Stroke services in general practice — are they satisfactory?

ANN F BISSET

COLIN MACDUFF

ROSEMARY CHESSON

JAMES MAITLAND

SUMMARY

Background. *The contribution of general practice and primary care teams to stroke care has received surprisingly little attention despite research evidence on the importance of coordinated care.*

Aim. *To determine general practitioners' (GPs') and their patients' satisfaction with hospital and community services for stroke patients in Grampian Region, Scotland.*

Method. *A questionnaire survey of 138 stroke patients and their GPs was carried out six weeks after each patient was discharged home between June 1995 and January 1996. Outcomes measured were GP and patient satisfaction with services, Barthel Index, Hospital Anxiety and Depression scores, London Handicap Score, and Homsat and Hospsat scores (satisfaction with stroke services).*

Results. *Response rates of 95% (131) for GPs and 91% (125) for patients were obtained. GPs and patients were generally satisfied with services. Stroke patients were more likely to have had contact with their GP than with any other service. Adverse comments from GPs focused on problems with hospital discharge letters. At six weeks, patients received an average of 2.5 community services and 1.5 hospital services, but there was wide variation across disability groups.*

Conclusions. *Levels of satisfaction were high, but the wide range and variation in services used by patients emphasized the complexity of the primary care of stroke patients; the need for coordination, review and effective links with hospital; and the key role of the GP.*

Keywords: stroke; patient satisfaction; questionnaires; hospital anxiety depression scale; general practitioners.

Introduction

STROKE is a major cause of long-term morbidity and disability in the community.[1,2] Research and audit literature on acute stroke units and stroke rehabilitation have demonstrated the effectiveness of coordinated units,[3-7] but the contribution of general practice and primary care teams to stroke care has received surprisingly little attention. There is a considerable literature on the GP's role in related areas, such as the management of hypertension,[8,9] disability,[10,11] depression,[12] dementia,[13,14] unmet needs in the elderly,[15-18] and coordination of services and information for the disabled.[19] However, only one article was found when searching MEDLINE and ASSIA for 'stroke' and 'general practitioner';[20] and there were only passing references to GPs in many papers on stroke,[21-24] including papers on stroke care in the community in which GPs were not mentioned at all.[1, 25-34] Comments on GPs were often limited to generalizations such as: 'Effective coordination [of stroke services] requires general practitioners to play a central part, but most have neither the training nor the time to take on the burden of yet another specialist service.'[35] However, some data on GP contacts with patients were gleaned from searching relevant articles (Table 1).[20, 36-47]

We report a survey of GPs' and their stroke patients' satisfaction with hospital and community services.

Method

Three hundred and fifty patients were identified with a new diagnosis of stroke (ICD9 code 432-434, 436-439) in the two main hospitals (1548 beds) in Aberdeen between June 1995 and January 1996.[48] We were unable to recruit 57% (200) of the patients (mainly the frailer ones): 25% (87) died; 12% (43) were transferred to long-term care; 4% (17) had concurrent illness or problems with consent or understanding; 1% (4) refused to take part; 10% (35) were discharged before the study could be explained to them; and 4% (14) were discharged outside the Region. The remaining 150 (43%) were discharged home (or to a nursing home) and agreed to take part in the study. GPs' and patients' satisfaction with hospital and community services was studied six weeks after discharge, by which time the sample size had dropped to 138 because 12 patients had died or had suffered illness or a further stroke.

A self-completion postal questionnaire for GPs was piloted on 25 GPs (response rate 80%) and then sent to each patient's GP six weeks after that patient was discharged. GPs were asked their opinion of nine aspects of hospital services and discharge arrangements for their patients. The second section of the questionnaire, asking about 13 community services, was completed by the primary care team member whom the GP considered to have the greatest knowledge of the services that the patient was receiving.

