The diabetic, the hospital and primary care

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SUMMARY. In a survey of mainly elderly patients discharged from a hospital diabetic clinic, it was found that 41 per cent were being seen by the general practitioner only when required or not at all, 36 per cent were being seen fairly regularly, and 23 per cent at routine appointments.

The transfer from hospital to primary care was popular with two thirds of these patients, mainly because of the time, trouble, and money they saved in no longer travelling to hospital.

Over 20 per cent of patients thought they had been discharged from the diabetic clinic because they were cured, a further 37 per cent thought they could be cured, about a third did not test their urine, and a similar proportion admitted that they did not keep to their diet.

Of 204 known diabetics examined in general practice, about half had high blood sugars, a third of lower limbs had undoubted signs of peripheral vascular disease, and one fifth of the sample had both.

Introduction

IN an ageing society there is a marked rise in the number of maturity-onset diabetics who appear suitable for routine management by the general practitioner. Malins and Stuart (1971) describe how a visiting team from the hospital clinic could assist in the general practice management of diabetics, while Thorn and Russell (1973) describe diabetic mini-clinics in general practice.

When the consultant in charge of a large diabetic clinic in Sheffield asked the city practitioners if they would be willing to accept clinical responsibility for such patients, about three quarters of them agreed to do so. Three years after this policy had been put into operation and 1,060 patients had been discharged to general practitioner care, it was obviously desirable to assess the outcome.

Method

Survey forms were sent to 218 practitioners about 530 patients listed on alternate cards in the 'discharged patient' register. Of the 481 questionnaires returned (a 90 per cent response rate) 437 were analysed. Eighty-nine of these patients were then visited by the nurse researcher who used a semi-structured questionnaire. Later, a further 212 patients were visited by two trained lay interviewers who delivered a structured questionnaire and also recorded the patients' comments.

As a separate project but at the same time, a specially trained nurse carried out a series of tests on 204 patients known to be diabetic and selected by 15 volunteer group practices.

Results

General practitioner questionnaire

Over 80 per cent of the 437 patients (224 males and 213 females) were in the 50 to 79 years age group. Apart from a predictable excess of female survivors in their seventies, and therefore of females living alone, no significant differences were noted between the sexes and Table 1 shows age of patient by frequency of general practitioner consultation for the sample as a whole.

Of the diabetics under 40 years of age, only one was being seen regularly every two or three months, while of the 179 (41 per cent) who were being seen only occasionally or not at all, 66 were under 60 years of age. The number of patients being seen frequently but not at routine intervals was 156 (36 per cent), and 100 (23 per cent) had routine appointments.

During the previous 12 months no major changes had occurred in 323 of the 437 patients. Thirty-two had some circulatory disorder, one hypertensive was being seen monthly and the other eight hypertensives were not being seen at set intervals (Table 2). Of the patients with diabetic problems, seven were seen occasionally and three were being seen at intervals of one to three months. Of the 14 patients with cardiac conditions,

Table 1. Age/frequency of general practitioner consultations with patients discharged from hospital diabetic clinic.

Frequency of consultation	Age (years)							
	<40	40-49	50-59	60-69	70-79	80+	Not known	Total
Not seen by general practitioner	3	6	20	19	15	0	0	63
Seen occasionally by general practitioner	2	11	24	43	25	4	7	116
Frequently seen but not at set intervals	2	11	31	51	49	9	3	156
Seen monthly	0	3	7	16	13	2	0	41
2 or 3 monthly	1	2	7	17	17	2	0	46
4-6 monthly	0	1	3	5	3	0	1	13
Not known	0	0	1	1	0	0	0	2
Total	8	34	93	152	122	17	11	437

Table 2. Frequency of general practitioner consultation by important health problems over one year.

		Important health problems									
	None	Diabetic changes	Blood pressure	Stroke	Other circulatory problems	Heart disorders	Chest conditions	Eye conditions	Other problems	Not known	Total
Not seen	51	0	0	0	0	0	1	0	0	11	63
Seen occasionally	95	7	3	0	0	3	1	1	3	3	116
Seen regularly but not at set intervals	90	17	5	1	2	7	7	2	7	1	139
Routinely at 1-3 months	67	3	1	0	5	3	1	3	3	1	87
Routinely at 4-6 months	12	0	0	0	0	0	0	0	1	0	13
Frequently	8	4	0	0	1	1	0	0	3	0	17
Not known	0	1	0	0	0	0	0	0	0	1	2
Total	323	32	9	1	8	14	10	6	17	17	437

three were being seen occasionally and the same number at a routine appointment every one to three months.

