Uncomfortable prescribing decisions in hospitals: the impact of teamwork

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Summary

Objectives Prescribing is not always driven by therapeutic motives alone; social and intrinsic factors also play a part in the decision. However, most research into prescribing influences has been conducted in general practice, with very little conducted within hospitals. One potential influence is the hospital multidisciplinary team, yet little attention has been paid to how interactions between teams and team members may influence prescribing. This study investigated the effect that team interaction and structure had upon UK hospital doctors' prescribing decisions, particularly their discomfort felt prescribing.

Design and setting The study used the critical incident technique and in-depth interviews. Prior to an in-depth interview, 48 doctors of varying grades from four hospitals were asked to remember any uncomfortable prescribing decisions that they had recently made. These 'incidents' were discussed in depth. All interviews were tape-recorded and transcribed verbatim. A grounded theory approach to data analysis was taken.

Results There were 193 critical incidents described in the interviews. Over one-third were related to the difficulties of prescribing within a team environment. Discomfort frequently arose because of factors relating to the hierarchical structure; in particular, junior doctors described their discomfort when they were uncertain of seniors' prescribing decisions. Prescribers also adhered to rules of prescribing etiquette, including the maintenance of other doctors'/teams' prescribing decisions and adherence to prescribing norms. Discomfort also arose from a perceived pressure to prescribe from the nursing team. Doctors admitted to prescribing to maintain overall team relationships, sometimes ignoring hospital regulations and best practice to do so.

Conclusion Overall, this study demonstrated that hospital doctors' prescribing decisions were strongly influenced by relationships with other team members, particularly nurses and senior doctors. Ways of reducing this discomfort should be explored and further research is advocated in this area.

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Introduction

Prescribing is not always driven by therapeutic motives.[1] Factors such as the doctor–patient relationship[2] and the pharmaceutical industry[3] have been shown to impact on doctors' prescribing decisions. Within general practice, doctors' prescribing decisions are also influenced by the prescribing decisions of colleagues and hospital consultants.[4] However, the impact that other healthcare professionals have on the prescribing decisions of doctors working in hospital practice is unknown.

The hospital workforce consists of a range of healthcare professionals. For effective healthcare delivery, staff are organized into teams to care for patients. Team membership may be multidisciplinary or be limited to those with similar professional roles, such as in the medical team, comprising doctors of varying experience and seniority. Teams are hierarchal in formation and location within a hierarchy is generally determined by the seniority or experience of the employee.

There has been little written about how these teams of health professionals operate in practice[5] and to date no-one has explored the effect that the team has on doctor's prescribing. This study, by exploring uncomfortable prescribing decisions, explored how working within these teams impacted upon hospital doctors' prescribing decisions.

Methods

Data collection

The critical incident technique (CIT) was used as an investigative tool[6] and a means of triggering reflection about what types of prescribing makes participants feel uncomfortable. This technique has the advantage that it 'does not collect opinions and estimates but obtains a record of specific behaviours'.[7]

The CIT formed the basis of an in-depth interview; in the first part, participants were asked about real-life incidents of uncomfortable prescribing decisions. This allowed doctors to discuss their subconscious thought processes and influential factors on the decision to prescribe. This revealed not just factors that could lead to doctors feeling uncomfortable, but also factors that would affect prescribing in general, providing a means of unravelling much broader and complex prescribing influences.

In the second part of the interview, participants were asked about more general themes from the literature, such as the types of medications and patients that doctors associated with discomfort. Concepts and theories emerging from the ongoing analysis provided an iteratively revised focus for this second part of subsequent interviews.

Data analysis

Interviews were tape-recorded and transcribed verbatim. A systematic approach to analysis of the data was aided by use of the qualitative data analysis package, NVivo.

The first author read and re-read the interview data, assigned preliminary codes and reflected on these as further interviews were undertaken. Direct comparison with earlier data was conducted and examples were sought where prior findings were disconfirmed and contrasted.

To increase robustness, all authors individually read the critical incidents. Their thoughts on the emerging themes were then discussed and a consensus reached.