A patient services questionnaire was piloted on 21 patients (response rate 81%), asking about their usage and satisfaction with services since their stroke (5 hospital services, 11 primary care services, 7 social services, 5 aids and appliances). Patients were blindly randomized to two groups: 75% to receive postal questionnaires and 25% to receive a visit by an audit assistant who administered the same questionnaires to patients. (This split was based on the number of patients it was estimated that one assistant could visit.) A summary of patient recruitment is shown in Figure 1. Patients also received Hospsat and Homsat questionnaires[49] (validated for measuring stroke patients' satisfaction), the Hospital Anxiety and Depression Scale questionnaire,[50] the London Handicap Scale questionnaire,[51] and the Barthel[52] questionnaire (to indicate casemix[53]).

Data were entered and analysed on an SPSS for Windows version 6.0 database. Statistics were calculated using the Confidence Interval Analysis (CIA) program version 0.5. The study was supported by the local GP sub-committee of the Area Medical Committee and Divisional Social Work Officers.

A F Bisset, MA, MFPHM, senior registrar; and C Macduff, BA, MSc, audit assistant, Department of Public Health Medicine, Grampian Health Board, Aberdeen. R Chesson, BSc (Soc), MSc, reader, School of Health Sciences, Robert Gordon University, Aberdeen. J Maitland, DROG, MRCGP, clinical research fellow and general practitioner, Department of General Practice, University of Aberdeen.

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Table 1. Comparison table of other studies on stroke patients where the GP was mentioned.

Study	No. of Patients	Months after stroke or discharge	% patients who had GP contact	Comments
Three districts in southern England, Wolfe *et al*[36]	265	3	69% (65–82%)	78–89% had blood pressure checked. 7% saw neither GP nor hospital doctor. Mean of 1.3 surgery visits. Significant variation in GP contact between districts.
Grampian Stroke Care Initiative Russell[37]	172	1-6	48%	GPs critical of discharge letters; would like more day hospital care and would welcome shared care but were concerned about lack of community resources. Community guidelines drafted. 40% GPs felt they had sufficient training on stroke.
Newcastle Greveson *et al*[38],James[45]	62	36	61%[a]	60% would approach their GP if problems arose but few patients and carers were confident that their GP, although sympathetic, could help. GPs were less likely to see severely disabled patients. Targeting of services seemed poor.
Nottingham Ebrahim[39]	183	6	66%	Level of patients' disability not associated with provision of occupational therapy or contact with GP. Less disabled more likely to attend hospital. 'Worryingly high' proportions of patients had little or no contact with their GP.
Nottingham Ebrahim and Nouri[20]	120	6	58%[b]	'It is unlikely that GP consultations were sufficiently structured to identify remediable problems'. The GP is in the best position to identify problems, ensure continuity of care and translate plans into action.
East Kent Baldock and Ungerson[40]	32	1-6	'Hardly any'	Almost all responders critical of GPs, especially soon after discharge as patients had expected GP contact. Only 2 patients had been visited then by their GPs; others had to contact surgery.
London Anderson[41]	93	18	35%[b]	54% GPs participated in study after 3 mailings. More patients saw GP than any other service. 10% had not seen GP since discharge. 38% felt GP 'very helpful', 43% fairly helpful, 19% 'not helpful'. 10% wanted more GP help. Many patients valued the personal relationship and reassurance from GP, but seemed to feel there was little the GP could do.
Two districts southern England, Wolfe[42]	255	3	84% (78–80%)	Some data collected from GPs, and GPs' costs were included in study. 'Striking lack of continuity in rehabilitation'.
United Kingdom Clark and Opit[43]	425	?	?	'GP contact seems insensitive to either dependence or social context'. 7-10 GP visits/year in patients over 65.
Oxfordshire House *et al*[44]	128	12	13%[c]	GPs aware of nearly all persistent severe psychiatric disorders in their patients, but appeared unaware of the possibilities for helping them.
Birmingham McLean *et al*[46]	20	?	?	'Lack of interest by GP. Visited only on request'.
Leigh-Smith *et al*[47]	383	12	44%[b]	Suggests that some medical after-care was continuing.

[a]In past six months; [b]in past month; [c]note of psychological problems in GP records.

