Perceptions of the impact of primary care organizations on GP prescribing

The iron fist in the velvet glove?

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Abstract

Purpose – This qualitative study aims to examine key stakeholders' perspectives of primary care group/trust prescribing strategies. Within the context of general practice prescribing, the paper also debates the wider issue of whether GPs' prescribing autonomy is under threat from managerial expansion following recent organisational changes in primary care.

Design/methodology/approach – Data were obtained from focus groups and a series of individual semi-structured interviews with GPs and key primary care organisation stakeholders.

Findings – The data underlie a tension between the managerial objective of cost-restraint and GPs' commitment to quality improvement and individual clinical patient management. In presenting both managerial and medical narratives, two divergent and often conflicting discourses emerge, which leads to speculation that managerial attempts to constrain prescribing autonomy will achieve only limited success. The contention is that GPs' discourse features as a challenge to a managerial discourse that reflects attempts to regulate, standardise and curtail clinical discretion. This is due not only to GPs' expressed hegemonic ideals that clinical practice centres on the interests of the individual patient, but also to the fact that the managerial discourse of evidence-based medicine encapsulates only a limited share of the knowledge that GPs draw on in decision making. However, while managers' discourse presented them as unwilling to impose change or directly challenge clinical practice, evidence also emerged to suggest that is not yet possible to be sufficiently convinced of the future retention of prescribing autonomy. On the other hand, the use of peer scrutiny posed an indirect managerial influence on prescribing, whilst the emergence of prescribing advisors as analysts of cost-effectiveness may threaten doctors' dominance of medical knowledge.

Research limitations/implications – There is a continuing need to analyse the impact of the new managerial reforms on primary care prescribing.

Originality/value – This study provides a snapshot of managerial and GP relations at a time of primary care transition.

Keywords Primary care, General practitioners, Medical prescriptions, Drugs, Medicines, United Kingdom

Paper type Research paper

The authors would like to thank all respondents who generously gave up their time to participate in this study. They would also like to thank the external reviewers of this paper for their insightful and constructive feedback. This study was jointly funded by the Department of Health and the Association of the British Pharmaceutical Industry.

Journal of Health Organization and Management
Vol. 21 No. 1, 2007
pp. 5-26

1477-7266
DOI 10.1108/14777260710732231

Introduction

Historically, the medical profession has established a considerable degree of uncontested power and autonomy in clinical practice (Freidson, 1970). Central to its dominant position in the health service is its monopoly over a body of specialized knowledge, socio-legal responsibility for patients (Freidson, 1970, 1985), professional self-regulation and the privilege to organize and define clinical practices without external accountability (Elston, 1991; Harrison and Ahmed, 2000). Recently, the profession's autonomy is considered to be under threat. This originates from two trends – increasing consumerism, represented by a more medically informed populace with higher expectations of services and participation in medical decision making (deprofessionalisation); and the expansion of bureaucratic organisation and managerialism, the subject of the present analysis (Elston, 1991; Kelleher *et al.* 1994). The erosion of clinical autonomy has often been examined with reference to the theory of proletarianisation (Barnett *et al.*, 1998; Britten, 2001; Calnan and Williams, 1995; Harrison and Dowswell, 2002; Weiss and Fitzpatrick, 1997). This perspective emphasises the significance of increased bureaucratic and managerial principles, such as productivity and cost-efficiency over the content of medical practices. Alongside this, is a greater specialization of other health workers adopting some of the medical profession's functions at both policy and practice level (Calnan and Williams, 1995; McKinlay and Arches, 1985; McKinlay and Stoeckle, 1988). While it is arguable whether this conceptualization is a useful framework for UK analysis, where GPs largely remain independent contractors within the NHS, it raises important questions regarding the displacement of medical decision making through managerial and bureaucratic strategies emphasising rationality and accountability.

In the UK National Health Service (NHS), the most influential organisational change has been the changeover from administration to general management, with an emphasis on rationality, efficiency and cost-restraint (Hunter, 1996). Over the last decade, national government policies have pursued the principle of general management, at first in hospitals, but from 1990 onwards also in primary care. The underlying principle of government policy is to enhance quality of care for patients while simultaneously exerting firmer control on the clinical expenditure and activity of the medical profession. In the most recent spate of primary care changes, GP fundholding was replaced from 1998 by nationwide primary care groups (PCGs). Whereas fundholding was voluntary, involvement in a PCG is compulsory. PCGs are administrative units covering 40-50 GPs and which hold most health care budgets on behalf of their patients. Under this new structure, GPs, nurses and other health professionals have responsibility for commissioning care and balancing healthcare costs within a unified, cash-limited budget for hospital and community health services, prescribing and general medical services. This reflects the government's objective to control the rise in NHS expenditure. With cash-limited resources, this means that any overspend in any area of the budget would have to be met from allocation elsewhere. From April 2000, PCGs were able to evolve into independent Primary Care Trusts (PCTs) – free standing, statutory bodies that control approximately two-thirds of the entire NHS budget for the majority of hospital and community health services. In addition to responsibility for health improvement, PCTs have new responsibilities for health needs assessment and planning in their local communities, a role formerly undertaken by health authorities. The present study was undertaken when both PCGs

and PCTs were operating, therefore the collective term Primary Care Organization (PCO) will be used to encompass both.

Three specific initiatives lie at the heart of the government's agenda for high quality care in the new primary care led NHS. Under the statutory duty of clinical governance, clinical staff, health professionals and managers have clear lines of responsibility and accountability for ensuring the quality of clinical decisions (DoH, 1998). In order to guide the process of quality improvement, two statutory bodies external to the NHS were created. Based on clinical cost-effective evaluation of best available evidence, the aim of The National Institute of Clinical Excellence (NICE) is to institute a consistent, rational approach to the use of new treatments through issuing national guidance on best practice in treatment and care. The Commission for Health Improvement (CHI) was introduced in September 1999 to oversee and monitor the implementation of local clinical governance arrangements, NICE guidance and National Service Frameworks (NSFs) – a set of evidence-based, national clinical standards for defined service or care groups (eg. Coronary heart disease, diabetes, older people). Through monitoring and evaluating performance, these arrangements place a far greater emphasis on clinical and financial accountability. In delivering healthcare, evidence-based medicine (EBM) (Evidence-based Medicine Working Group, 1992) has emerged as the new paradigm for medical practice in UK healthcare, founded on the principle that clinical practice should arise from a scientific and objective evidence base. This, together with an emphasis on rule-based clinical guidelines and systematic measures to monitor, maintain and improve clinical standards, shifts the focus away from the clinical judgement of individual doctors and may be viewed as a form of external control (Harrison, 2002).