Nurse's interviews

A trained research nurse interviewed 89 diabetic patients as part of the initial study. It was felt that this subgroup deserved separate analysis, since patients were more closely questioned and an attempt was made to correlate information from both patients and doctors.

During the 12 months before interview 66 patients (74 per cent) had seen their practitioner. Nineteen out of the 89 interviewed had consulted their doctor because of their diabetes, another 19 consulted for diabetic and other medical reasons, and 28 gave non-diabetic reasons for the consultation. Sixty-eight had had no changes in their diabetic régime.

Of the 38 who did not test their urine, three had moniliasis, six had cataract, two had foot problems, and one each had had a heart attack, hypoglycaemic attacks, and diabetic neuropathy. It was from this group that three had needed admission to hospital.

The nurse thought that 48 were enthusiastically in favour of the changeover from hospital to primary care, 11 were neutral, 15 regretted the change, and another 15 did not make their views clear.

When asked what were the advantages of their discharge from the hospital diabetic clinic, 15 patients said there were no advantages, 35 said it saved the trouble of a journey to hospital, eight said it saved them time, and 16 said it saved money. No-one mentioned any greater ease in making appointments, or better communication with familiar doctors, or increased continuity of care.

The nurse had needed to counsel about half the patients about their diet but referred only five for further medical help.

Main patient interviews

Two lay interviewers saw 212 patients (108 male, 104 female), of whom 146 were pleased when they were

discharged from the hospital clinic, 29 were indifferent, 17 were apprehensive, and 20 were not at all pleased.

Although they had been given careful briefing at the clinic, 43 patients thought that they were discharged because their diabetes had been cured and a further 79 thought they could be cured by efficient treatment. All but 10 had been given a diet sheet, with instructions about using it and thought that they understood those instructions. However, 49 felt that dietetic control of their diabetes had not been explained clearly and 120 would like to be told more of their disease. Seventy-six admitted that they did not keep to their diet, but only nine admitted that they did not take their medicine as ordered.

When their diabetes was not well controlled, 39 adjusted their behaviour to improve it, 30 by adhering more strictly to their diet and nine by minor alteration to their medication. Forty-one had some personal routine to help in taking their medication, 67 knew when they needed to take extra sugar, and 80 carried a diabetic identification card or equivalent.

Special facets of care

Seventy-four patients did not test their urine for sugar, 28 tested daily, 38 weekly, the remainder occasionally or when they did not feel well; 90 notified the results to their doctor but 58 usually did not. Sixty had a regular appointment with their doctor but 152 had not; 119 would tell their practitioner of any important changes but 93 would not.

Of 148 who were worried when they were first diagnosed as diabetic, only 38 said they were still worried, and about this number still discussed their anxieties with their doctor.

Of 155 who felt they were taking special care of their feet, only 43 were seeing a chiropodist, 14 of whom were paying privately for this service.

The four complications thought by the patients to be commonly associated with diabetes were eye disorders (124), night cramps (84), pruritus (68), and numbness of legs (60). Foot ulcers were considered to be diabetes-related by 49, heart disease by 20, and stroke by 17. By contrast, indigestion and migraine were both thought to be connected with diabetes by 35 patients. These views are closely related to the actual complaints recorded as experienced by these patients.

Eighty-three had seen their family doctor within the month and another 96 within six months of the interview. The interviewers thought 192 had enough understanding of their diabetes to keep reasonably well.

One hundred and eighteen would like to attend the hospital clinic periodically for tests but 92 did not wish to do so.

Of 38 miscellaneous remarks from patients and relatives pleased with their discharge from hospital care, these six are fairly typical:

"I felt satisfied with general practice care."

"Trouble as regards taking time off work and therefore pleased, but felt the loss of regular check."

"Now thought capable of taking care of himself."

"To sit all those hours and never to see the same doctor twice and they don't know all your complaints."

"Best thing that ever happened—you're just a number at the hospital."

"No travelling, no waiting and I'm cured."

Of patients disapproving of the change, these sentences are also characteristic:

"I miss the check-up and can't get to the surgery and they don't visit."

"Had faith in the clinic but I've not faith in this doctor."

