

A qualitative study exploring variations in GPs' out-of-hours referrals to hospital

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ABSTRACT

Background

There is evidence of significant variations in hospital referral rates for GPs working in out-of-hours care.

Aims

To explain why there are marked variations in hospital referral rates for GPs working in out-of-hours care.

Design of study

In depth, face-to-face interviews with a purposive sample of GPs with different out-of-hours referral rates.

Setting

Bristol, UK.

Method

GPs were selected according to their rate of out-of-hours hospital referral. They were classified as high, medium, or low referrers. Five interviews were carried out with GPs from each of the three categories.

Results

High referring GPs are typically cautious and believe it is better to admit if in doubt. They express anxiety about the consequences of a decision not to admit, both for the patient and for themselves. They hold negative attitudes towards alternatives to hospital admission. Low referrers were more confident about their decisions and less often worried afterwards. Low referrers were positive about alternatives to hospital admission and described themselves as able to resist pressures from family or carers to have someone admitted. Low referrers also see hospitals as places to be avoided and viewed their goal as preventing an admission.

Conclusion

Educational programmes need to be developed to improve GPs' judgements of their competences and to build appropriate levels of confidence.

Keywords

decision making; hospital referral rates; out-of-hours care.

INTRODUCTION

Recent research into out-of-hours primary care has shown marked variations in hospital referral rates;¹ and has found that these variations were not related to the number of patient contacts. Evidence to explain such variations is in short supply, although a considerable body of research² has explored variations in the daytime referral practices of GPs to hospital secondary care. This research has identified a range of possible influential factors that are associated with the patient, the doctor, and the environment in which the care is provided.^{3,4}

The explanatory power of many of these various factors has been shown to be limited,⁵ although it has been hard to interpret the evidence as GPs serve different populations, so GP variability may be confounded by patient variability. GP cooperatives provide a context in which GP variability can be directly explored, as different GPs are serving the same population and wide variations in referral rates can be examined within the same population.

It is unclear whether GPs are able to apply the same decision-making rules and practices they use in daytime surgery to the different context of out-of-hours care, or whether a number of other factors have an influence on decision making.

The aim of the study is to explore why there are such marked variations in out-of-hours referral patterns by focusing on GPs' accounts of their decision making

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and the reasoning behind their decisions to admit or not. This question was explored using qualitative methods because, until now, this has been a neglected area, and thus required a method that is exploratory and informal.

METHOD

Sampling

A purposive sample of GPs was selected according to their rate of out-of-hours hospital referral¹ which included those referred to hospital for admission or to a hospital accident and emergency department. No information was available on the proportion of these patients who were referred to secondary care and were admitted. Rate of referral was calculated from data on patients who accessed services in one out-of-hours cooperative in Bristol in the south of England over a 3-year period (2001–2004).

GPs were classified as high, medium, or low referrers. The aim was to interview five GPs from each of these three categories. High referrers were the top 10 referrers (referrals to hospital ÷ total number of face-to-face contacts) and low referrers were the bottom 10 hospital referrers. Medium referrers were selected from the 10 either side of the median.

Sampling from the 30 GPs continued sequentially until five from each category agreed to the interview. Five of those approached either refused or did not respond to the invitation. Of these five, four were women, three were medium referrers, and one was high and the other a low referrer. Informants were offered a fee for their time being interviewed, which was on average about 1 hour.

Data collection

Data were collected through face-to-face interviews carried out by two senior social scientists in the winter of 2005/2006 after the new GMS contract had been implemented. Each interview was digitally recorded and carried out in the GP's surgery or, in two cases, the home of the GP. Interviewers were only made aware of the referral status of the GPs (high, medium, or low) after the interviews so as not to influence their approach to the interview. However, they were made aware of GPs' referral status during the course of the analysis, as the aim was to explore any differences and similarities between the high, medium, and low groups.

GPs had not been informed of their referral status, although at the end of the interview they were asked about their perceptions of it. There was close agreement between GPs' estimates and actual practice, with all five high referrers and all five low referrers being accurate in their assessments of their behaviour. However, three with medium status saw themselves as low referrers, one as high, and one did not know their referral status.