Study setting and sample

Two teaching hospitals and two general hospitals from one of 10 Strategic Health Authorities were selected. Hospitals were chosen to increase the potential variation in organizational characteristics. All doctors in the hospitals were sent an invitation letter. Snowballing was used to improve the recruitment of junior doctors by requesting participants to suggest peers who may be willing to take part. Thirty-two doctors were selected for interview based on an initial purposive sampling frame, which sought doctors of varying experience working within different specialties; a further 16 doctors were theoretically sampled according to emerging findings. Prior to interview, participants were asked to think of any incidents of uncomfortable prescribing decisions that they experienced, for discussion during the interview.

Approval from an NHS Research Ethics Committee and management approval was obtained for the study. All data were treated as strictly confidential.

Results

Doctors reported 193 uncomfortable prescribing incidents. Evidence-based medicine (EBM), the doctor–patient relationship and the overall healthcare team were the main over-arching influences on prescribing associated with discomfort. Although it is recognized that there is some interaction between these influences, this paper focuses on the latter. The influence that EBM has on prescribing is described elsewhere.[8]

Prescribing decisions were strongly influenced by the organizational structure and the multidisciplinary team (MDT) within which doctors worked.

The influence of doctors

Three 'uncomfortable' influences arose because of the interaction with other doctors within that structure: the medical hierarchy; prescribing norms; and prescribing etiquette.

The medical hierarchy

Specialist teams of doctors operate within a hierarchical structure. Within this hierarchy, it is often senior doctors who initiate a decision to prescribe but prescription writing is often the role of a junior doctor. This arrangement was the cause of much discomfort for junior doctors, if they lacked knowledge of the drug they were asked to prescribe:

> *'… this is another subset of uncomfortable prescriptions that I have sometimes, is when a senior colleague of mine asks me to prescribe something and I simply don't know what it is.' (General surgery pre-registration house officer [PRHO])*

Junior doctors were placed in an uncomfortable position when they believed that their seniors' decisions might be inappropriate, but their position within the hierarchy made it difficult for them to contend the decision. One example of this discomfort was given by a PRHO, who disagreed with a prescribing decision made by a registrar. He did not challenge the decision because he felt the registrar would exercise his authority, making such efforts futile:

> *'… but that wasn't really a situation where I could say "well no I think you're wrong" because they would just say "well no I'm not, I'm the registrar"…' (Breast surgery PRHO)*

Junior doctors also felt that there was a lack of available channels to resolve the problems that they detected in their superiors' prescribing. Yet, ironically, the cause of this discomfort was inverted for senior doctors. The registrar below was uncomfortable because he felt that juniors would not approach him if he made a prescribing error:

> *'I'm very approachable but I think people may find it more difficult to come to me and say "oh you've done that wrong".' (Care of the Elderly [CoE] registrar)*

When dealing with apparently inappropriate (but not immediately harmful) prescribing decisions, doctors often choose to be tactful with their seniors and compromise their opinion in favour of maintaining good team relations. One SHO discussed an incident whereby his registrar asked him to prescribe temazepam for a patient but he felt that the prescription was inappropriate. Despite his discomfort, he prescribed the temazepam, as his senior colleague was new and he wanted to remain 'on his good side'. When asked if he thought his decision was appropriate, he replied that he might ask another doctor to stop the prescription but that he, personally, would not approach the registrar:

> *'… I may, when I'm on a ward with another reg [registrar] who's more senior than him tomorrow, I may mention it, may decide to knock it off, we'll see. Although it's not going to do him any direct injury, so it can probably wait a day, facilitate my diplomacy with the new registrar; I don't want to upset him.' (ENT SHO)*

The hierarchal team was not always a source of discomfort. Juniors would also approach a more senior doctor for advice when faced with a difficult prescribing decision. Some junior doctors felt that by gaining such advice, they would be absolved of responsibility, and essentially could 'pass the buck'.

Discomfort arose when junior doctors were working on call, however, and senior doctors were not available to provide advice. This left doctors feeling a greater sense of responsibility, bringing with it discomfort:

> *'You are generally on-call by yourself, even though you have someone on the end of the phone, but the onus is more on you …' (ENT SHO)*

There was a stark difference between the junior doctors' experiences of obtaining advice in certain specialties. Prescribing support for junior doctors in surgical posts was felt to be poor:

> *'I was a surgical house officer and it's an extremely poorly-supported job really, you are on the wards on your own and you haven't got a clue what you're doing most of the time.' (CoE SHO)*

In contrast, doctors in anaesthetics felt that they had good support in their prescribing, with a more 'flattened hierarchy':