The prescription is one of the most frequently used medical interventions and its significance as a representation of the doctor's authority is well understood (Comaroff, 1976). However, the rise of a scientific-bureaucratic medicine in UK healthcare (Harrison, 2002; Harrison and Smith, 2004) conflicts with the notion of prescribing as an exercise in clinical discretion, which is more often influenced by "tacit" norms, experiential knowledge and a range of psychosocial factors rather than scientific research evidence (Armstrong, 2002; Bradley, 1992; Prosser *et al.*, 2003). In addition to efficiency and rationality, a defining characteristic of bureaucracy is an ethos of "objectivity" whereby individualistic and emotionally-based decision making is vetoed in favour of systematic, standardized rules and regulations that conform to the overall objectives or the organisation ("formal rationality") (Weber, 1947; McKinlay and Arches, 1985; Ritzer and Walczak, 1988). In clinical practice this demands an impersonal expert who treats each patient according to the discipline of external guidelines and standards, regardless of their own professional values, clinical judgement or personal feelings (or those of their patients). However, it has been argued that it is through the use of tacit clinical knowledge and an idiosyncratic patient-centred approach that the medical profession justifies and maintains its clinical autonomy (Armstrong, 2002; Freidson, 1970).

With PCOs assuming responsibility for formulating and implementing primary care policy, including prescribing (DoH, 1998, 2001), PCO managers and prescribing advisers are taking on a more proactive role in monitoring and directing clinical activity and controlling expenditure (Majeed and Malcolm, 1999). From this position, the communion between managerial imperatives and autonomous clinical decision making is uncertain. Prescribing accounts for about 20 per cent of the PCO's total

budget and is often seen as the area where savings can most easily be made with no detriment to patient outcomes. Thanks to excellent information systems it is easy to monitor, at least in terms of volume and expenditure if not quality, and often forms part of performance indicators for PCO managers as well as for GPs. Against this, government polices attempting to increase the quality of NHS care through central guidance have almost invariably increased prescribing costs, leaving PCOs to try to resolve a difficult tension. The result is that most PCOs are overspent on the prescribing components of their budgets, and have had to take money from other services to meet this. PCOs have a statutory responsibility not to exceed their budgets. This entails a regard for the implications of "opportunity cost" – an economic consideration that takes account of alternatives to which the resource might have been put. However, although the unified budget aims for collective accountability to the patient population with GPs expected to manage prescribing within set budgets, there are no explicit sanctions if they fail to do this.

There is a further tension for GPs: they are not only accountable to the PCO but they are also the patient's advocates. This latter role is traditional and instilled throughout medical training and may run counter to the former. With GPs undertaking greater managerial responsibility through commissioning services and responsibility for the cost-effective use of resources, the success of the recent initiatives depends to a large extent therefore, on GPs' commitment to budgetary accountability. Furthermore, in appointing PCOs clinically and financially accountable for quality demands a fundamental change in attitude and culture within primary care. In theory GPs within the geographically defined PCO would collaborate for the greater good of all, acquiring a corporate ethos to accomplish health care reform (DoH, 1998; Wilkin *et al.*, 2001). However, improving quality within cash-constrained budgets indicates tensions and potential contradictions in the health care organisational and policy framework that may undermine this approach. While PCO prescribing advisers have knowledge of therapeutics and costs and can collaborate with GPs in achieving cost-effective prescribing, there exists the possibility of discord if a cost-containment agenda is seen to confine treatment choice.

Part of the rationale in involving GPs in strategic managerial positions within the PCO is to strengthen management's control over clinical activity. It has been variously argued that doctors' restratification into management roles may be an influence that restrains professional autonomy (Coburn, 1992) or quite the reverse, enables them to retain medical authority through prospects for greater political power in shaping policy, although this may be relevant only to the managerial elite rather than rank-and-file GPs (Friedson, 1985; Hunter, 1994). However, with GPs no longer constituting a majority on PCT management boards, their professional influence here may be undermined.

While efforts to increase rationalisation and standardisation in clinical practice are clearly intensifying, it is not yet clear how far bureaucratic and managerial expansion actually curtails clinical autonomy (Harrison and Pollitt, 1994; Harrison and Ahmed, 2000, Weiss and Fitzpatrick, 1997; Britten, 2001). In an early study of GPs' initial perceptions of the impact of primary care reforms on practice and professional autonomy, Dowswell *et al.* (2001) found that GPs displayed little immediate enthusiasm for the new arrangements, partly on the grounds of increased bureaucracy but also because it was expected PCOs would seek to establish increased control over their

clinical activities, although this did not result in active resistance. In further analysis of the same interview data, Harrison and Dowswell (2002) found the PGG to be a consequential influence on GPs' increasing propensity to account for their actions in case notes. The authors concluded that this provides the possibility of external surveillance of medical work, thereby implying a clear reduction in autonomy. Britten (2001) also speculates that clinical governance and peer group pressure driven through by PCOs, has the potential to undermine clinical freedom. Recent NHS organisational changes make it timely to re-examine the consequences of managerial expansion on prescribing autonomy within general practice. Although the context for this examination is around the new primary care structure in the UK, it has a particular significance across the range of healthcare systems that have introduced the notion of business management and managerial responsibility for the delivery of healthcare. This qualitative study explores the discourses that key stakeholders use to describe their attitudes and approach to prescribing policy and practice under PCO structures. Further, within these discourses, we debate the wider issue of managerial legitimacy and whether GPs' clinical autonomy is under threat following managerial expansion. The implications of these issues on the future direction of PCO strategy are debated. In recognising that a comprehensive examination of the relationship between autonomy and managerial expansion must incorporate a macro perspective (Freidson, 1970, 1988; Harrison and Ahmed, 2000), analysis focused on the perspective of every-day prescribing and GPs relations with PCO managers, while moving beyond a descriptive analysis to further explore the meanings conveyed in stakeholders' accounts of how they define and operationalize prescribing strategies, with a particular focus on the discursive strategies used to advance or resist managerial processes on clinical practice. This draws on Brown and Humphreys' view of organizations which suggests that individuals and groups are involved in interdependent but often asymmetric power relations in which shared narratives are one means by which hegemony is at various times extended, resisted, accommodated and contested (Brown and Humphreys, 2002).