How this fits in

Out-of-hours care provided by GPs working in cooperatives provides a context for exploring variation in referral, as different GPs are serving the same patient population. This study, using qualitative methods, showed that levels of confidence is a key element in decision making, and that educational programmes need to be developed to improve GPs' judgements of their competencies and to build appropriate levels of confidence.

A topic guide was developed which was piloted on two GPs from the same out-of-hours cooperative. The topic guide began with general questions to assess GPs feelings about 'working in general practice today'. The questions that followed focused on GPs involvement with, and experiences and perceptions of, out-of-hours care; it also explored their approaches to hospital referral and whether this differed from daytime surgery referral practices. This enabled an understanding of GPs perspectives on out-of-hours care within the context of their overall approach to work in general practice.

A vignette was developed to explore decision making (Box 1). This was presented in writing at the interview and used in conjunction with questions about decisions to refer to hospital or not. Alternative scenarios (Box 1, stage 2) were presented to stimulate discussion with all the GPs. The vignette proved particularly valuable for eliciting the relative importance given to the clinical versus the social needs of the patient. After the interview, GPs were asked to fill in a short questionnaire about personal and background characteristics, including their level of involvement in out-of-hours care in the last 12 months.

Analysis

The fieldwork and analyses were carried out concurrently and iteratively. After initial scrutiny of the data collected from the first six interviews and identification of emerging themes, a preliminary explanatory framework⁶ was constructed which informed the nine further interviews. The thematic framework was used as the basis for coding the data. Coding was carried out by one researcher, and a sample of the transcripts were double-coded by the other interviewer. Coding was revised in the light of discussion between coders. The method used in the thematic analysis was constant comparison,⁷ aided by the computer software package NVivo.

RESULTS

Table 1 shows that five GPs had not been involved in out-of-hours work in the past 12 months, and three of these were high referrers. This reflects the difference in the time period between when the data on referral rates

Box 1. Case vignette: decision making about out-of-hours referral.

► Stage 1:

You are the mobile doctor working at an out-of-hours care service. It is about 9 pm on a Wednesday evening and you are directed to visit an 80-year-old woman who is complaining of breathlessness and weakness. You have no prior knowledge of this woman. She lives alone. She has been in hospital with something similar a few months previously, but no definite diagnosis seems to have been made.

She is not in pain but is more breathless and weaker than usual. It is more difficult for her to cope at home by herself. She has medication that includes metformin, furosemide, GTN spray, aspirin, captopril, simvastatin, and codydramol. She is not sure what all the medication is for.

What do you do? Do you send the patient to hospital or keep her at home?

► Stage 2:

You have just decided what to do when her son arrives and provides additional information that, either:

- (i) he can stay with her overnight at her home
 - (ii) she dislikes hospitals
- or
- (i) there is nobody to look after her
 - (ii) she does not like being by herself when she is unwell

What do you do? Do you send the patient to hospital or keep her at home?

were calculated (2001–2004) and when the interviews in this study were carried out (2005). This change in the level of involvement could reflect the change in responsibility due to the impact of the new GMS contract. The high and medium referral groups included males and females, while the low referrer group was all male. Low referrers were older in comparison with the other two groups, and had longer post-qualifying experience.

Interviews explored the importance of a range of different dimensions which included those associated with the GP, the patient, and services. Analysis revealed that the key element in the decision to admit or not was the GP's perspective. There was little variation between GPs in the significance attached to the patient's clinical condition.

However, GPs varied in how they viewed the social circumstances of patients and this variation was related to their status as high, medium, or low referrers in terms of willingness to refer. Similarly, differences between GPs in how they viewed the effect of policy and organisational context on their decision to admit reflected their referral status. Hence, the most significant influence on referral practice appeared to be the orientation of the doctor. The key elements that influenced GPs' decision making were their confidence, their experiences (both positive and negative), their tolerance of risk and uncertainty, and their attitudes to hospital and support in the community.

These influencing factors appear to be interrelated. For example, GPs who experience a complaint may be affected in terms of confidence and feelings about risk management. These factors are also a filter through which all other influences are sifted, including clinical status; patient-related factors, such as social circumstances; and how the GP reacts to policy and organisational factors, such as ease of admitting and pressures not to admit. The following sections explore these influences in more detail, beginning with GP-related factors.