> *… they [consultants] always ask your opinion, which I think other specialties, maybe there's a bit more hierarchy, what a consultant says goes …' (Anaesthetics SHO)*

Prescribing norms

Within certain specialties or wards, junior doctors' prescribing was strongly influenced by norms or precedents that had been set by consultants. Doctors' discomfort was sometimes attributed to a pressure to conform to these norms, their discomfort again originating from a lack of knowledge about the medication in question:

> *'… general surgeons seem to like it [Hartmann's] as their fluid resuss [i.e. resuscitation]… whereas the normal regime is obviously a mixture between normal saline and dextrose. So instead of prescribing those sort of things they've chosen this … and it's just not knowing what's in there and what the effects are … but because the consultants seem to like it and it's their fluid of choice, I don't really have much choice in the matter.' (Orthopaedics PRHO)*

Prescribing within the norms was important to non-consultant doctors, who were fearful of contravening them and causing trouble:

> *'… it only takes a few consultants changing their prescribing habits and everyone follows suit basically and once it becomes a norm, it becomes a norm and, you know, you'd find it difficult to defend yourself if you prescribe outside of that.' (CoE registrar)*

Adhering to prescribing norms was particularly difficult for junior doctors because of their frequent rotations around specialties. Doctors also had difficulty adhering to unfamiliar prescribing norms when on-call. Their discomfort was exacerbated by the lack of opportunities to learn about the rationale for these prescribing decisions, as they were rarely in contact with the team or consultant who had set these norms. They often relied on the nurses to provide them with information about prescribing norms. Occasionally, the basis of prescribing norms was disputed, with doctors believing that they contravened the current evidence. In these situations, less senior doctors would often conform to the norm, conceding to their position within the medical hierarchy.

Prescribing etiquette

Reasons for the prescribing decisions of doctors could sometimes be explained by what one interviewee described as 'prescribing etiquette'. Three rules of etiquette were suggested by the data: (1) avoid altering other prescribers' decisions; (2) avoid making prescribing decisions outside of your own team; and (3) only change inappropriate prescribing decisions. Deviance from the etiquette by prescribers was a frequent and implicit cause of discomfort.

Doctors discussed their discomfort when having to alter prescribing decisions made by members of their team. An SHO discussed his discomfort when altering a colleague's decision not to prescribe ibuprofen to a patient with osteoporotic fractures, because they had previously been prescribed warfarin. He decided that the patient's pain was severe enough to warrant this treatment and he wrote the patient up for ibuprofen without saying anything to his colleague for fear of chastisement:

> *'… it would have been undiplomatic, if that is a word, of me if I'd shot my mouth off in front of him … I thought I'd go back to the patient and give her something when he's not there …' (General medicine SHO)*

Junior doctors discussed their discomfort when prescribing or making prescribing modifications for patients under the care of another team, despite this being part of their on-call role. An example of this was given by an SHO who made the decision to stop a prescription, written by another team, as the medication was causing the patient to experience side-effects:

'I think the prescription itself, although stopping it was reasonable, it was just sort of, a slight bit of politics there, etiquette that made it uncomfortable.' (General medicine SHO)

If it was absolutely necessary to break rule one or two, then it was felt imperative that the prescribing decision to be altered was inappropriate. Interfering with a potentially appropriate decision was associated with much discomfort. Doctors, particularly, struggled with the uncertainty of whether the original prescribing doctor was in possession of additional information, which might explain the prescription and change an apparently inappropriate decision to an appropriate one:

'… it was one of those ones where I didn't know his exact reasons for changing the prescription. I thought it was probably best not to change it back again without knowing.' (Obstetrics and gynaecology SHO)

The influence of non-medical healthcare professionals

Non-medical healthcare professionals also played a major role in the prescribing of doctors and their associated feelings of discomfort. Three main themes emerged from the analysis: prescribing responsibility, pressure on the decision to prescribe and prescribing to facilitate the nursing team.

