The European Journal of General Practice

ISSN: 1381-4788 (Print) 1751-1402 (Online) Journal homepage: https://www.tandfonline.com/loi/igen20

General Practitioners and Hospital-Initiated Prescribing

Miren I. Jones, Sheila M Greenfield, Fiona A Stevenson, Amanda Nayak & Colin P Bradley

To cite this article: Miren I. Jones, Sheila M Greenfield, Fiona A Stevenson, Amanda Nayak & Colin P Bradley (2001) General Practitioners and Hospital-Initiated Prescribing, The European Journal of General Practice, 7:1, 18-22, DOI: 10.3109/13814780109048779

To link to this article: https://doi.org/10.3109/13814780109048779

General practitioners and hospital-initiated prescribing

Miren I Jones, Sheila M Greenfield, Fiona A Stevenson, Amanda Nayak, Colin P Bradley

Objectives: Prescribing costs have risen significantly over the past decade and this has led to increasing pressure on general practitioners (GPs) to control their prescribing budgets. This paper explores GPs' perceptions of the influences of hospital-initiated prescribing on how they manage their prescribing budget.
Method: 16 practices within Birmingham Health Authority were selected according to characteristics of their prescribing budget. Twenty-one GPs in these practices were interviewed in depth about their views on how they controlled their prescribing budget, including questions on hospital-initiated prescribing.
Results: GPs reported being influenced by the experience of seeing patients who had been prescribed particular drugs by a consultant and then following their example. However, GPs expressed dissatisfaction with some hospital-initiated prescribing. Sometimes they considered the choice of drugs for conditions commonly treated in primary care to be unnecessarily expensive. They were also concerned about more expensive and more specialist drugs. GPs found it difficult to change or refuse to prescribe medication which had been initiated in hospital because they felt it could be damaging to their relationship both with their patients and consultants.
Conclusions: Hospital prescribing can have a major impact on general practice budgets and GPs felt that their ability to contain costs was not always within their control. The GPs expressed a wide range of views on how to respond to prescribing initiated in hospital with which they did not feel comfortable.
(*Eur J Gen Pract* 2001;7:18-22.)

Keywords: prescribing budget, hospital prescribing, general practice, United Kingdom

Miren I Jones, research fellow.
Sheila M Greenfield, senior lecturer.
Department of Primary Care and General Practice, University of Birmingham, UK.
Fiona A Stevenson, lecturer in concordance.
Department of General Practice and Primary Care, Guy's, King's and St Thomas' School of Medicine, London.
Amanda Nayak, lecturer.
Department of Accounting and Finance, Birmingham Business School, University of Birmingham, UK.
Colin P Bradley, professor.
Department of General Practice, University College Cork, Ireland.

Address for correspondence: Dr M Jones.
Department of Primary Care and General Practice, The Medical School, University of Birmingham, Edgbaston, Birmingham B15 2TT, UK. E-mail: m.i.jones@bham.ac.uk.