GP-related factors

Confidence and experience. One way of distinguishing between high, medium, and low referrers was by the way GPs expressed confidence in their skills. Low referrers were confident: they talked about their experience as doctors and the length of time they had worked as GPs. In comparison, GPs in the high-referrer group tended to talk in less confident ways, and expressed a belief that they did not know or do enough:

'And again there's this sort of continual feeling that you haven't quite done enough, you know.' (GP5, female, 17-years post-qualifying, high referrer)

Table 1. Demographic characteristics of GPs by referral type.

	High, <i>n</i>	Medium, <i>n</i>	Low, <i>n</i>
Total, <i>n</i>	5	5	5
Males/females	2/3	3/2	5/0
Age, years			
30–39	1	2	1
40–49	3	3	2
50–59	1	–	1
≥60	–	–	1
Mean years since qualifying	19	17	22
No involvement in out-of-hours care in past 12 months	3	1	1
Out-of-hours sessions 2005–2006			
1–7	–	1	1
8–15	–	2	2
16–23	–	–	1
≥24	2	1	–

In addition, GPs emphasised the salience of experience. While they all felt experience was relevant to referral practices, high-referring GPs linked their decisions to their experience of negative outcomes. They also viewed increased caution following negative experiences as a good thing:

'Well I think experience has also taught me over the years that sometimes being cautious hasn't necessarily been a disadvantage.' (GP13, female, 29-years post-qualifying, high referrer)

In contrast, low referrers suggested that experience enhanced confidence:

'It's partly confidence and then obviously how long you have been in practice, how much you've seen in the past and dealt with similar situations.' (GP14, male, 39-years post-qualifying, low referrer)

Tolerance of risk and uncertainty. In general, GPs acknowledged that risk was present in most of their decisions but showed differing degrees of comfort with this. GPs who were high or medium referrers expressed caution and discomfort with uncertainty:

'When it comes to medicine, certainly I'm quite cautious.' (GP16, male, 8-years post-qualifying, high referrer)

On the other hand, GPs who expressed confidence combined with a willingness to accept a degree of uncertainty were low referrers:

'So I think people vary in the amount of risk they're willing to take ... obviously the amount of risk you're going to take varies according to ... firstly, your personality but also how long you've been in general practice, what type of general practice you've been in ... if you're used to working on your own ... And also you know you are knowledge based.' (GP4, male, 19-years post-qualifying, low referrer).

There were also differences between the groups in how much they worried after they had made a decision, or after their shift had ended:

'Maybe I don't lose sleep because I've now been working here for quite a long time ... I've got enough over the years right ... And not spectacularly and lazily wrong.' (GP9, male, 21-years post-qualifying, low referrer)

Interviewer: *'Do you ever worry: "Have I made the right decision?"'*

Responder: *'Um, that's what I base my admission criteria on basically.'* (GP16, male, 8-years post-qualifying, high referrer)

This GP sometimes checked up on patients after an out-of-hours care shift had ended. He observed that he was more likely to worry about out-of-hours care patients than those he sees in his daily practice, because daytime patients have a means of getting back to him should they need to.

Some of the GPs in the medium group also talked about worrying after the shift had ended, particularly about patients who they had decided not to refer to hospital. Others in the low and medium referral group tended to acknowledge that they might experience uncertainty, but they expressed that as wondering about the outcome for the patient rather than worry, and did not continue thinking about a decision after finishing an out-of-hours care session:

'I mean, I think when you first start out you often post-analyse what you do "Was I doing the right thing? Should I ... " you kind of mull it over. I think over time, you know you can't ... you haven't got time to waste energy going through that process. You know you see a patient, you assess them, you make a decision ... And you live or die by your decisions.' (GP3, male, 19-years post-qualifying, medium referrer)

Complaints

How GPs felt in terms of risk and their confidence was associated for some with the experience of being sued or having a complaint made against them in the past:

'Because um ... as I think I've said to you before I'm quite obsessive. Very very careful. And I think again in the light of what's happening at the moment with this wretched complaint, I think, if anything, it's probably tipping me even more. If anything I'm being even more cautious. I'm very very careful. I don't like missing things.' (GP17, female, 25-years post-qualifying, high referrer)

Although it was not just the high referrers who had received a complaint in the past, high-referring GPs felt differently about how a complaint affected their decision making: they suggested that it increased the likelihood that they would admit a patient.