Method

A qualitative methodology was selected to capture a detailed description of stakeholders' attitudes and experiences. The study combined focus groups and in-depth interviews. The advantage of focus groups is that the encouragement of participant interaction stimulates thinking and exchange of attitudes that may not be entirely revealed by direct questions (Kitzinger, 1995). Moreover, through shared experience, group interchange can encourage the expression of previously undisclosed views or experiences. In this way, focus groups are particularly useful for generating hypotheses. However, a disadvantage is that the group context may inhibit individual expression and attitudes that vary from the group norm. Therefore, in order to incorporate the individual view within identified discourses, we conducted semi-structured interviews with additional participants.

Data collection was conducted with a total of 45 key stakeholders (Table I). To maximise sample variation, participants were selected by purposeful sampling to ensure a national spread of stakeholders considered to have insight into the study issues. These included health authority (HA) pharmaceutical advisers, PCO prescribing advisers, chief executives and medical directors, rank-and-file GPs, GPs

Focus group 1, urban	*Focus group 2, suburban/rural*
GP – Prescribing lead, ex-fundholder (GP2)	GP – Prescribing lead, ex-fundholder (GP1)
GP – Local LMC member, ex-fundholder (GP4)	GP – Local LMC member, ex-fundholder (GP4)
GP – Dispensing practice (GP3)	GP – Dispensing practice (GP3)
GP – Ex-fundholder (GP1)	GP – Part-dispensing practice (GP2)
HA pharmaceutical adviser (AHA)	HA pharmaceutical adviser (AHA)
PCO prescribing adviser (PCGO)	PCO prescribing adviser (PCOA)
Focus group 3, rural	*Focus group 4, urban*
GP – Prescribing lead, non-fundholder (GP1)	GP Prescribing lead (GP1)
GP – Junior partner, non-fundholder (GP2)	GP Ex-fundholder (GP2)
Practice manager (PM)	Practice manager (PM)
PCO prescribing adviser (PCGO)	PCO prescribing adviser (PCOA)
	HA pharmaceutical adviser (AHA)
In-depth interviews	
GP – Rural, dispensing GP, non-fundholder (GP1)	HA pharmaceutical adviser, urban (HA adviser1)
GP – Mixed suburban and rural, non-fundholder (GP2)	HA pharmaceutical adviser, mixed suburban and rural (HA adviser2)
GP – Rural, non-fundholder (GP3)	HA pharmaceutical adviser, urban (HA adviser3)
GP – Urban, ex-fundholder (GP4)	HA pharmaceutical adviser, rural (HA adviser4)
GP – Urban, non-fundholder (GP5)	HA pharmaceutical adviser, mixed suburban and rural (HA adviser5)
GP – Urban, single-handed, non-fundholder (GP6)	HA pharmaceutical adviser, urban (HA adviser6)
GP – Urban, prescribing lead, non-fundholder (GP prescribing lead1)	PCO adviser, urban (PCO adviser1)
GP – Rural, prescribing lead, ex-fundholder (GP prescribing lead2)	PCO adviser, urban (PCO adviser2)
PCO chair, urban, ex-fundholder (PCO chair)	PCO adviser, urban (PCO adviser3)
PCO chief executive, urban (chief exec1)	PCO adviser, rural (PCO adviser4)
PCO chief executive, rural (chief exec2)	Medical director (medical director) – urban

Table I.
Participants

involved on the PCO board such as prescribing leads and PCO chairs and GPs with dispensing practices. GP characteristics including gender, practice size and location were also incorporated into the sampling dimension. A letter explaining the aims and methodology of the study was sent to all stakeholders. This was followed up a few days later by a phone call.

Four focus groups with 21 participants were convened at an early stage of the investigation in order to seek emerging hypotheses (Kreuger, 1988). In order to avoid the potential discomfit of a large discussion group and to maximise the opportunity for discussion amongst all participants, each group consisted of between four and six persons, a commonly preferred number (Kitzinger and Barbour, 1999). To obtain a spectrum of perspectives on the same issue and to explore any differences between health professionals we aimed for heterogeneity within the groups. Individual in-depth interviews were conducted with an additional 24 key stakeholders.

For the focus groups, HA geographical setting and the recruitment of HA pharmaceutical advisers were the founding sampling criteria. Two focus groups were conducted within high-density urban settings, one in London and the other in the north west of England. One group was conducted in a mixed suburban and rural setting in the East Midlands and the other in a rural setting in Wales. Two focus groups were convened by the study researchers who recruited PCO prescribing advisers and GPs

from a list of all practices given by the HA pharmaceutical adviser. However, in recognizing the practical difficulties of enlisting a group of people to a common venue (Kitzinger and Barbour, 1999), recruitment for two focus groups (East Midlands and London) was assisted by the participating HA pharmaceutical adviser. One HA adviser was unable to attend on the day and the practice manager participated instead.

For the individual interviews efforts were made to encompass a mix of PCO settings broadly similar to the focus group sample. A range of urban, suburban and rural PCOs was selected and the names of relevant stakeholders obtained. Apart from one chief executive, all stakeholders approached agreed to participate. The GPs were enlisted through a rolling recruitment procedure from records provided by the health authorities and selected on the basis of PCO involvement and practice size. Two of the GPs contacted declined to participate. All respondents were paid £60 for their participation.

Data collection

Data collection was carried out between June and July 2001. The interviews and structure of the focus group discussions were developed from the findings of previous research on factors influencing prescribing (Prosser *et al.*, 2003) and supported by a literature review. To ensure a comprehensive range of issues had been included, two GPs, two PCO prescribing advisers and one HA pharmaceutical adviser who were not subsequently involved in the study, participated in pilot interviews. The data collection schedules were then refined.

Initial focus group discussion was broad, exploring general views about the factors influencing prescribing. Discussion then focussed on attitudes towards cost consideration, management of the prescribing budget and their relative importance in clinical practice. The focus groups met for approximately two hours, moderated by experienced researchers (including TW), and observed by a sociologist who made detailed notes during the discussion (HP).

Semi-structured interviews consisted of open-ended questions around a series of key themes. Separate topic guides were developed for different stakeholders. For GPs, these included: factors influencing prescribing and drug choice; consideration of costs; attitudes towards the prescribing budget; the influence of local prescribing policies. For chief executives and advisers, key headings included: local prescribing policies and objectives; management of prescribing and the budget; GPs' attitudes to prescribing costs and budgets. Interviews with GPs who were PCO board members were an amalgamation of questions from both. Interviews were conducted face-to-face, usually in the respondent's own office. One GP chose to be interviewed at home. All interviews were conducted by HP and lasted between one and two hours.