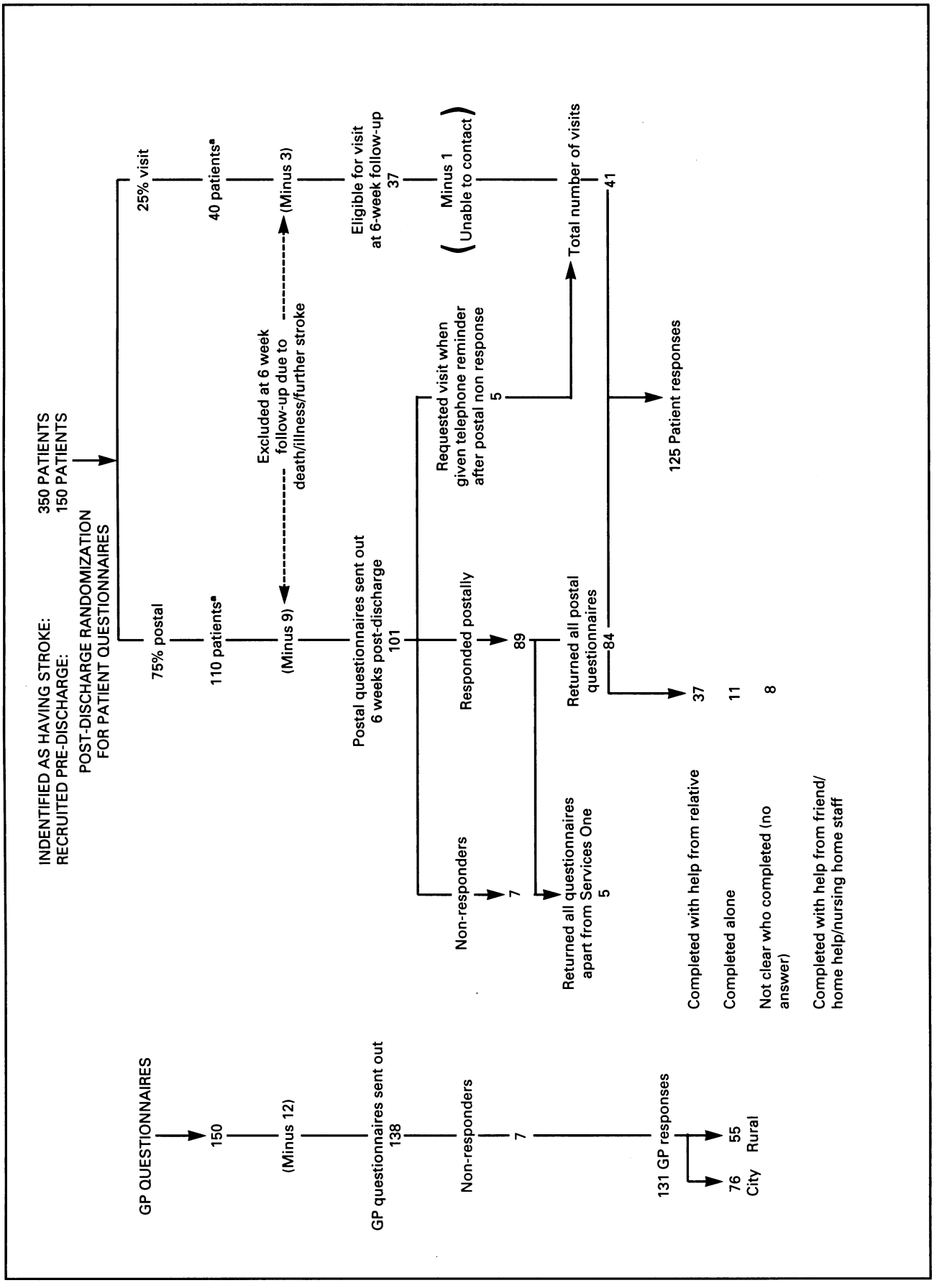

Figure 1. Summary of questionnaire recruitment and responses.[a] These figures resulted from randomization being carried out in batches of 40 sealed envelopes.