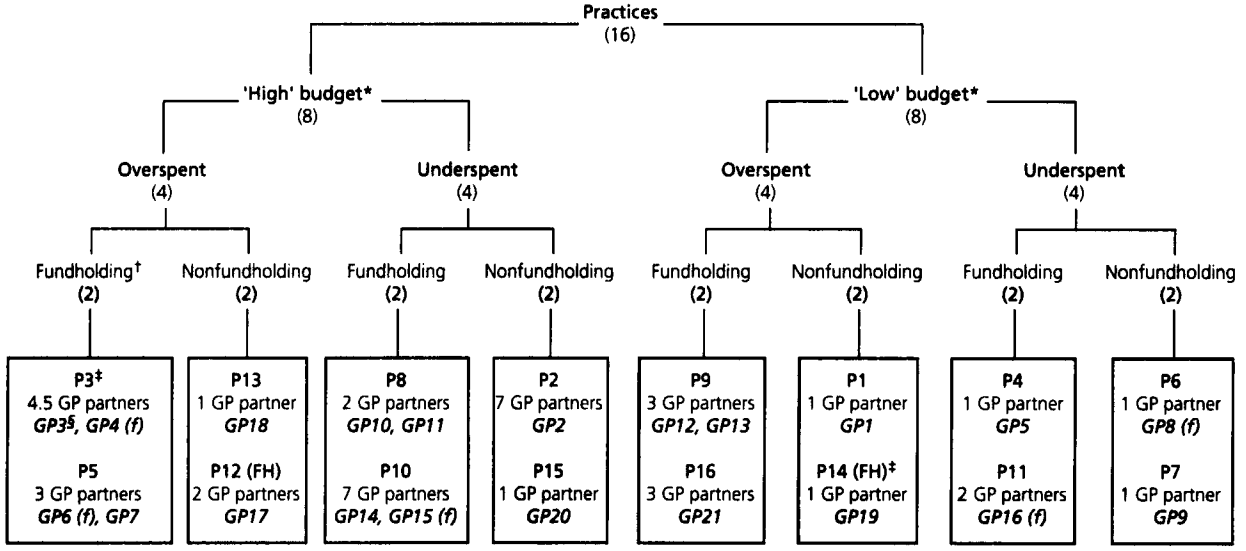
Submitted: 6 December 1999; accepted in revised form: 9 February 2001.

Introduction

Studies in several European countries have shown that drugs initiated in hospital can have a significant influence in terms of changing or increasing primary care prescribing.[1-5] The reasons for this vary in each country due to differences in the organisation and funding of healthcare. In the UK, 80% of prescriptions dispensed are exempt from payment of prescription charges by the patient and the increasing pressure on hospitals to control their costs has led to a shift in prescribing from secondary to primary care.[6,7] This has resulted in an increase in the cost of general practice prescribing and is a cause of great concern amongst general practitioners (GPs).[8-10] Although hospitals in the UK have had cash-limited budgets for many years, this has only applied to some GPs since the introduction of fundholding in 1991 (practices could choose to become fundholders and receive a cash-limited prescribing budget; any savings made in prescribing could be used in other areas of the practice budget). Non-fundholding GPs were able to enter an incentive scheme which rewarded attainment of a target budget for prescribing. Remaining within budget is thus a priority for GPs and hospital-initiated prescribing tends to increase costs.[2,11] Repeat prescribing in general practice is estimated at 81% of prescribing costs[12] so an expensive drug initiated in hospital at a reduced price and continued long term in primary care may have a significant impact on an individual GPs budget. A related factor is that the responsibility lies with the clinician who signs the prescription even if it was requested by another doctor.

Previous studies of prescribing at the primary/secondary interface are quantitative and whilst they usefully identify

Figure 1. Selection of practices for phase 1 interviews.



* Practices allocated a 'high' or 'low' budget relative to Health Authority average for a practice with equivalent number of patients
† Fundholding practices have a cash-limited prescribing budget
‡ P=practice number (FH=fundholding if changed status)
§ GP=GP number (f=female)

the quantity of prescribing transferred to primary care and continued by the GP, they do not satisfactorily explain how GPs perceive these issues and why they accept or change these prescribing decisions. Such questions are best addressed by qualitative methodology[13] and this paper, based on in-depth interviews with 21 UK GPs about how they manage their prescribing budgets, explores how GPs view and respond to hospital-initiated prescribing.

Method

The study was designed with a purposive sample of 16 practices from within Birmingham Health Authority which were selected according to prescribing budget criteria designed to encompass a wide range of views. Each practice within a health authority (HA) is allocated a prescribing budget according to a complex formula[14] and the budget may be 'high' or 'low' relative to the HA average for a hypothetical practice which has the same number of patients. This HA average is calculated from the total annual drug spending for all GPs within the authority and includes an allowance for patients aged 65 and over. The sample included eight practices with a 'high' (above the HA average) and eight with a 'low' (below the HA average) prescribing budget allocation (figure 1). Each of these two groups included four practices which were overspent and four which were underspent on their budget. Initially two fundholding (FH) and two non-fundholding practices (NFH) were selected for each subgroup, but at the time of the interviews there were ten FH and six NFH practices due to changes in fundholding status. A total of 44 practices were approached until 16 had been recruited into the appropriate categories. Twenty-one GPs in the 16 practices were interviewed.