Discomfort was often felt because of the responsibility attributed to the physical act of writing a prescription. Doctors felt that accountability for prescribing decisions lay wholly with them which made them very cautious about prescribing requests from non-medical members of the team. Doctors did not know their position, medicolegally, if they accepted erroneous advice from non-medical team members. Therefore, they felt they should personally assess all patients:

'… people will just say to you, "can you write a prescription for flucloxacillin for this wound?" and should you actually go and see the patient or should you just take their word for it?… I don't know where I'd stand if the patient had an adverse reaction …' (A&E registrar)

Many uncomfortable prescribing decisions reported by juniors were associated with pressure to prescribe from nurses. House officers discussed this issue the most frequently, with over one-third of their incidents falling into this category. Only two senior doctors discussed a recent incident of this nature but doctors of all grades described being exposed to nursing pressure in their early careers. Exactly how pressure was exerted by nurses was nicely demonstrated by one PRHO, who discussed how the nurses' emotive remarks made her feel pressurised to prescribe:

'… when I did mention it to the nurses that "oh I'm not sure about this" they'd come out with things like "well Sandra's very good" or "you wouldn't let a dog die in pain"… so that puts pressure on you I think.' (General surgery PRHO)

Junior doctors frequently discussed the pressure they perceived from nurses to prescribe sedatives when on call. Their discomfort arose from a suspicion that sedatives were not always appropriate. Despite this suspicion, some interviewees reported giving in and prescribing. For some doctors, prescribing was an easier option than declining nurses' requests. Not all requests were conceded to and these doctors felt that they had to 'stand up' for themselves, demonstrating a power struggle in the relationship:

'… you get called "can you basically just prescribe something to quieten down the ward?" You have to, it's kind of a standing up issue, you have to kind of stand up for yourself and say no.' (Respiratory medicine PRHO)

Once doctors became registrars, they felt that they became more resistant to the pressure that nurses exerted on them to prescribe. This was attributed both to a change in attitude and to the way they were perceived by the nursing team. They felt that their prescribing decisions had become 'a bit more final'.

Nevertheless, doctors did try to maintain effective functioning of the multidisciplinary team, which in some cases led them to break rules and to prescribe to reduce workload for the nursing team. Examples included signing for prescriptions that they did not write and prescribing medication that had already been administered. They would accede to these requests because they were aware of the impact that not doing so could have on others or the team as a whole:

'… it's not unusual to open up a drug card and notice things that haven't been signed but have been written in and given … theoretically it's quite easy

to say well I'm not going to sign anything I've not prescribed, but you don't necessarily help either the patient or the nursing staff with that situation …' (Orthopaedics PRHO)

Doctors also took into account the impact that their decisions would have on the team's workload. Part of the rationale for an SHO's eventual decision to recannulate a patient, instead of prescribe oral antibiotics, was based on nursing workload:

'… I kind of thought well, if I put the cannula in there's no more work for her [the nurse] because she's already made it up …' (Obstetrics and gynaecology SHO)

Discussion

This study revealed that not only did doctors feel discomfort as a result of prescribing within a team environment but also that working within this environment had an important influence on doctors' decisions as to whether or what to prescribe.

There are some limitations to the study. Data collection relied on self-report and therefore accuracy was limited by the interviewee's ability to recall their decision-making. There could have been factors that influenced doctors' decision-making that were forgotten or that doctors chose not to disclose. There may have been occasions where interviewees' altered their responses in line with accepted norms. However, this effect was reduced by use of the CIT, as responses were grounded in actual events.

The effect of the medical hierarchy on doctors' prescribing decisions was an important finding. A hierarchy 'produces restraining forces against communicating criticisms of persons in a higher level'[9] and we found that doctors were sometimes reluctant to voice their concerns about seniors' prescribing decisions. This has implications for patient safety, as this lack of questioning can lead to prescribing errors.[10] Furthermore, this type of discomfort may contribute to the reasons why relationships with senior doctors were the second most frequently reported source of stress for junior doctors, after dealing with death and dying.[11] Furthermore, restrictive hierarchical systems, such as is found in some surgical specialties, is a reason given by some doctors for rejecting a specialty as a long-term career.[12]

Therefore, we would advocate the introduction of flattened hierarchies that allow junior doctors greater contact with senior doctors when necessary, decreasing stress on the junior doctor. A flattened hierarchy could lead to closer working relationships between these doctors, a potential area for improvement in junior doctors' training and experience.[13] Flattened hierarchies also provide greater opportunities for others to play a part in decision-making.[14] This may include other members of the MDT who believe that the organization of medical firms is a major factor inhibiting the development of good working relationships with doctors.[15]

The hierarchy, conversely, also provided comfort for junior doctors, as they would gain advice from and pass responsibility to the doctor directly above them in the hierarchal structure. This phenomenon has been reported with GPs passing responsibility for prescribing decisions onto hospital consultants,[4] and is termed 'defensive avoidance',[16] but has not been reported within hospitals. There were, however, incidences when junior doctors were incapable of making prescribing decisions but were unable to obtain senior advice. This is concerning, as lack of supervision is associated with prescribing errors[10] and a reduced quality of care.[17] These findings from this study suggest that these are areas of improvement for doctors in training.