Results

GP questionnaires

Ninety-five per cent (131) of the GP questionnaires were returned after one mailing (or, where necessary, a reminder phone call and second mailing). Ninety-seven individual GPs replied (one had four patients in the study, five had three patients, 21 had two, and 70 had one). Views were received from 76% (57) of the 75 GP practices (290 GPs) who admit patients to Aberdeen hospitals; 57% (75 replies) were from Aberdeen city, and 43% (56) were from outside Aberdeen (some patients lived up to 47 miles from the city). The section on community services was completed personally by the GP in 64% of the returned questionnaires (73% of rural GPs and 58% of city GPs completed this section), by the district nurse in 20% of the questionnaires, by the health visitor in 2%, and by 'another' in 5%; in 10% of the questionnaires it was not known who had completed the section. Individual GPs' satisfaction with services differed when they had more than one patient, suggesting that their responses were specific to particular patients. Dissatisfaction was expressed for particular services, and no GP was dissatisfied with all services.

General practitioners' views on services are summarized in Tables 2 and 3. Fifty-seven free-text comments were also given: 16 mentioned problems with discharge letters (they did not arrive at all, arrived up to 5 weeks late, or contained inaccurate information); nine mentioned that a patient had refused services; nine criticized discharge arrangements; two mentioned that patients were supplementing care privately (for home care and taxi services). One praised the 'excellent' personal discharge letter that was sent to the patient as well as the GP.

Stroke patients received an average of 2.51 (95% CI = 2.09–2.94) community services and 1.45 (95% CI = 1.23–1.66) hospital services. A total Barthel score was derived for 79% (99) of the patients at six weeks after discharge, and compared with GP returns on service use (Table 4 and Figure 2). Sixty-nine per cent (90) of the patients had received hospital follow-up since discharge. The average number of community services for those living alone was 3.22 (95% CI = 2.33–4.07), and 2.38 (95% CI = 1.89–2.88) for those living with one or more relatives. Eleven patients refused some or all services offered.

Eighty-five per cent (65) of the city GPs and 95% (52) of the rural GPs responded with information on community services: city patients received a mean of 2.71 community services (95% CI = 2.18–3.24) and rural patients a mean of 2.37 (95% CI = 1.66–3.07). Ninety-one per cent (69) of the city GPs and 98% (54) of the rural GPs completed the section on hospital services: city patients received a mean of 1.71 services (95% CI = 1.42–2.00) and rural patients a mean of 1.06 (95% CI = 0.75–1.37). Median Barthel scores were similar for both groups: 17 for city patients (mean = 15.2, 95% CI = 14.1–16.3) and 18 for rural (mean = 16.2, 95% CI = 14.9–17.6).

Patient questionnaires

The response rate was 91% (125) for patient questionnaires; 88% of the postal group replied (89 patients) and 84 completed questionnaires on services were received. Patients' median age was 72 years and 58% were male. The median Barthel score six weeks after discharge from hospital was 17 (range = 2–20 [least disability = 20]); median London handicap score was 0.550 (range = 0.202–1.000 [least self-reported handicap]); median depression indicator score was 6.00 (range = 0–18 [highest possible score = 21 = 1.000]); but 20% of patients had a depression score of over 11 (indicating possible depression). Thirty-eight per cent (47 patients) had no carer. Fourteen patients were in nursing or residential homes and only two of these were receiving external services.

Stroke patients were more likely to have contact with their GP than any other service (though no details were asked about the type of contact): 77% (96 patients) had had contact with their GP, and 46% (57 patients) had found this helpful. The GP provided the only service received by two patients. Three patients did not get the service they sought from GPs, seven patients wanted 'more' GP help, and two felt that GP help was unnecessary. District nurses provided the second most common service, visiting 48% (60) of the patients. Three patients' only contact had been with a social worker, and 32% (40) had seen a social worker or care manager. Patients had used combinations of 28 different health and social services; 56% (70) had received at least one hospital service since discharge. A Homsat[49] total score was derived for 67 patients: the median total score for patient satisfaction with services was 10/15. Eighty-three patients felt that things had been well prepared for their return home. Fifty-five per cent of patients who replied by post had received help from a friend, relative, or another person to fill in the questionnaires.