"A regular check is necessary for peace of mind."

"Thought that a yearly check was necessary but the doctor does not instil any confidence."

"More pressure to do the right things at the clinic."

The diabetic nurse

This section surveys the activities over a year of a part-time state registered nurse who was trained at the hospital diabetic clinic in the principles of diabetic management and went out to volunteer general practices with blood sugar (Amestest) equipment and a small Doppler flowmeter.

During the year 50 general practitioners were contacted about conducting a regular diabetic clinic in their practice: 28 were very keen, 16 were interested, and seven did not wish to use the nurse. Fifteen general practitioner diabetic clinics have been established as a result of this nurse's training and encouragement. Four are now operating well without her, another six will shortly do so; five other clinics are still being developed and another seven are under active discussion. Attached community nurses are most interested but are not yet involved routinely in the running of these clinics.

The nurse saw 204 patients (101 male and 103 female) of whom 67 per cent were in their sixties or seventies. Twenty-nine were on insulin, 116 on oral medication, and 59 treated by diet alone.

Seventy-seven received advice from the diabetic nurse and three, via the nurse, from the hospital dietician; 14 patients had their medication increased and six had their dosage reduced by their doctors as a result of the nurse's findings.

On testing the urine, 121 were found to be satisfactory, 57 had glycosuria (three of whom had ketonuria in addition), and nine had proteinuria. Forty-two patients, mostly in their sixties and seventies, had diastolic blood pressures of over 100 mm and were referred to their practitioners for review.

More important findings concerned blood sugar levels and the peripheral vascular state. Nearly half had

Table 3. Diabetic clinics in general practice. Patients with high blood sugar: i.e. over 9.0 mmol/litre (95 of 204 patients).

	9.0 to 12.0 mmol/l	12.5 to 15.0 mmol/l	15.5 to 20.0 mmol/l	20.5 to 22.0 mmol/l	22.0+ mmol/l	Total
Male	18	9	11	5	0	43
Female	18	17	8	7	2	52
Total	36	26	19	12	2	95

Table 4. Diabetic clinics in general practice. Peripheral circulatory state of lower limbs of 202 patients, by Doppler flowmeter.

	Normal circulation	Mildly abnormal circulation	Markedly abnormal circulation
Male	151	34	17
Female	113	66	23
Total	264	100	40

definitely high random blood sugar levels, above 9.0 mmols/litre (Table 3). Twelve patients were referred back, through the appropriate channels, to the hospital diabetic clinic, mostly as a result of poor diabetic control, with blood sugar at or over the 20 mmol/l level in eight cases.

When the lower limbs were examined clinically, 192 were satisfactory, but three had infected toes or feet, two had leg ulcers, one had a foot ulcer, four seemed discoloured and ischaemic, and two were in a generally neglected state—an incidence of six per cent abnormality. Doppler blood flow showed a normal picture in 151 male and 113 female lower limbs, but an abnormal picture in no less than 51 male and 89 female lower limbs (Table 4), indicating some peripheral vascular disease in a third of the limbs checked, which was severe in 10 per cent. Sixteen patients had no pulse detectable (with the Doppler) in both legs and eight of these also had a high blood sugar.

Discussion

The routine whereby the hospital diabetic clinic establishes the management suited to the individual case, educates the patient in his/her future pattern of behaviour, and later selects suitable patients for general practitioner care seems a reasonable one. Unfortunately the assumptions on which it is based are not always valid.

Deaf, anxious, partially sighted, elderly patients not accustomed to rapid learning in strange hospital environments can absorb surprisingly little of what they are told. Large clinics are short of staff and must shed some workload: but busy general practitioners attuned to contractual obligations and the Herculean tasks involved in five-minute appointments may not eagerly seek out extra work. Even if they do, they will probably have to pay themselves for the detection and pursuit of non-attenders.

Against such a background, criticism of appointment systems in primary care or dietetic advice in harassed clinics is unhelpful. In spite of the difficulties, the system gives us a general practitioner consultation over a few months to 84 per cent of the diabetics and some knowledge of their disease to 90 per cent of the patients. However, although only a few had to be referred back to hospital, some of these patients are at risk and need closer supervision.

What can be done to improve this situation with minimal additional resources?