In-depth interviews were carried out between June 1997 and February 1998 by either FS, SG, MJ or AN, all of whom were experienced in conducting qualitative research with GPs. None of the interviewers are medically trained. In addition to general questions about influences on prescribing, the semi-structured interview schedule included specific questions on hospital-initiated prescribing, practice policies regarding expensive drugs requested by hospitals and lower cost/higher volume drugs initiated in hospital. All the interviews were recorded and transcribed. The main analysis was carried out by three of the authors (SG, MJ and FS) using the technique of charting. This involved repeatedly rereading the transcripts and independently selecting and reorganising responses according to themes.[15] Developing themes were then discussed and further refined in meetings by all the authors. Responses were also compared between 'high/low' budget, over/underspent and FH/NFH practices.

Results

The range of practice sizes in the study was representative of practices in Birmingham Health Authority.[16] Five female and 16 male GPs were interviewed. The five practices in which two GPs were interviewed were all fundholding but included both high and low budget and over and underspent practices.

Box 1. Influence of consultants on routine prescribing by GPs.

- 'It was at a meeting... and the consultant explained it all and why aspirin was better and I agreed with what he was saying so now I prescribe aspirin instead and it is better and cheaper' (GP15)
- '...it gives GPs a comfort feeling to think oh well if it is good enough for Professor So and So it's surely good enough for me' (GP1)
- '...if somebody goes up to a hospital clinic and comes back on a particular medication then I do not think I am the kind of GP who would change that irrespective of what it costs... If the consultant said that they had to have it then they have to have it' (GP1)
- 'I haven't so far challenged hospital prescribing. By and large I find it pretty genuine really' (GP9)

Box 2. Problems with hospital-initiated prescribing.

- '[Patients] often get issued with drugs that the hospital started, often because reps or drug companies supply the same thing at a much lower cost to the hospital. When they come out here it is very expensive for us' (GP15)
- 'You prescribe what the hospital asks. One consultant is a problem, he prescribes expensive new drugs for epilepsy' (GP16)
- 'You often find some of the junior doctors in hospitals will prescribe ridiculously expensive things' (GP7)
- 'High cost drug patients are started in hospital and the GP isn't properly compensated' (GP19)
- '... and it would be very helpful if the hospital, instead of telling us to prescribe a specific drug, gave us a group of drugs to prescribe from. For example if they suggested that we prescribe a proton pump inhibitor of our choice they might put 'a proton pump inhibitor such as omeprazole' or put 'an SSRI such as fluoxetine' in their letter, but it is difficult when they initiated treatment but do not give us any leeway to change the treatment' (GP13)
- 'We did an audit on things like omeprazole ...looking to see whether or not we were undertreating or overtreating and we decided we weren't ... In actual fact the hospital were suggesting even more ...drugs than we were prescribing' (GP4)
- '...especially junior doctors in the hospital, they have got no knowledge of the budget side of prescribing. ...there is no co-ordination between the hospital and the GPs on this and it cannot be achieved unless the Health Authority gets involved ...because whatever the costs are at the end of the day the Health Authority has got the total budget' (GP17)
- 'A lot of medicolegal implications associated with this. At the end of the day the prescription carries my name even though it was prescribed by somebody else. What nobody has worked out so far is where the responsibility of the hospital ends and where the responsibility for the primary care position starts or vice versa' (GP2)
- 'I think practitioners have to band together ... and put an end to what hospitals are doing. ...Nothing wakes me up more and winds me up more than how secondary care prescribing affects primary care prescribing' (GP20)

Box 3. Strategies for responding to hospital-initiated prescribing.