Attitudes to hospital admission

Differences were observed among GPs in how they viewed the benefits of hospital admission in out-of-hours care work, and how they saw the alternatives to admission. High referrers talked about the clinical and general benefits of hospital admission; some also said

that a benefit of admission was that it reduced their risk of being sued:

'I tend to err on the side of caution ... The more risks you take the more you're laying yourself open to something going wrong and potentially getting a complaint. And so it's easier to send somebody in and get the hospital to check them out than to sort of leave them at home and think well actually they might die, you know, and then what?' (GP5, female, 17-years post-qualifying, high referrer)

There were few differences between high, medium, and low referrers in the way they felt about lack of prior knowledge about the patient's history in the out-of-hours setting; however, for GPs with low levels of confidence this, combined with a lack of opportunity for a second opinion, may take on greater importance in the decision to admit. Interestingly, one of the medium referrers also pointed out that lack of prior knowledge of the patient's clinical history meant that external factors, such as the state of the house when visiting in out-of-hours, took on a greater weight in their decision making.

In general, GPs also recognised that there were risks involved in admitting a patient, including the danger of hospital-acquired infections, loss of independence for the patient, the poor environment of over-stretched hospitals, and the dangers of being 'over-investigated'. However, high and medium referrers tended not to agree that hospital admissions led to over-testing and felt that tests carried out were appropriate.

There was broad agreement across all three groups that the main risk of not admitting to hospital was that the patient might deteriorate and either be admitted as an emergency, in less 'ordered' circumstances, or that the patient could die. Among high and low referrers there was concern about the implications of such an outcome for the GP, in particular the risk of being sued.

Attitudes to out-of-hours work

GPs' feelings about the value of out-of-hours work and their motives for doing it did not appear to influence decision making, as there was little difference between the referral groups in how they perceived out-of-hours care work. When asked about why they do out-of-hours care work, high, medium, and low referrers all talked in very similar ways. For some in each group the key incentive was financial. However, out-of-hours work was also valued for the interest and variety it offered, the excitement of working in acute medicine (an unpredictable workload compared with general practice), and being part of a team. Many GPs also saw out-of-hours work as part of the role of being a GP, and part of their commitment to their profession, their community, and their patients

— even though they acknowledged that the area they covered in out-of-hours care sessions was much wider than their own practice:

'I quite like to see the odd emergency.' (GP7, male, 14-years post-qualifying, low referrer)

'Um ... yeah it felt a bit like that, that you were looking after other people's patients in a way that you'd want them to look after your own.' (GP6, male, 19-years post-qualifying, high referrer)

This commitment was seen as part of their professional role. However, many saw out-of-hours care work as something they had to do to ensure cover was provided for their patients until the contract changed. Once out-of-hours care sessions became optional, many withdrew from out-of-hours work.

There was also little difference between high, medium, and low referrers in what they did not like about out-of-hours care work. All groups talked about tiredness and the difficulty of fitting out-of-hours work with other commitments, particularly family needs. Another shared response was the difficulty of working with only limited information about the patient, compared with their practice work. High referrers highlighted the stress of out-of-hours care work, while low referrers commented on the inappropriate use of out-of-hours care services for problems that should be dealt with through ordinary general practice.

Patient-related factors

All GPs emphasised the importance of patients' clinical status in their decisions to admit; there were few differences between the groups in this. For example, in GPs' responses to the vignette all talked about patient's medication, what this indicated, and the kind of tests they would carry out on the spot to assess the patient's clinical condition. Social factors, such as what patients and their families or carers wanted, how well families or carers could cope, and the social situation of each patient were also important in the decision-making process.