Analysis

All interviews and focus groups were audio taped and transcribed verbatim. Analysis followed a grounded analytical approach (Strauss and Corbin, 1998). This followed an iterative process whereby categories and concepts were identified, tagged and organized into major patterns and themes. Explanation was derived through moving back and forth between analysis and data, continually comparing one respondent's views with another's in order to confirm emergent accounts. Interviews were continued until no new categories were generated, implying theoretical saturation.

Findings

Prescribing priorities and agendas – competing discourses

A number of managerial approaches identified are indicative of formal rationality and included audits, development of local PCO or practice formularies, educational outreach (eg. practice visits, pharmacist-led practical support, targeting of outlying prescribers), prescribing feedback, dissemination of drug information, educational meetings, incentive schemes and peer group review. Prescribing targets were broadly similar across PCOs, for instance increasing generic prescribing, reducing the volume of prescribed antibiotics, non-steroidals and benzodiazepines and drugs of limited clinical value, audits linked to NSF targets, and compliance with formulary and budgetary management. These often constituted to prescribing incentive payment schemes (Ashworth *et al.*, 2002).

The managerial perspective/managerial discourse

Managers adopted a discourse that presumed the authority of scientific, evidence-based medicine, while at the same time marginalizing the clinical and experiential knowledge drawn on by GPs:

> One of them (GP) might be doing it purely because he's seen that there might be some benefit for a patient, even though the evidence there is limited, and also the – if there isn't the evidence there, there is the chance that it might benefit the patient and the view is that we are there to treat people, we're not there to worry about the cost, that's someone else's problem (HA advisor2).

> I think there's a very long way to go before the evidence-based medicine culture is really adopted by general practice. I guess their experience or their experience of their favourite consultants that they refer to or some other colleagues, plays an important part in what they do (HA adviser4).

Their discourse also points to a managerial emphasis on performance monitoring and direct regulation of GPs' prescribing – "From our perspective, it's making sure what is – what should be used is used, is used appropriately" (Medical director). The implication of this discourse is the raising of a question mark around GPs' technical competence, while presenting managers as consequently having the task of reining in GPs' inappropriate prescribing.

Equally, managers placed prominence on the priority of managing prescribing costs within limited budgets, a finding that stands in contrast to a mailed questionnaire study which reported that most PCOs report the improvement of the quality of prescribing as their top priority, followed by budget adherence (Mason *et al.*, 2004). Budgetary control was portrayed as difficult for managers, and in part attributed to GPs not having taken on board the implications of the unified budget for the collective population – "I wouldn't say there's a huge sort of public spiritedness amongst them, they've all got to pull together for a common good, I think it's more an individual practice level" (Chief Exec1). While there was agreement that the issue of quality improvement had been raised by national targets and the advent of clinical governance, "I think in the new structures there's a lot more emphasis on quality as well as cost" (HA adviser6), these legitimate yet seemingly contradictory logics and values, produced a key difficulty for PCO stakeholders. Managers' discourses suggest an important destabilization of their competition for hegemony in their

acknowledgement of the constraints of reconciling what they felt to be two competing agendas, improving quality while adhering to fixed budgets. Those responsible for overseeing and implementing prescribing management were on the horns of a dilemma. Faced with the key task of ensuring practices remain within tight economic limits, the underlying sub-text to quality improvement was cost-containment and many strategies were formulated because of their potential to reduce expenditure:

> The main issue is still trying to keep within the overall prescribing allocation … Cost still seems to be the main one I'm afraid. (HA adviser4).

> The modified release non-steroidals, really, because there's no clinical reason for using them usually, and because there's a considerable difference in cost (PCO adviser4).

> A big motivating factor is cost, but it's also looking at the evidence as well. You're trying to approach it "what's the evidence for using a PPI (proton pump inhibitor) in this situation, do you need a PPI" but, if PPIs were number 100 on the list of drugs prescribed in this area, we wouldn't have bothered to do it (GP Prescribing lead1).

As such prescribing strategies focused on reducing the inappropriate prescribing of specific drugs such as modified release non-steroidals, prescribing volume and lower-cost therapeutic substitution, rather than the broader issues of evaluating the overall the costs and benefits of medicines, the appropriateness of prescribing or defining and measuring prescribing quality. National priorities for quality improvement augmented tension between these push-pull factors and respondents felt that implementation of NICE guidance and NSFs would threaten attempts at budgetary management, especially when GPs used this as a legitimate basis on which to justify their prescribing:

> if we try and work out how much it's going to cost us to implement a certain policy, let's say cholesterol lowering drugs for primary prevention, we've got to strike a balance between what we want to do and what's prudent, because we don't want to break the bank (PCO adviser4).

> The GPs are saying, "well I want to give, looking at primary and secondary prevention of IHD and what the recommended level, you know to give a statin is. If you actually did what some of the guidance says, it would increase the cost within this authority by six fold. Now where would you find that resource? What the GPs say is well "we're giving what is best for our patient that is up to someone else to sort out, unless you're telling me, we can't prescribe it, which you can't do" (HA adviser2).

At the same time, the rapid pace at which organisational change was expected reduced overall capacity to implement change. Confronted with contradictions at the local level, what emerged was a balance struck between containing budget expenditure, meeting national priority targets and implementing what is feasible given limited capacity in terms of time, finance and human resources. Nationally imposed targets and initiatives undermined local discretion to identify local population health need and to develop policy and prescribing initiatives:

> Because a lot of national service frameworks are relatively process orientated, there's now becoming quite wide concerns about have we got the capacity to do it in terms of the bodies, not necessarily the money so much, but people to deliver these services…there are very practical issues about how you do it all and also the number of things that just trot over the horizon, we're potentially suffering from priority overload, as well as having to change the whole structure of the service (HA adviser5).

These apparent tensions and difficulties tend to suggest that managers occupy a weak position from which to legitimate and assert their authority. More importantly, managers presented themselves as having inadequate status authority in influencing medical work. Both their narrative, and that of the GPs themselves, suggests GPs were sceptical of managers as objective decision makers and information providers. While managers were in no doubt that the organization's focus and interest on cost-effectiveness was entirely legitimate, they were clearly aware that cost-containment lay beyond GPs' prime area of interest and value – "GPs in this health authority are very reluctant to focus on cost as a primary issue" (HA adviser1), and that any deliberate management-led strategy could face resistance from stakeholders owing to a clash with clinical discretion. Since PCOs are not classic bureaucratic structures in the sense that they are not based on hierarchical lines of accountability, managers have no requisite authority to exact GPs' compliance with PCO objectives. Consequently, this meant that there were considerable constraints on what could be undertaken in terms of managerial cost-efficiency procedures. As such, in order to negotiate medical hegemony, managers adopted various strategies designed to advance a managerial perspective and their claims to legitimacy.