First, we can investigate with the voluntary organizations the value of the well briefed non-professional in training patients. Closer links should be forged between the Diabetic Association and primary care with this in view. Individual counselling at home should be given a first priority, since patients in the study seemed anxious to learn more of the simple principles behind their diet, for all the previous failures in communication.

Secondly, the extra help in diabetic management that could be provided by practice or attached nurses should be ensured not by sending out hospital-based nurses to cream off interesting cases but by giving the community nurses involvement and support in those practices prepared to use them properly.

Thirdly, we must acknowledge that general practice must not be separated from modern medical technology. Any excessive use in hospital does not excuse its absence in the community, and having demonstrated that 'straight-forward' cases may not be so straightforward after all, the practitioner must be enabled to take a detailed interest in patients at special risk.

If we class as at risk those patients in the study with a blood sugar of more than 12 mmol/l or with signs of peripheral vascular disease, or both, this includes 140 patients of whom 26 per cent were under 60 years of age. The 204 patients from general practice were not a random sample and may well include a high proportion of those causing special anxiety to their doctors: but there is a need for the further study of the significance of these findings, especially in the 42 patients (one fifth) with both high blood sugar and signs of peripheral vascular disease. If we cannot give to primary care the basic equipment to do this, such patients should not be discharged permanently from the hospital clinic, but rather seen thoroughly, if rarely, for review. Alternatively, a peripatetic service can be organized along the lines described here.

COLLEGE ACCOMMODATION

Charges for college accommodation are reduced for members (i.e. fellows, members and associates). Members of overseas colleges are welcome when rooms are available. All charges for accommodation include breakfast and are subject to VAT. A service charge of 12½ per cent is added. Children aged 12 years and over, when accompanied by their parents, can always be accommodated; for those between the ages of six and 12 years, two rooms are being made available on a trial basis. Children under the age of six cannot be accommodated and dogs are not allowed. Residents are asked to arrive before 18.30 hours to take up their reservations.

From 1 April 1980, charges will be (per night):

	Members	Others
Single room	£8	£16
Double room	£16	£32
Flat 1	£25	£40
Flat 3 (self-catering with kitchen)	£35	£60

Charges are also reduced for members hiring reception rooms compared with outside organizations which apply to hold meetings at the College. All hirings are subject to approval and VAT is added.

	Members	Others
Long room	£60	£120
John Hunt room	£40	£80
Common room and terrace	£40	£80
Kitchen/Dining room	£20	£40
Jephcott room	£40	£80

Enquiries should be addressed to:

The Accommodation Secretary,
Royal College of General Practitioners,
14 Princes Gate, Hyde Park,
London SW7 1PU.
Tel: 01-581 3232.

Whenever possible bookings should be made well in advance and in writing. Telephone bookings can be accepted only between 9.30 hours and 17.30 hours on Mondays to Fridays. Outside these hours, an Autophone service is available.

Diabetes, because of the different systems involved and its long time-scale, has been thought of as typical of the diseases that need the general practitioner as co-ordinator of care. This study indicates that even highly motivated doctors in the conditions of contemporary urban practice will have difficulties in fulfilling this role; yet an effective routine of self-audit could transform this picture with surprising speed.

References

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Acknowledgements

Thanks are due especially to Dr J. D. Ward, Diabetic Consultant, and Mrs M. Young, State Registered Nurse, for much advice, support, and assistance in this study; to Professor J. Knowelden and various colleagues in the Department of Community Medicine, but especially to Mrs D. Jones, Diabetic Research Nurse, and to Misses M. Davies and P. Scull who did most of the interviewing; thanks also to the general practitioners who accepted with tolerance yet one more burden from an academic.

Ambulatory medical care

We analysed data from the National Ambulatory Medical Care Survey to compare the style of practice of two primary care providers, general internists and family general practitioners. Whereas internists spent 18·4 minutes with the average patient, family general practitioners spent 13·0 minutes. Whereas internists used laboratory tests in 73 per cent of visits and x-ray tests in 53 per cent, family general practitioners used these studies in 34 and 19 per cent of visits. Internists provided instructions regarding health problems in 17·8 per cent of visits, and family general practitioners in 12·4 per cent. The two provider groups did not differ in terms of therapy for emotional problems, both providing it in a relatively low proportion of visits (three per cent). Whether by choice or necessity, family general practitioners spent less time examining and instructing patients, and they ordered fewer laboratory and x-ray studies. The implications of these differences for the cost and quality of primary care need further study.

Reference

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