However, there were differences between high, medium, and low referrers in how such factors have an impact on their decisions. All three groups of GPs said that they took account of what the patient wanted. While high, medium, and low referrers would all support a patient's wish not to be admitted, where appropriate, only high referrers said they would be influenced by a patient's wish to be admitted:

'... if they're kind of agitated, concerned, or their family are agitated or concerned or kind of in any way aggressive, be it passive or otherwise, I'd be more likely to admit as well.' (GP16, male,

8-years post-qualifying, high referrer)

Similarly, while all GPs claimed to take account of what the family wants, low referrers also said they would not reverse a decision to not refer on the basis of family wishes. Low referrers saw themselves as negotiators, and their role as 'selling' their decision to family and carers:

'When I see members of the family saying, "Oh but there's nobody to look after her", I often would interpret that as a problem for the family rather than the doctor.' (GP11, male, 15-years post-qualifying, low referrer)

GPs' decisions to admit were also influenced by the social situation of the patient, including the state they were in when visited, their housing and general environment, and whether they lived alone. There were few differences among referral groups in the importance placed on social aspects, but the most important one was the extent to which GPs felt confident in the availability of alternative services in the community.

Organisational factors

Service-related factors that appeared to be influential were the availability of alternatives to in-patient admission; 'timing' factors, such as whether the consultation was on a weekday evening, night, or at the weekend; ease of admission to hospital; and policy relating to admission, in particular what could be described as a 'do not admit' policy as a result of influence from commissioners to reduce admission levels. However, as with patient-related factors, GPs' beliefs and GP-related factors are filters through which such influences are sifted in the decision to admit or not.

The three groups of GPs had different attitudes towards alternatives that were available in the area at the time of the out-of-hours care study. For example, while high, medium, and low referrers were all aware of the availability of intermediate care and saw it as a valuable resource, high referrers had negative attitudes towards this alternative which related to difficulties they had experienced in trying to access this for patients. Although alternatives to admission were known about, high referrers felt they were of little benefit:

'She greeted me with, "I've fallen down the stairs twice today". So she wasn't safe at home. So I tried to refer her to intermediate care to see whether we could get a respite bed, but there was nothing going, so I had no option.' (GP16, male, 8-years post-qualifying, high referrer)

Some medium referrers acknowledged that there

were limited resources for care outside of hospital, but were also optimistic about finding alternatives and positive about what was on offer, as were low referrers:

'I think the intermediate care is probably much better for the patient if they can have it ... I don't think hospitals are generally great places to be. They're under-staffed, there are lots of bank staff, different ... you know. I think if you've got a life-threatening or very serious illness, hospital is the place to be, but not really for anything else.' (GP15, female, 11-years post-qualifying, medium referrer)

There were few differences between high, medium, and low referrers in their feelings about the ease of admitting a patient. All felt that organisational changes had made it easier to admit a patient in out-of-hours care work. In particular, the change from having to argue the case with a hospital doctor to advising a nurse about the need for admission was perceived to make the process of admission easier:

'I think generally the nurses are less keen to confront you about your keenness to admit.' (GP3, male, 19-years post-qualifying, medium referrer)

However, GPs also commented that there were too few opportunities in out-of-hours care work to get a second opinion from a hospital doctor, or to check a decision. While the desire for a second opinion on occasion did not differ by referral group, it may have been a factor prompting more admissions among those who were high referrers, given their greater caution and intolerance of risk, particularly in the context of a lack of prior knowledge of the patient.

GPs also commented on the policy environment and the pressure not to admit. One high-referring GP said she felt guilty when she admitted a patient. Both high and low referrers described this 'do not admit' policy as significant in their out-of-hours care work:

'I think there's a pressure not to admit, you know ... because there's limited number of beds and you're taught to make sort of strong decisions.' (GP6, male, 19-years post-qualifying, high referrer)

However, for low referrers this 'do not admit' policy acted as a different kind of filter, because it matched their own desire not to admit:

'And you think actually I don't want to send people into hospital unless I'm reasonably sure it's going to do them good. So ... no I don't know if I'm unusual in that, but I suspect not.' (GP9, male, 21-years post-qualifying, low referrer)

DISCUSSION

Summary of main findings

The aim of this paper was to explore the marked variations in decisions to refer to hospital from out-of-hours care. In-depth interviews with a purposive sample of GPs were conducted to gain insights into influences on decision making. However, it is not known what is an 'appropriate' hospital admission and whether low, medium, or high referral rates may be appropriate.⁸

Evidence from this study suggests it may be possible to characterise the professional perspective of the doctor and explain different patterns of GP referral practice according to how GPs talk about their approach to hospital referral, and how they deal with decisions in their out-of-hours care work. This supports research evidence from daytime referral practices,⁵ which suggests it is the doctors' orientation, or more specifically their threshold of risk, that best explains variations in referral.