Aware of GPs' opposition to explicit cost constraint, PCOs emphasised quality in prescribing targets, and hoped to influence cost containment under this guise. Advisers considered they had to "sell" cost advantages to GPs on the back of quality arguments in order to gain co-operation. As one prescribing adviser explained:

> It is a bit of a tricky situation because if you're perceived as just doing things to save money, GPs get hacked off and they stop listening to what you're saying because they want to treat patients with the best drugs (PCO adviser2).

One of the ways in which prescribing advisors attempted to assert their legitimacy, was to present themselves as skilled in matters of medicines information gathering and evaluation, with the prospect of bringing their knowledge and expertise to bear on GPs' prescribing. Prescribing advice was pursued through dissemination of cost-comparison charts and written information highlighting the cost-effectiveness of drugs within a class. However, prescribing advisors presented themselves as concerned merely with the task of data gathering and dissemination, while the process of actual clinical decision making is left to GPs. This had interesting implications for managers and advisers tactics for guiding prescribing. Aware of GPs' decision-making power, their approach was one of diplomacy, focused on developing good interpersonal relationships and offering practical support. There was also an understanding that their advisory role needed to be earned, especially with GPs who were previously used to a heavy hand from the health authority. The key to modifying behaviour was based on facilitation, rather than on explicit directives or sanctions that might challenge cooperation and objectives. The intention was for managers to make significant recommendations that allowed clinical discretion:

> I'm not very happy with just saying you must use, it's like these are the pluses, these are the minuses and it's for you to choose as a clinician what you want to do . . . if you tend to dictate to GPs they don't take any notice anyway, what they want is you to help them get through the maze of decisions but leave them the freedom to do what they want to do (PCO adviser3).

Other methods for encouraging compliance with prescribing objectives and budgetary restraint included incentives and appeals to professional norms and authority. Target

setting and performance-based financial incentives are a key managerial strategy in processes of standardising and directing prescribing. Managers considered financial incentives raised awareness of issues to be tackled and were an effective lever in redirecting prescribing. More critically, as the quote below suggests, managers depicted GPs as self-seeking and unwilling to adopt prescribing change without incentivisation:

> The whole culture of general practice is about incentivisation and whether you like it or not that's the way. It's one of the main tools that we've got to develop general practice and keep them moving on. Money talks (Chief Exec1).

> ... we can only offer carrots and no sticks, so every time we want to implement anything or want them to implement anything it's, "well what are you going to pay us for it?" (PCO adviser3).

While PCOs were reluctant to explicitly direct prescribing, the notion of professional accountability proved to be especially influential. The strategy relied on peer influence. All PCOs used indicators of prescribing performance based on analysis of prescribing patterns at PCT and GP practice level and monitored prescribing variation amongst individual practices to identify anomalies. Comparative practice-level prescribing data on prescribing volume and cost relative to the other practices in the PCO was issued to all practices. While initially individual practices remained anonymous, some PCOs had started to provide data with all practice names attached. Through "naming and shaming" of performance outliers, this strategy attempted to hold GPs accountable for their prescribing by raising the importance of the impact of individual practices' prescribing on overall resources available and hence on all practices. Often the fear of being regarded by one's peers as profligate or outside the norm acted as a change catalyst. According to advisers, peer scrutiny engaged GPs in reviewing and modifying practice:

> . . . they're not aware of too much pressure on the individual budgets but they are aware of the group pressure (GP Prescribing lead1).

> . . . if they are always outliers, then it does seem to sharpen the mind a bit (PCO adviser4).

However, although managers placed great emphasis on tackling prescribing variability as a characteristic of inefficient prescribing, it is debatable how this might improve the overall quality of prescribing. It has been argued that quality prescribing can only be defined at the level of the individual patient, taking account of diagnosis and other factors, and that initiatives that improve the cost-effectiveness of prescribing are unlikely to improve the broader quality of prescribing (Walley, no date given). Without ways of defining and measuring prescribing quality, it is likely that GPs will seek to resist the competing hegemony of managerialism, as becomes clear in the proceeding GP discourse.

Nevertheless, when asked about the impact of prescribing strategies, managers were confident in their capacity to exert change in local clinical activity and to influence greater collaboration and co-operation with PCO objectives. While they recognised that prescribing change was slow, they maintained it was gradual and their support accepted, even welcomed, by some GPs, albeit a minority:

> GPs are generally more willing to listen. There's still some that are more enthusiastic than others and appear to want not only to listen but want to change and are eager to learn and

want to share views. They're still maybe in a minority, but a bigger minority than it used to be (HA adviser4).

We've been allowed to get in – it's enabled us to get into practices where we might not have been able to get in before (Chief Exec1).

The medical discourse – the iron fist inside the velvet glove?

An important consideration in assessing managerial impact is the extent to which GPs feel pressed to meet PCO prescribing objectives or to change prescribing. GPs' attitudes ranged across a spectrum from those who found prescribing support useful through to those who felt advisers to be unnecessary or unhelpful. To some, prescribing advisers were a welcoming specialist imparting useful drug information – "we actually got the pharmacy adviser to come down and said 'look, where can we improve our prescribing?'" (GP6) – to others they were "cost-cutters" and "inspectors":

It's back door pressure, the PCG pharmacists come in, sort of rifle through our drawers looking for what can we turn generic, who could be transferred to more effective dosing (GP1).

Furthermore, advice was viewed as less helpful by GPs deemed "good prescribers"

Because I'm thought of as a good prescriber, they not very helpful really (GP3).

While GPs considered cost secondary to clinical effectiveness, cost-effectiveness, in theory at least, was regarded as important. Whereas this suggests on a general level, some concordance with PCO agendas, it does not mean that there is agreement about how to best deliver care to patients. When doctors expressed their opinion more concretely, their discourse exposed fundamental inconsistencies between their clinical goals and managerial prescribing strategies. Moreover, they displayed little evidence of the subordination of these clinical goals to the interests of the organization as a whole. All GPs, including those at management level, were highly critical of any notion of a entirely cost-containment agenda:

The impression that I've had with discussions with all of the advisers that we've had is it's very much cost based. There is some prescribing on the target that I disagree with, and which are purely cost motivated and aren't good medicine (GP3).