At interview, nine patients made positive comments about their GP: one mentioned an improvement after the GP prescribed a change of drugs, and another was pleased that the GP had checked her blood pressure. Patients volunteered that they felt it important that the GP knew about their stroke. Four patients

Table 2. GPs' views on hospital services provided for their patients after stroke.

Service	% (No.) of patients where GP thought this service was applicable[a]	GPs' opinion			
		Satisfactory[b]	Unsatisfactory[b]	Don't know[b]	No answer[b]
Inpatient stay	98% (128)	76% (97)	0% (0)	7% (9)	17% (22)
Placement of patient on discharge	98% (129)	88% (114)	2% (2)	0% (0)	10% (13)
Information in formal discharge letter	99% (130)	87% (113)	5% (6)	2% (3)	7% (9)
Timing of formal discharge letter	99% (130)	75% (98)	10% (13)	3% (4)	12% (15)
Liaison with community services	85% (112)	74% (83)	5% (6)	12% (13)	10% (11)
Medical outpatient follow-up	69% (90)	71% (64)	8% (7)	12% (11)	11% (10)
Outpatient physiotherapy	53% (70)	47% (33)	9% (6)	16% (11)	13% (9)
Outpatient occupational therapy	51% (67)	54% (36)	4% (3)	25% (17)	16% (11)
Oupatient speech therapy	38% (50)	38% (19)	4% (2)	30% (15)	28% (14)

[a]Percentages for this column are calculated from the total number of GP responses (131). [b]Percentages for these columns are calculated from the number of patients for whom GPs thought the service was applicable (i.e. number in first column).

Table 3. GPs' views on community services provided for their patients after stroke.

Service	% (No.) of patients for whom GPs[a] thought this service was applicable[b]	GPs' opinion				
		Satisfactory[c]	Unsatisfactory[c]	Service unavailable[c]	Patient refused[c]	Don't know[c]	No answer[c]
District nurse	60% (78)	72% (56)	0	0	3% (2)	5% (4)	21% (16)
Community occupational therapist	53% (69)	61% (42)	3% (2)	0	2% (1)	9% (6)	26% (18)
Home help	50% (65)	55% (36)	3% (2)	2% (1)	8% (5)	8% (5)	26% (17)
Community physiotherapy	41% (54)	41% (22)	4% (2)	0	2% (1)	13% (7)	37% (20)
Chiropody	40% (52)	38% (20)	4% (2)	0	4% (2)	17% (9)	37% (19)
Home care	39% (51)	55% (28)	0	0	8% (4)	10% (5)	27% (14)
Care manager	39% (51)	39% (20)	0	4% (2)	2% (1)	14% (7)	41% (21)
Social worker	34% (44)	27% (12)	0	2% (1)	2% (1)	18% (8)	50% (22)
Day care	33% (43)	44% (19)	0	0	5% (2)	9% (4)	42% (18)
Meals on wheels	30% (39)	18% (7)	0	5% (2)	18% (7)	13% (5)	46% (18)
Community speech therapy	28% (37)	30% (11)	5% (2)	0	3% (1)	14% (5)	49% (18)
Night settling	21% (28)	18% (5)	0	7% (2)	7% (2)	7% (2)	61% (17)
Respite care	21% (28)	14% (4)	0	4% (1)	18% (5)	7% (2)	87% (16)

[a]Only 64% of these responses were from the GP (84 replies); the rest were from other members of the primary care team. [b]Percentages for this column are calculated from the total number of GP responses (131). [c]Percentages for these columns are calculated from the number of patients for whom GPs thought the service was applicable (i.e. number in first column).

Table 4. Number of services per patient according to disability[68,69] at 6 weeks after discharge from hospital.