Social influences such as prescribing norms and etiquette were important to doctors, who did not want to be criticized by colleagues for disregarding them. Junior doctors, in particular, were not always aware of the existence of prescribing norms, yet were scorned by senior doctors when prescribing outside of them. Lack of communication between a member and their group is associated with deviation from norms more generally[18] and perhaps improved communication between those that set norms and those new to specialties might alleviate some of this discomfort.

As explained earlier, even when junior doctors were familiar with the norms, some were uncomfortable adhering to them. These doctors would benefit from training about prescribing norms, as many felt that they lacked sufficient prescribing knowledge. It was impossible to determine from the study however, whether these norms were appropriate. Norms can occasionally lead to 'group think', whereby members of a group do not realistically appraise alternative courses of action.[19]

This study demonstrated the existence of an implicit etiquette related to prescribing. Other studies conducted in primary care have highlighted the existence of etiquette among the medical profession.[2,4] Theoretical explanations for such etiquette include the existence of 'fraternal obligation',[20] in which doctors will work in the spirit of other doctors, to the extent that it can deviate from their own ideals.[21] Prescribing etiquette, unfortunately, has been found to be a cause of inappropriate prescribing.[22] The behaviour reported in this study could potentially result in the emergence of inappropriate prescribing decisions originating from hospital care.

Firth-Cozens suggested that regular internal formal and informal communication can encourage good team working,[23] and perhaps regular communication and training by pharmacists about the medications regularly prescribed within a ward or specialty would indeed improve teamwork by exploring the basis of norms and evaluating alternatives. Furthermore, it has been reported that doctors feel that better access to mentoring and clinical non-medical support would improve their working lives:[24] perhaps the support of pharmacists could improve these doctors' discomfort around prescribing. These non-medical mentors may also allow doctors to feel more comfortable asking for help, as we found that junior doctors were often reluctant to ask senior doctors for help.

The power and influence that certain nurses had over doctors was an important finding. The power nurses had over those who relied on their assistance placed junior doctors in a vulnerable position – they felt uncomfortable and hesitant at refusing the nurses' requests, even when they strongly disagreed. The findings suggest that the structure of the medical hierarchy appears to overlap with that of the nursing hierarchy. Specialist nurses and senior nurses were higher up this overlapping hierarchy than the PRHOs and thus could exert a strong influence on these doctors' prescribing decisions. This has been partly explained by Cott,[25] suggesting that non-medical team members possessed expert power – nurses here were frequently described as experienced and knowledgeable. Our nurses, in addition, showed coercive power,[26] by their negative emotive discourse, and information power by their knowledge of the prescribing norms.

A recommendation in the document Doctors in Society[5] was that working as part of team needs to be introduced early in a doctor's career. Increased joint training with nurses and pharmacists in the undergraduate course, for example, may help increase the effectiveness of multidisciplinary team working. This may assist medical professionals in understanding the accountability that each takes for decisions. Furthermore, it would help doctors understand the role, competencies and care philosophies of other members of the MDT.

Finally, our study would recommend that interventions to alter hospital prescribing, such as those that promote EBM, may be more successful if they take into account these wider influences on the prescriber. Ignorance of these types of influences could cause considerable discomfort, particularly if autonomy is compromised by restrictive interventions.

Conclusion

It is clear that doctors do not prescribe in isolation. Their decisions are constrained by the hierarchy in which they work, the unwritten etiquette that they adhere to and the MDT.

Good teamwork is thought to lead to better quality care[27] and is important to ensuring patient safety.[28] However, whether teamwork, as it was described in this study, was always in the best interests of patients, was questionable. Teamwork was also a frequent cause of upset for doctors, which has an impact upon doctors' job satisfaction and is a causal factor in stress.[11] The relationship between professionals in a team has been listed as an area for future research.[5] This study echoes this recommendation and, from a prescribing perspective, highlights some areas of improvement which could decrease doctors' discomfort when prescribing as part of a team.

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