. . . and at the same time, were decidedly ambivalent about budgetary management and financial accounting at the individual patient level:

The PACT data, one said 110% overspent, and I just looked at it and thought oh well, and then put it in the bin. No pressure, not at all, if anything to stay in budget (GP2).

While GPs were willing to follow managerial initiatives of therapeutically equivalent substitution to save costs, they experienced little conflict over the quality/cost trade-off or the costs of their prescribing budget when they considered that more expensive drugs improved the quality of prescribing for their individual patients, in particular the high volume of statin prescribing:

. . . we're always reassured when our respiratory and cardiovascular drugs are at or above the average, because if we were below we'd be thinking how we're not really picking these people up and treating them (GP Prescribing lead2).

> . . . you prescribe which one has the best evidence. We have to be aware of cost, but you try not to make that the overriding control, because what you are delivering is quality. If I can justify the quality the cost doesn't matter, they can't argue about it (GP4).

Whereas the PCO's aim was collective budgetary accountability, as the above quotes illustrate, GPs' discourse expressed a distinct professional ideology that asserted that clinical goals should serve the individual patient. In contrast to the PCO managers, rank-and-file GPs had a limited strategic population perspective – "As long as I can prove I can deliver quality and it is justified I don't care what the drug budget is, if I know what I'm doing is right, if I can back it up with the evidence base" (GP1). GP board members also gave priority to this, with a PCO chair reflected that patient needs came first, even when this might breach PCO objectives:

> . . . there's an acceptance that you do what is right for the patient and if it happens to fit in with targets then fine, but I don't think there's a drive to particularly follow those targets I think a lot of us miss out the health authority prescribing advice on the basis that this patient seems to be at risk for this particular thing, and we've still got that one-to-one responsibility to the patient.

This was just as true for ex-fundholders who resented their loss of autonomy and purchasing independence. Consequently, they now felt little responsibility for the collective budget:

> . . . we used to respond more to budgeting in the fundholding days but I think the attitude now is I don't feel it's going to impact on me (GP2 focus group2).

Even low-cost prescribers found it difficult to conceptualize the notion of opportunity cost while working within a unified budget and were reluctant to see any reduction in their individual practice budgets as a consequence of underspending:

> Because we are a low-cost prescribing practice, they keep trying to reduce our budget but we prefer to have the flexibility in case we get some high-cost patients coming in (GP5).

For two underspent prescribers who welcomed the opportunity of greater overall cost savings generated through the use of incentive schemes, their most pressing concern was the allocation of their own practice budgets. This individualistic perspective is highlighted by one GP who felt aggrieved because his budgetary allocation had only increased marginally, thereby making it more difficult to ensure an incentive payment for meeting budgetary targets. Moreover, GP managers' perception of their managerial responsibility related more to the interests of their own profession than to a managerial discipline. While, there was some indication of paying lip service to managerial values for greater accountability of cost-effective prescribing, they tended to identify professionally with rank-and-file GPs in that quality prescribing was the primary focus:

> There's not a huge argument if quality prescribing is inducing costs (GP Prescribing lead1).

In terms of directing the activities of their GP colleagues, while GP managers assumed responsibility for encouraging greater GP accountability, they were reluctant to compel change. Instead, they typified their role as facilitators mediating between the separate interests of management and clinicians: "We're about facilitation, enabling, supporting . . . rather than telling people what to do" (GP Prescribing lead2); while one

GP board member described his role as representing the complexities and constraints of clinical practice to the management board, while simultaneously safeguarding GPs' interests from "top-down" managerial imperatives:

> If you've been a pharmacist, you don't really know what it's like to be a GP, you don't really see … what we're trying to do is to make all the clinical governance team members aware of what practices are coping with … As a prescribing lead or clinical governance lead, it's holding the management team back that's a big issue (GP prescribing lead1).

A recurring conversational theme incorporated into hegemonic ideals of medical practice, was the interface between knowledge and practice and to what extent managers and advisers have legitimate authority in determining prescribing. GPs' discourse clearly privileged clinical experience over other forms of knowledge and this had implications for how GPs view the role of prescribing advisers. According to GPs' perspective, clinical knowledge embodies a knowing of the patient. To many GPs therefore, managers possessed insufficient information to engage effectively in critical decision making, since they aimed to standardise prescribing and failed to appreciate the complexity of medical practice. Whilst many GPs were supportive of advisers "administrative" function as information providers of medicines information, their discourse challenged the legitimacy of advisers as participating professionals with decision-making authority. GPs believed that advisers did not understand the actuality of day-to-day clinical practice and the range of contingencies that transpire in "real-world" patient consultations. Thus, GPs' discursive regimens sought to differentiate themselves from managers by advancing their role as patient advocate and so establishing a professional boundary around the domain of clinical decision making:

> Advisers underestimate the difficulty of what we're being asked to do, in terms of sitting down with the patient. The latest one that's coming out from our PCG is that you ought to be able to cut your triptan [a class of drugs developed for the treatment of migraine] prescribing in half by giving people aspirin and not metaclopramide. I read the original *Bandolier* [an NHS publication on evidence-based medicine distributed monthly to key NHS workers] article, but to say realistically you ought to be able to get all of your neurotic, migrainy patients and save half the money is naïve in the extreme (GP1, focus group2).

Specific attempts to impose prescribing, therefore were resented, while the apparent limited support for advisers as significant knowledge sources is signified in GPs acknowledgement that prescribing is ultimately influenced by preference, habit, experiential knowledge and by clinical colleagues perceived as having higher decision-making authority, particularly hospital consultants:

> I can be enthusiastic about something – we've had advisers out to our practice who said change this and after a while I've remembered, but then after – you just fall back into prescribing erythromycin again. It's what you're used to (GP1, group1).

At the same time, the medical discourse suggests that current managerial policies and strategies provide GPs with considerable latitude in clinical discretion. GPs considered there to be little overt pressure to control their prescribing and that prescribing change is voluntary:

> … it's more guidance into certain paths rather than saying you will prescribe this instead of that (GP3).

> It wouldn't matter if we were 50 thousand pounds overspent, all we'd be told is, "oh please don't do it next year, but if you do it's no problem … until the PCGs are actually able to penalise people who are over-budget and aren't reaching the quality indicators, I don't think there's a great deal of incentive for some practices to change (GP6).