- 'I just prescribe them' (GP18)
- 'If there is a drug that is as good clinically that is cheaper, then with the patients' consent we would [change it] but we wouldn't do it without talking to the patient about it. We wouldn't necessarily contact the hospital and say it... ...the usual one is asthma inhalers' (GP4)
- 'Sometimes the hospitals have already said to them [patients] that they have to have them and there is nothing that I can do about it' (GP18)
- 'Sometimes I have rung a consultant saying 'do they need this particular proton pump or can I write 'a proton pump'. By and large they say it doesn't matter which one you write' (GP2)
- 'If they were to prescribe Losec and we wanted to prescribe Zoton then we would change them.....providing they are equivalent drugs that are more or less effective then I do not think there is a problem with that' (GP14)
- 'I don't always follow the hospital. I give what I think is the right one. If I find something cheaper I will go for it and if it is as effective I will tell the patient' (GP10)
- 'I haven't needed to make such decisions but I would ring the Health Authority or ring fellow GPs around. They are very good and supportive ...they are ever so helpful. I would ask them' (GP8)
- 'Sometimes the hospital will prescribe expensive drugs or drugs that are not in our formulary and we look at it and think 'well we could actually use this instead, it would save a bit of money', so we will then make that switch across in that situation' (GP14)
- 'For very expensive things like cyclosporin, those sort of drugs, we tend to contact the hospital because it is only a handful of patients ... and on the whole the hospital will prescribe...' (GP4)
- '...we are negotiating with the hospitals that if any patient comes in they tell us that we want the medicine of this group. Not write the name [of the drug], go by the group, so it is up to us. This hopefully is achieved by next year' (GP17)
- 'I have actually taken to ringing up and querying it now, which again is very time consuming. Quite often they will agree and use a cheaper alternative, trimethoprim instead of ciprofloxacin' (GP7)
- 'We had never been asked to do this before [prescribe erythropoietin] and I wasn't quite sure and I actually asked [another GP] for advice because I know he is in a far more innovative practice than I am and he is far more logical about these things... and he said 'oh you must write back and say that you cannot do it', which we did. ...and the girl fortunately is still going to get it' (GP6)
- '..we have got a patient on Epo and very reluctantly we agreed after having discussed this with the Health Authority' (GP21)
- 'We have said to the clinicians that unless there are actual funds identified from the Health Authority or any source then we won't be prescribing ... the budget we have does not go far enough...' (GP20)
- 'We have spoken to the chairman of the LMC [Local Medical Committee] about prescribing disagreements' (GP7)
- 'I got a letter written by a senior registrar ...and it said please prescribe... ...on the phone I said 'you tell your boss that if he wants this man to have this he will be writing it himself'. I said 'you find a cheaper alternative or you write it yourselves' and they did not come back to me and I do not care and I am prepared to defend it' (GP20)

Box 4. Problems with specific expensive medicines.

- '...there should be some sort of national policy because you only need one high cost drug in certain areas for a hospital just to ruin in one fell swoop all your attempts to make any savings. We have got a patient on octreotide which costs about £ 20,000 per year. So I think there should be a central budget for these high cost drugs and I feel that should not come out of general practitioners' budgets because it is very soul destroying when you spend every day trying to make some sort of savings of a few pounds here and there and then somebody comes along and wipes it out all in one go' (GP13)
- 'There are expensive drugs for cystic fibrosis and I suppose we haven't been asked to do it but we will just have to say we are sorry but we cannot do it because we are overspent on our budget' (GP3)
- '... in fact one of the reasons my prescribing may have gone down is one of my growth hormone children has actually left...' (GP18)

Box 5. GPs' relationship with patients.