High-referring GPs are typically cautious and believe it is better to admit if in doubt. They express anxiety about the consequences of a decision not to admit, both for the patient and for themselves. They also appear to hold negative attitudes towards alternatives to hospital admission. Such attitudes are often based on an experience of being unable to mobilise these alternatives. High referrer also appeared more willing to take into account the wishes of the patient and their family in relation to admission.

Low referrers were characterised as being confident about their decisions and were less worried about their decisions afterwards without being dismissive of the difficult nature of some decisions they have to take. They were positive about alternatives to hospital admission and described themselves as able to resist pressures from family or carers to have someone admitted. Low referrers perceived hospitals as places to be avoided. Although GPs in all three groups observed that hospital admission brought with it a number of clinical and social risks, low referrers viewed their goal as preventing an admission.

Strengths and limitations of the study

Interviews were conducted with a small sample from one out-of-hours cooperative, although interviewed GPs were seeing a wide range of patients from several areas of the city. Views from this study will be used to generate questions to pose to around 200 GPs working in three cooperatives covering all areas of the city and several hospitals. Further research will enable these findings to be validated with a larger group and to explore whether the views expressed here are more widely generalisable.

The responses given here are based on retrospective accounts of decision making and the reasoning behind it. In some cases the doctors were not involved with

out-of-hours care at the time of the interview, and their more recent decisions to discontinue out-of-hours care may have influenced their beliefs and reporting of it. These data are based solely on GPs' accounts. Patients' perceptions of the nature of decision making and their perceived influence on negotiating a decision whether to refer to hospital, may be distinctly different; this was not explored in the current study.

Implications for future policy and clinical practice

This study has raised some important issues about out-of-hours care work, including the differences between out-of-hours care work and general practice. For example, the change to nurses being in charge of requests for admissions appears to have made it easier for GPs working out-of-hours to get an admission to hospital. Some GPs also appear to need a means of gaining a second opinion in out-of-hours care work without going through a hospital admission procedure. Gaining a second opinion could be of importance to more cautious high referrers, particularly if the person they seek an opinion from is a peer who can act as a 'critical friend' and mentor rather than a gatekeeper.

Increasing the availability of intermediate care and making it easier to arrange could enhance the confidence of high referrers in using it as an alternative to in-patient admission (for example, if intermediate care could be sought with one phone call rather than several, as with hospital admission).

The current evidence suggests that differences in referral rates may be related to a fear of being sued. A culture that supports GPs, rather than makes them feel threatened, may enable them to pursue alternatives to hospital admission.

Finally, GPs commented on the lack of routine feedback following out-of-hours care shifts. High, medium, and low referrers do not have an opportunity to review outcomes for the people who they see during out-of-hours care work, as they would with their own patients in general practice. There is not the opportunity to review negative outcomes, such as cases where there were adverse consequences of leaving the patient at home or admitting to hospital.

These issues suggest that those who appear to find decision making about admission most stressful, and who use hospital admission most often, are GPs who find greatest difficulty with the gap between the problems encountered and resources available out of hours. In out-of-hours work there is an urgent problem but less continuity of care, less prior knowledge of the patient, no medical notes, and GPs are unable to draw easily on a second opinion compared to working in a daytime practice. For some GPs this is problematic. High referrers in particular appear to manage this difficulty and the tensions it creates for them by

resorting more often to hospital admission.

Level of confidence is a key element in decision making and there is evidence that GPs are poor at judging their own competence.⁹ Educational and training programmes need to develop methods for building appropriate levels of confidence as well competence.

The results have implications for changes in out-of-hours care.¹⁰ With a greater range of professionals becoming involved in assessing patients in the community, and possibly admitting them, and who may be more risk averse and less confident than GPs, marked differences in referral rates are likely to persist. This suggests the need to continue to investigate variations in referral and its implications.

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Ethics committee

This study received approval from the Southmead ethics committee in July 2005 (Reference 05/Q2002/62)

Competing interests

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