Although some GPs expressed foreboding about the effect of more prescriptive directives on clinical discretion:

> … it's not quite as bad as we expected but it has the potential, the iron fist is inside the velvet glove, we know it's there (GP1).

> I don't like the idea of being told what drugs to prescribe, The problem is you get to limited formularies or whatever. The problem is what's the next thing that you're going to be told that you're going to do, it might be the thin end of the wedge, this is a national formulary, we have three antibiotics and everybody in the country uses them, with modifications if there is a local variability and sensitivities. But I mean, that to my mind seems to be the extension of that argument which might not be a good end (GP3,Group 1).

Not all GPs shared the same views expressed by managers regarding the efficacy of financial incentives. Again, the challenge to any managerial strategy for mere cost-containment can be seen in GPs' insistence of the need for incentive targets to improve quality and serve the interests of individual patients. While some GPs welcomed incentives and had introduced changes as a result, the issue of incentives revealed contrasting voices and contradictory logics. For instance, some views suggest that incentives might strengthen an "individualist" consciousness by focusing on the immediate financial reward, rather than on patient benefit, or overall savings to be invested for the benefit of the patient population. For instance, there was concern among some GPs that incentives could induce perverse consequences and that some patients may be denied medications; or that prescribers may refuse to take on "high-cost" patients. In fact, two GPs argued that it was unethical for prescribing targets to be dependent upon remuneration since effective prescribing ought to be a criterion of clinical and professional responsibility. In direct contrast, for others the prime motivation for complying with incentives was financial, "The question is do they change our prescribing, the answer is no, but I'll happily have the money and I'll whinge if I don't get it" (GP1, focus group2). This is also reflected in that a number of GPs felt that the financial return was too little for the increased workload demanded:

> The amount of work you have to put in to get the incentive payments far outweigh the actual money they give you, so even when we have the opportunity we never bother because it's too much hassle (GP1).

This approach implies a contradiction in doctors' portrayal of themselves as patients' advocates. It also raises questions about genuine professional motivation and contributes to managers' intimations that GPs may sometimes locate self-interest over equity. Associated with this idea is the notion of competition between practices for limited budgetary resources, and accordingly, an undermining of the managerial conception of mutually supportive clinical practice and collective budgetary accountability:

> … the practices that have historically been good prescribers have been penalised compared to the other practices, and the other practices, the funding that comes in and the way that they then utilise that is probably not going to be on good practice development (GP3).

Nevertheless, GPs' discourses displayed some level of managerial influence on prescribing. Even for those GPs who strongly resented any attempts by the PCO to direct prescribing, there was an increased awareness of having to account for their actions:

> ... you're more conscious of what you're doing and you're more prepared to justify what you're doing (GP1).

> It's an additional pressure when you see the patient. I feel awful sometimes that I have to make a decision, it's an extra burden (GP4).

Moreover, a key to instigating prescribing changes is peer influence. To the extent that prescribing targets are set by managers and performance surveyed and publicised through shared comparative prescribing data, it might be said this is a technique of management, albeit one that capitalises on the way in which GPs are influenced by professional expectations and norms:

> The charts have helped and you take us as an example as being the outlier with salmeterol, that never bothered us but when we saw we were an outlier, well why are we different, we sorted it (GP2, focus group2).

Discussion

There are various methods to investigating the effects of organizational processes on practice so before discussing the theoretical implications of our findings, it is necessary to consider its methodological suitability. The study reported on attitudes to the approach of PCO prescribing initiatives rather than any association between initiatives and prescribing data. It is not apparent then, whether managerial prescribing initiatives have actually changed prescribing and future studies may want to evaluate the outcomes of specific prescribing initiatives. However, as others have pointed out, without clearer distinction of the dimensions of clinical autonomy, any actual change is difficult to measure (Elston, 1991; Barnett *et al.*, 1998). While quantitative studies may have power in exploring the relationships between measurable variables and outcomes, they are much less convincing when investigating attitudes and experience. Analyses of clinical decision making indicate that qualitative studies are often crucial to understanding why interventions work since they reveal the often complex interweaving of psychosocial attributes with clinical and structural constituents. As such, a useful starting point for analysis is the perception of stakeholders themselves and their use of discursive strategies to advance or resist their respective managerial or medical perspectives and claims to legitimacy. However, since the study is based on accounts viewed from the perspective of selected individuals it is difficult to assess the extent to which the attitudes of our sample are representative for UK general practice as a whole. Nevertheless, the search for concept validity was enhanced through the combination of focus group discussion and individual interviews and the themes that emerged were common across research settings. Further, within the diverse sample, theoretical saturation was seemingly accomplished.

The trend towards bureaucratization and managerial influence is not in dispute (McKinlay and Arches, 1985; Harrison and Pollitt, 1994), and is reflected here by the cost-restraint and efficiency agendas of PCOs, the measurement and monitoring of prescribing and attempts to change it and GPs acknowledgement of the need to

account for their actions. However, despite the apparent view by managers that they were achieving prescribing change, our analysis suggests two divergent and often conflicting discourses which leads us to speculate that managerial attempts to constrain prescribing autonomy will achieve only limited success. The contention is that GPs' discourse features as a challenge to a managerial discourse that reflects attempts to regulate, standardise and curtail clinical discretion. This is due not only to GPs' expressed hegemonic ideals that clinical practice centres on quality and the interests of the individual patient, but also to the fact that the managerial discourse of evidence-based medicine encapsulates only a limited share of the knowledge that GPs draw on in decision making.

In order for change strategies to be implemented, it is essential that those executing the change share a belief in its value. Rather than the collective approach in primary care that was envisaged by the new organizational reforms, findings show a managerial-clinician schism regarding organisational values which is represented by ideological differences in the way that doctors and managers view their roles. Tension exists between the managerial objective of controlling expenditure within limited resources and GPs' commitment to the quality of individual patient care. Although managers talked of quality, they measured success in terms of saving money. While cost-effective prescribing was viewed as important by GPs, they retained their right to prescribe according to their own clinical judgement of patients' needs, a similar finding to that of Weiss and Fitzpatrick (1997). Unlike Weiss and Fitzpatrick we found little evidence implying a reduction in autonomy from the expectations posed by patients. Here, the "ideological" focus on the individual patient provides GPs with a powerful moral argument that serves to legitimate their clinical autonomy (Armstrong, 2002) and presents them with an expedient discourse with which to resist organizational processes to minimize cost and managerial attempts at professional encroachment. This appears to support Giddens' (1997) notion that ideologies connect closely with power since shared ideas or beliefs serve to justify the interests of dominant groups. Ideological differences will probably continue to be a significant source of friction, especially with the increasing focus on consumer choice, involvement and satisfaction (DoH, 2000), which may be seen to legitimate individual patient care (although there is always the danger of this leading to the deprofessionalization). A further contingency on inter-practice collaboration and the encroachment of formal rationality can also be seen in GPs' individualistic attitudes towards budgeting and incentive schemes. It is difficult to see how PCOs can manage resource allocation without making efforts to discipline GPs or encourage a more utilitarian approach to the management of the collective budget. It will be interesting to see how PCTs set about trying to even out the disparity between individual and population health goals.