- 'There is always a tendency in patients to think that when hospitals prescribe something it is probably more superior' (GP2)
- 'I find it very difficult to swap people because you know if you change drugs for financial reasons it doesn't do a lot of good for the doctor/patient relationship...' (GP13)
- 'It would be very hard on the patient not to give it. They do put us in very difficult positions and we are the ones that have to live with the patients so to speak, so you can't upset everybody' (GP6)

The GPs' responses to questions on hospital-initiated prescribing were grouped into five main themes concerned with GPs' views on and responses to consultant prescribing. Analysis of the GPs' responses from the range of practices ('high/low' budget, over/underspent, fundholding/non-fundholding) showed no differences.

The influence of the consultant on routine prescribing by GPs (box 1)

Many of the GPs felt obliged to continue prescribing a drug prescribed by the hospital as they felt it was not right to change it. Four GPs said that their prescribing was influenced by consultants either directly by the advice they gave or indirectly following observation of the use of drugs prescribed by the consultant. This type of influence was regarded positively by GPs and was not seen as a problem for their prescribing budget. It was viewed as a learning experience and the relationship between the consultant and the GPs was important. For example, GP1 said he would be encouraged to use a drug if he saw a consultant use it routinely.

Problems with hospital-initiated prescribing (box 2)

All the GPs except for three expressed dissatisfaction with some of the prescribing requested by the hospital. This included both the more commonly used drugs such as selective serotonin re-uptake inhibitors (SSRIs) e.g. Prozac, and proton pump inhibitors (PPIs) e.g. omeprazole, and also the very expensive and more specialist drugs such as cyclosporin, erythropoietin and fertility treatment. Drugs initiated by the hospital for which the patient also requires monitoring were a further source of difficulty because of the additional costs this incurs.

GPs were often cynical about the reasons behind some hospital prescribing. They felt that higher prescribing costs in the community could result from hospitals receiving drugs at a reduced price, from hospital doctors' lack of awareness of drug costs and from lack of coordination of prescribing between hospital and general practice. Several GPs felt very strongly about the fact that hospital consultants could send a patient back to a practice having prescribed an expensive drug and the GP was expected to accept this.

Strategies for responding to hospital-initiated prescribing (box 3)

GPs' responses to prescribing requests by the hospital varied from resigned acceptance to non-cooperation. GP19 explained that he referred patients to particular consultants because he respected them and they had specialised knowledge which he did not have and so it was not for him to challenge them. Other reasons given for complying with a consultants' prescribing request were that contacting the consultant and querying it or changing it with the patients' consent were felt to be very time consuming. However other GPs stated that they sometimes changed patients to a cheaper drug if they could see no good reason for the patient to be on the more expensive version, although the need to discuss this with the patient was emphasised. A strategy being considered by one practice (P10) which had recently employed a pharmacist, was for the pharmacist to review the medication of patients returning from hospital. Several GPs offered a possible compromise which is for consultants, where possible, to recommend to the GPs that they prescribe a drug of their choice from a particular drug class.

Problems with expensive medicines (box 4)

The GPs were less willing to accept consultant prescribing of very expensive drugs in areas where they had little experience and did not wish to accept responsibility. They felt that the only reason GPs were asked to prescribe these drugs was so that the cost did not fall on the hospital budget. The effect of a very small number of patients on a GP's budget could be substantial. The drugs which GPs felt they did not wish to prescribe included gabapentin and other newer anti-epileptics, risperidone, octreotide, cyclosporin, erythropoietin and growth hormone; GPs were divided on the use of infertility treatment.

The GPs said they were placed in a very difficult position as they felt unable to refuse a patient especially if the patient had been with the practice for many years. The GPs

often involved the Health Authority in these decisions so that any special circumstances could be taken into consideration if they were overspent on their prescribing budget. Only a minority said that they challenged hospital prescribing and they did not feel comfortable about being in a position of having to do this.

The relationship with patients (box 5)
A particular concern of the GPs was that changing patients' drugs could be damaging to the relationship between the GP and the patient.[17] It could also be very time consuming for the doctor. Patients may be reluctant to change drugs that have been prescribed by the hospital.

