical Research Council Clinical Pharmacology Research Group, Royal Postgraduate Medical School, Hammersmith Hospital, London

C. J. BULPITT, M.B., M.R.C.P., Honorary Consultant Physician and Honorary Lecturer in Clinical Pharmacology

C. T. DOLLERY, M.B., F.R.C.P., Professor Clinical Pharmacology

Division of Computing and Statistics, Medical Research Council Clinical Research Centre, Northwick Park Hospital, Harrow, Middlesex

E. C. COLES, M.B., M.TECH., Member of scientific staff

S. C. TURNER, Senior programmer

C. MEARNs, Programmer

Department of Medicine, King's College Hospital, London

A. D. MUNRO-FAURE, B.M., F.R.C.P.C., Honorary Senior Lecturer

B. F. JOHNSON, M.B., M.R.C.P., Honorary Senior Lecturer