Disability (no. of patients)[a] (Barthel score)	Mean no. of community services	Mean no. of hospital services
High (*n*=28) Barthel <15	2.95 (95% CI = 1.68–4.23)	1.57 (95% CI = 1.06–2.09)
Moderate (*n*=54) Barthel 15-19	2.63 (95% CI = 2.03–3.24)	1.68 (95% CI =1.32–2.04)
Low (*n*=17) Barthel 20	2.53 (95% CI = 1.25–3.82)	1.71 (95% CI 1.20–2.21)

[a]Barthel total scores were available for 104 patients. The remainder had incomplete Barthel scores owing to difficulty in answering individual questions (mainly on bathing and mobility). There were corresponding GP responses for 99 out of the 104 patients.

made negative comments: mainly that the GP was not interested in them and did not visit unless asked. Only one patient mentioned that there had been a 'communication problem' between the GP and consultant.

Fourteen patients stated that they had wanted but not received particular services, and there were three instances (21%) where the GP or district nurse showed awareness of this in completing the questionnaire. Conversely, aspects of outpatient follow-up and community services that were highlighted as unsatisfactory by 21 GPs or district nurses were matched by corresponding dissatisfaction in three (14%) of the patient replies.

Discussion

As in most satisfaction studies,[54,55] services were seen as generally satisfactory, but three aspects of our results merit discussion.

The central role of the GP

Our study confirmed that GPs were central to stroke care as they were the most common (and sometimes the only) point of contact for patients.[11,20,39] Further study is needed to determine what GP contact actually involves, how much time it takes, what skills and evidence are needed for purchasing community services,[56] and what difference it makes to patients, carers, and other members of the primary care team.

The traditional role of the GP after stroke includes prescribing drugs,[11,40] monitoring blood pressure,[57] and acting as gatekeeper for health services.[3,40] The hospital consultant's role[58] is assumed to be an important part of centralized coordinated care, but specialist training in rehabilitation medicine still does not require experience in general practice.[59] Both roles might be enhanced by shared care. Outpatient rehabilitation, DOMINO,[27] outreach, and keyworker schemes[32] have been studied, but stroke research still seems focused on hospital[58] and physical[33] models of care. Yet hospital care is only a small part of many patients' experience of disability,[30] and progress achieved in hospital may be lost after discharge.[25] How far have GPs contributed to Grampian's relatively low mortality from stroke[60-62] (standardized mortality ratio 88.6 in 1992)?[23]

The complexity of primary care

The list of different services is far from exhaustive. About one-third of patients had a social worker or care manager, and joint-working between health, social services,[40] voluntary, and private sectors seem likely to increase in future. The number of patients refusing services suggests that time and tact may be required when organizing provision of care. Rural GPs in Grampian