Discussion

Hospital-initiated prescribing and how it affects budgets was a theme about which many of the study GPs had strong feelings. This study confirms the results of previous quantitative studies in that hospital prescribing can place a considerable burden on GPs,[3,5,19] and also helps to explain from the GPs' perspective the considerable changes in patients' medication which take place at the primary/secondary interface. The pressure to remain within budget was an ongoing concern for the study GPs and they had responded in a range of ways to the variety of issues resulting from hospital prescribing and had developed individual strategies to manage this. Although four out of five GPs in the UK claimed to follow the hospital prescription on patient discharge,[20] in the wider European context it has been shown that GPs can influence hospital prescribing by changing medication initiated in hospital[3] or by influencing revision of a hospital formulary.[19]

Many of the GPs in this study were proactive in challenging hospital prescribing. Some GPs prescribe the drugs requested, others prescribe and notify the Health Authority and ask for additional funding, while others write to the hospital to say they cannot prescribe the drugs hoping that the hospital will do so. One might expect that GPs in particular practice settings might feel more empowered to challenge hospital prescribing, for example GPs in larger practices and fundholders. However, GPs from a range of practice types expressed similar views and their perceptions of hospital prescribing did not appear to be related to their practice characteristics.

The study GPs highlighted the fact that effects on prescribing budgets may also be due to the number of patients on a GP's list who have been prescribed expensive drugs such as octreotide, erythropoietin or growth hormone by hospital specialists. Although the numbers of patients may be very small the effect of each patient on the budget may be very large, and the perceived unfairness of this is in addition to having to prescribe drugs with which GPs may feel unfamiliar. While the responsibility for initiating expensive drugs is separate from the responsibility for the prescribing budget, the evidence for using these drugs, especially the newer ones, may not be considered as fully as if a consultant had responsibility for the prescribing costs.

The GPs in this study were generally very aware of their drug spending and felt they were being unfairly blamed for overspending in some areas of their prescribing budget and no allowance was made for special circumstances which affected their budget. Improved communication between hospitals, GPs and health authorities so that hospitals were more aware of costs in the community, and hospitals giving GPs more choice by recommending that they prescribe from a class of drug rather than a named drug would give GPs more opportunities to exercise greater control over their prescribing budget and thus to make savings. Indeed many GPs would prefer that drugs which are widely used in the community are not initiated in hospital, so that the GPs could choose which drugs to prescribe for their patients especially for long-term treatment. It has been suggested that problems in prescribing at the primary/secondary interface present a strong case for commissioning agents that would consider drug purchasing across both care sectors.[20] Primary care in the UK was reorganised in 1999 with the introduction of Primary Care Groups; these groups have, on average, 55 GPs serving a population of 107,000 patients and have a fixed budget which includes prescribing. Managing prescribing is one of their major concerns. This will facilitate communication of successful strategies, for example for managing hospital prescribing, between practices and may encourage greater coordination in prescribing between hospitals and GPs. ■

Acknowledgements

This work was undertaken by the above-named authors who received funding from the Department of Health; the views expressed in this publication are those of the authors and not necessarily those of the Department of Health. We would like to thank Richard Seal, Michael Innes and Jim Parle for their advice and support throughout the project. We are grateful to all the general practitioners who participated in the study.

References

1 Valles I Callol JA. Induced prescription in primary care. *Eur J Gen Pract* 1999;5:49-53.
2 Bijl D, Sonderen E van, Haaijer-Ruskamp FM. Prescription changes and drug costs at the interface between primary and secondary care. *Eur J Clin Pharmacol* 1998;54:333-6.
3 Himmel W, Tabache M, Kochen MM. What happens to long-term medication when general practice patients are referred to hospital? *Eur J Clin Pharmacol* 1996;50:253-7.
4 Himmel W, Kron M, Hepe S, Kochen MM. Drug prescribing in hospital as experienced by general practitioners: East versus West Germany. *Fam Pract* 1996;13:247-53.
5 Weiss MC, Fitzpatrick R, Scott DK, Goldacre MJ. Pressures on the general practitioner and decisions to prescribe. *Fam Pract* 1996;13:432-8.