In particular, the discourses differentiate between the different types of knowledge drawn on by GPs and managers. In contrast to the managerial focus on evidence-based medicine, GPs relied predominantly on their practical and experiential knowledge and presented this as the "dominant" form of knowledge shaping decision making. Retention of autonomy from managerial control can also be seen in GPs' reinforcement of the technical division of labour and their resistance to non-clinical health care managers as policy makers. Advisers were valued as technical information sources, rather than clinical associates, the crucial distinction being that they aid clinician decision making, rather than control it. The implicit divide between clinical knowledge

and evidence-based information is illuminated in GPs' perception that advisers did not understand the everyday realities of the clinical consultation. This perception therefore reinforces GPs' claim as expert decision makers possessing a distinct body of knowledge (seen as a central feature of professional authority and autonomy – Freidson, 1970, 1988). In distinguishing advisers as simply technical disseminators of information, any challenge to autonomy is therefore benign without intuitive clinical knowledge. This perceived lack of legitimate professional authority denies managers a mandate to impose their function and, consistent with other studies, managers were reluctant to take a more directive role in imposing prescribing policy (Harrison and Dowswell, 2002; Weiss and Fitzpatrick, 1997) and that mediation and diplomacy are not an obviously effective way of changing clinical practice (Sheaff *et al.*, 2004).

Managerial control is further weakened by a system that focuses largely on incentivisation, rather than on penalising inappropriate prescribing (a trend that is set to continue, for instance in the context of the new GP contract and the Quality Outcomes Framework that provide financial incentives to improve quality in primary care). As such, strategies are perceived as voluntary, with no obligation for GPs to apply the targets that they do not feel improve clinical practice. Recently, limits to prescribing discretion have also come from national directives stipulating the implementation of Clinical Governance as a policy framework to continuously improve the quality of clinical practice (DoH, 1998) and clinical guidelines to ensure minimum clinical standards, e.g. National Service Frameworks. Such guidance, ironically, may also weaken managerial power. With local PCO objectives driven by cost-containment, GPs may become frustrated if they feel constrained to comply with nationally driven quality improvements, for example an increase in statin prescribing.

Despite the supposition that the appointment of doctors into managerial positions would undermine clinician autonomy, amongst GP PCG board members we found little evidence to support the notion that clinical managers had internalised a managerial ethos or were mediators for managerial control. On the contrary, there was some evidence that managers were complicit in the restraint of managerialist values. Furthermore, these GPs identified less well with the cost-containment interests of their organisation than with the GP view of the primacy of the individual patient. As Hunter (1992) argues, where there are collegial relationships, rather than a clear hierarchy of roles and responsibilities at different levels, this is at odds with the prevailing concept of general management. There is perhaps an indication that GP managers may become powerful players within this new framework as facilitators of exchange between the managerial body and clinical colleagues.

It might be argued then that PCO managers find themselves in a vulnerable position with regard to their ability to influence prescribing. However, two important influences emerged which suggest that we cannot yet be sufficiently convinced of the future retention of prescribing autonomy. Prescribing advisors' asset of a strengthening information base may itself be a threat to GPs who, at least in theory, aspire to practice cost-effectively. Prescribing advisors as information resources and analysts of cost-effectiveness may be a potential force that deconstructs one of the foundations of professional dominance – medical knowledge. In providing a synthesis of scientific data that helps inform the doctor they erstwhile reinforce the grip of scientific rationality on clinical practice. Thus, the increased specialization of educated health care professionals with systematic knowledge undermines the value of individual

clinical judgement and therefore, the claim to privileged occupational status. EBM, with its focus on proven scientific evidentiary sources for rationalising and standardising clinical practice, especially when linked to regulatory mechanisms and "clinical guidelines", presents a significant threat to individual clinical autonomy and doctors' control over the content of their medical work (Allen, 2000; Harrison *et al.*, 2002). As Armstrong (2002) argues, the application of evidence-based medicine provides an illustration of the new tensions between preservation of traditional privileges of the profession as a collective and the clinical discretion exercised by individual practitioners. The implication of this is that any attempts to defend individual prescribing autonomy will need to move beyond the medical model and the definition of evidence broadened to include multiple types and sources of knowledge that incorporate both external scientific medicine and individual clinical judgement. The process of specialization is further enhanced by the use of computerized data to evaluate and question the performance of GP prescribing at the same time as driving greater accountability (McKinlay and Arches, 1985).

Our findings suggest, as Britten (2001) suspected, that a significant challenge to prescribing autonomy ensues from peer group expectations. While Weiss and Fitzpatrick note such influence, they did not declare it to be a major threat to discretion. The difference between these conclusions probably reflects the expansion of GP accountability and the processes for monitoring performance that expose individual prescribing patterns. Arguably, however, rather than promoting professional collaboration, it may be prove divisive since GPs are required to judge the prescribing and clinical activities of colleagues.

This study, within the context of prescribing, provides a snapshot of managerial and GP relations at a time of primary care transition. In particular, it highlights the tension between the scientific rationality of managerial and bureaucratic processes and substantive rationality as characterized by GPs freedom to prescribe according to individual patient need. The influence of non-directive managerial strategies on prescribing is notable, but the impact of managers in explicitly directing prescribing is limited. Correspondingly, individual prescribing discretion continues, reflecting a continued struggle for control of the prescribing agenda. However, the very fact that prescribing cost growth continues suggests that the managerial threat is not over. Greater exertion of managerial control over prescribing – the velvet glove removed – may become necessary in order to realise prescribing targets and ensure practices stay in budget, although this seems unlikely given the current dependence on incentive mechanisms. Further, experience in hospital medicine where doctors are direct employees of the health services and non-independent contractors like GPs, has shown that mangers have only a limited ability to constrain clinical practice and must work with the doctors rather than against them. What is clear therefore, is a continuing need to analyse the impact of the new managerial reforms on primary care prescribing.

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