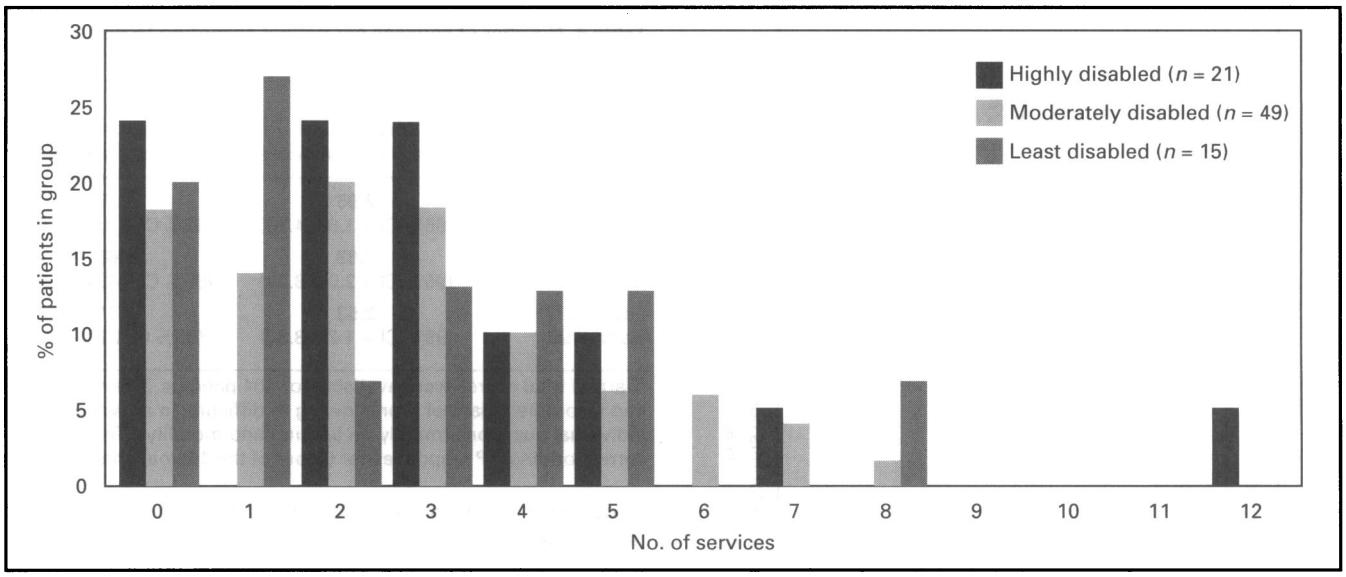

Figure 2. Number of community services per patient according to disability. Response from GP questionnaires. Numbers in disability groups are less than in Table 4: GPs gave feedback on services in 85 out of 89 cases.

appeared to have more knowledge of community services than city GPs, and their patients had less contact with hospitals. However, Table 4 and Figure 2 raise concerns that services may not correlate with need: reasons why the highly disabled sometimes received fewer services than the least disabled need to be explored.

Patients used an average of 2.5 services (with up to 12 services for one patient, and with various combinations of at least 28 different services). Research and guidelines[63,37] are needed on when and how to review services,[11] assess outcomes,[63,64] and change care packages. These would assist audit and provide feedback to staff and purchasers. Our survey did not explicitly ask about review, but the number of services where GPs did not comment suggests that some patients were not being actively reviewed.

Our findings are likely to be an underestimate of GP caseload: we were able to recruit only 43% of all stroke patients[48] and these were the fitter ones;[48,65] we did not contact the relatives of patients who had died, to assess their views on the support they had received;[66] and we did not explore whether the patients in nursing homes were being disadvantaged by receiving less help from community services,[67] an important area for community care research. We would have preferred to use a more qualitative approach, as this was an exploratory study, but time and funding constraints, and the lack of suitable validated tools, affected our study design. The definitions chosen for disability,[68,69] the tools used, and the services asked about inevitably influenced our findings:[70] larger studies are needed[71] to establish whether our findings are representative.

Links between hospital and primary care

Hospital discharge letters need to be improved.[72] Simplified copies of hospital discharge letters have been sent to some patients in Grampian to help them understand their stroke. These, or a shared-care card, could be used to outline to patients the community care they need and how to access it.[41]

Guidelines for management of common complications after stroke might help hospital and community staff to ensure consistent management. Combined protocols with social work staff could be tried (though problems have been encountered locally),[73] as would some form of shared care with hospitals (using the model of ante-natal care). Shared care could build on existing outpatient links with hospital, but transport is likely to be a greater problem for the elderly, the most disabled, and rural patients.

In conclusion, this survey confirmed that GPs were the principal contact for stroke patients in the community, and that their services varied as widely as other community services.[20,39,41] Links between hospital and community could be improved by better discharge letters and common guidelines for management. Stroke is only one of many chronic conditions that require considerable input from general practice and the primary care team in order to integrate hospital and community services successfully. Further research is needed on defining the role of the GP, what GPs' contact involves, and how this overburdened resource can most effectively improve outcomes for patients.

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Address for correspondence

Dr Ann Bisset, Department of Public Health Medicine, Grampian Health Board, Summerfield House, 2 Eday Road, Aberdeen AB15 6RE.