Continued on page 36.

References
1 Kochen MM, Himmel W. Academic careers in general practice: scientific requirements in Europe. *Eur J Gen Pract* 2000;6:62-5.
2 Chatziarsenis M. New policies at Nosokomio Neapolis: Introducing small areas research and development in a Cretan primary/hospital care setting. Linköping University, Medical Dissertation, No 579.
3 Lionis C, Trell E. Health needs assessment in general practice: the Cretan approach. *Eur J Gen Pract* 1999;5:75-7.

Reply by the authors

The principal purpose of our paper was to present a temporary overview of the different academic paths in general practice in Europe and to stimulate a discussion on the best solution for our discipline. For this purpose, we considered it adequate to rely on only one informant, with a rather good knowledge of academic details. Consequently, the paper was presented as a Background Paper, not as a paper based on original data.

If more readers contribute to a precise description of the situation in their country, this will surely strengthen our discussion.

Moreover, although qualification procedures in Greece seem to follow a more or less traditional pattern ('habilitation model'),[1] we as well as the readers of the Journal surely recognise the increasing academic reputation of Greek general practice. ■

Dr Wolfgang Himmel, sociologist.
Professor Michael M Kochen,
head and general practitioner.
Department of General Practice/Family Medicine,
University of Göttingen, Germany.
E-mail: whimmel@gwdg.de.

References
1 Kochen MM, Himmel W. Academic careers in general practice: scientific requirements in Europe. *Eur J Gen Pract* 2000;6:62-5.

ORIGINAL PAPER

Continued from page 22.

6 Sibbald B, Wilkie P, Raftery J, Anderson S, Freeling P. Prescribing at the hospital-general practice interface II: Impact of hospital outpatient dispensing policies in England on general practitioners and hospital consultants. *BMJ* 1992;304:31-4.
7 Croydon Health Authority. Croydon Primary Care Development Plan Report. 1996:7-10.
8 Crump BJ, Panton R, Drummond MF, Marchment M, Hawkes RA. Transferring the costs of expensive treatments from secondary to primary care. *BMJ* 1995;310:509-12.
9 Scrip dumping fears escalate. *Doctor* 1998;(**March 19**):1.
10 Jones R, Rawlins M. Prescribing at the interface between hospitals and general practitioners. *BMJ* 1992;304:4-5.
11 Audit Commission. A prescription for improvement. Towards more rational prescribing in general practice. London: HMSO, 1994:55-60.
12 Harris C, Dadja R. The scale of repeat prescribing. *Br J Gen Pract* 1996;46:649-53.
13 Green J, Britten N. Qualitative research and evidence based medicine. *BMJ* 1998;316:1230-2.
14 Baines D, Whynes D. The use of the ASTRO-PU and the ASTRO(97)-PU in the setting of prescribing budgets in English general practice. *J Clin Pharm Ther* 1998;23:229-34.
15 Bryman, A, Burgess RG (eds.) Analysing qualitative data. London: Routledge, 1994.
16 Database of GPs in England and Wales (1998) provided by West Midlands NHS Executive.
17 Stevenson FA, Greenfield SM, Jones M, Nayak A, Bradley CP. General practitioners' perceptions of patient influences on prescribing. *Fam Pract* 1999;16:255-61.
18 Pryce AJ, Heatlie HF, Chapman SR. Buccaling under the pressure: influence of secondary care establishments on the prescribing of glyceryl trinitrate buccal tablets in primary care. *BMJ* 1996;313:1621-4.
19 Tomson Y, Wessling A, Tomson G. General practitioners for rational use of drugs: Examples from Sweden. *Eur J Clin Pharmacol* 1994;47:213-9.
20 Panton R. FHSAs and prescribing. *BMJ* 1993;306:310-4.