ORIGINAL ARTICLE

Rules and guidelines in clinical practice: a qualitative study in operating theatres of doctors' and nurses' views

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Background: The current orthodoxy within patient safety research and policy is characterised by a faith in rules based systems which limit the capacity for individual discretion, and hence fallibility. However, guidelines have been seen as stifling innovation and eroding trust. Our objectives were to explore the attitudes towards guidelines of doctors and nurses working together in surgical teams and to examine the extent to which trusting relationships are maintained in a context governed by explicit rules.

Methods: Fourteen consultant grade surgeons of mixed specialty, 12 consultant anaesthetists, and 15 nurses were selected to reflect a range of roles. Participant observation was combined with semi-structured interviews.

Results: Doctors' views about the contribution of guidelines to safety and to clinical practice differed from those of nurses. Doctors rejected written rules, instead adhering to the unwritten rules of what constitutes acceptable behaviour for members of the medical profession. In contrast, nurses viewed guideline adherence as synonymous with professionalism and criticised doctors for failing to comply with guidelines.

Conclusions: While the creation of a ''safety culture'' requires a shared set of beliefs, attitudes and norms in relation to what is seen as safe clinical practice, differences of opinion on these issues exist which cannot be easily reconciled since they reflect deeply ingrained beliefs about what constitutes professional conduct. While advocates of standardisation (such as nurses) view doctors as rule breakers, doctors may not necessarily regard guidelines as legitimate or identify with the rules written for them by members of other social groups. Future safety research and policy should attempt to understand the unwritten rules which govern clinical behaviour and examine the ways in which such rules are produced, maintained, and accepted as legitimate.

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I nterest in managing risk in clinical settings has grown enormously in recent years, with healthcare organisations being encouraged to learn from their experiences of error and to introduce changes to limit their recurrence.[1–5] These encouragements, often enshrined in policy documents, generally contain three elements. Firstly, they seek to replace what is perceived as a ''blame culture'', which views error as arising from individual incompetence and in which staff are fearful of reporting errors, with a recognition that ''to err is human''. Secondly, they advocate the design and implementation of systems based on rules and standardisation that reduce error and make them safer for patients. Thirdly, they seek to foster a ''safety culture'' that is open and includes a willingness to report and learn from errors. In the UK, the National Patient Safety Agency (NPSA)'s ''Seven Steps to Patient Safety'' contains all these elements. It emphasises the need for healthcare organisations to foster a shared set of beliefs, attitudes, and norms in relation to what is seen as safe clinical practice. The alleged existence of a blame culture in the NHS is seen as a barrier to the understanding and management of clinical error.[6] However, there is an implicit assumption in this that a ''shared set of beliefs'' will be based on standardised procedures and thus will reduce the scope for individuals to apply their own judgements about what constitutes safe clinical practice.

This approach is not without critics. Writing in this journal, Berwick[7] has highlighted the adverse effects of developing detailed protocols for care which hark back to Tayloristic scientific management, stifling innovation and eroding trust. Similarly, Harrison and Smith[8] see the spread of rules and guidelines in health services as part of a process of ensuring public confidence that fails to acknowledge the role of uncertainty, morality, and discretion in the provision of care.

In contrast to formal monitoring and regulatory frameworks, trusting relationships are seen as involving shared norms rather than rules and regulations[9] with collective values fostering mutual cooperation. However, relatively little has been written about the relevance of guidelines and their relationship to trust in the context of multidisciplinary team working. Evidence suggests that doctors and nurses hold divergent views regarding adherence to rules and clinical guidelines, with nurses much more likely than doctors to frown upon and report violations of clinical protocols by fellow professionals.[10] However, detailed research comparing the views of doctors and nurses working together—drawing on their own real world (as opposed to hypothetical) experiences in an NHS hospital setting—is sparse. In the context of patient safety, trust is seen as a key component of successful team working, but it is not clear how and if these trusting relationships are maintained in a context governed by explicit rules, particularly if doctors and nurses hold different views regarding these rules. Furthermore, if doctors' views are inconsistent with those of nurses on the subject of guidelines, to what extent does this indicate an absence of the sort of shared norms which are seen as essential to both trusting relationships and to the development of a safety culture? These two questions are addressed here.

METHODS

The setting for the study was the operating department of a large teaching hospital in northern England. The findings presented are part of a larger 2 year study exploring threats to patient safety in the operating theatre. We draw on data collected between 2003 and 2004, during which time a member of the research team was based within the hospital as an observer. Data sources included conversations with

members of hospital staff, but the observer took no part in the work of the department. Other methods used included formal interviews, observation, and documentary analysis. The participants selected were a representative sample of occupational groups working in or involved in the management of the operating theatres. The interviews were semi-structured with participants being asked to talk about their work as well as their attitude to patient safety and their views on how this might be improved. The results reported here draw on interviews with 14 consultant grade surgeons of mixed specialty (general surgery, urology, ENT, maxillofacial, cardiothoracic, gastrointestinal, ophthalmic, orthopaedic), 12 consultant anaesthetists, and 15 nurses selected to reflect a range of roles including scrub nurses, ''modern matrons'' and nursing team managers. The tape recordings of interviews were transcribed in full.

A grounded theory approach to the analysis of data was initially used so that themes and questions that emerged in early interviews were explored and tested in subsequent interviews. Themes were compared and contrasted using the constant comparison method advocated by Glaser and Strauss.[11] We developed a coding frame for categorising and sorting the data into relevant categories and sub-categories, using Atlas ti software. In addition to the interview transcripts, detailed notes from field observations and a field diary were coded together with relevant documentary evidence from the hospital. A second member of the research team independently read transcripts to assess agreement on the coding frame and processes of analysis. Extracts from the field data and observation notes were fed back, reflected upon, and discussed with this researcher who assisted with the process of making sense of the data, identifying patterns, and helping place events within a relevant theoretical framework. Most of what follows is drawn from interview data, but observational material has been used to illustrate instances where behaviour outside the interview setting diverges from that presented during taped interviews. Quotations from respondents are presented as illustrations of themes and categories. Respondent identities are given in deliberately vague terms in order to preserve anonymity, but a distinction is made between ''nurses'' (including scrub nurses and other hands-on theatre nurses) and ''nurse managers''.

RESULTS
Rules and guidelines
Nurses saw guidelines as a key element in providing safe, good quality care. In contrast, doctors viewed guidelines as unnecessary and even potentially harmful. Nurses placed great emphasis on the use of checklists and written policies and processes, stressing the requirement to sign policies in order to provide written evidence of having read them. Much less emphasis was placed on outcomes, and there were occasions where nurses appeared to value following protocols for their own sake rather than as a means to good outcomes. In one session, for example, the circulating nurse had little opportunity during the operation to record the necessary information on swabs, blades and needles on the theatre whiteboard. Adherence to this guideline is intended to prevent items of equipment being left inside the patient after the operation. However, after the operation had finished the nurse then recorded all the used items on the whiteboard and then immediately wiped it off. This and other examples highlighted the potential for guideline compliance to become an end in itself, with some members of staff losing sight of the overall aim of the guidelines or at least displaying an unquestioning acceptance of their contents. Nurses' views suggested a faith in evidence and order, displaying little acknowledgement of uncertainty and individual variation. In

contrast to doctors, nurses emphasised the importance of the universal over the local, with standardised approaches seen as the best way of ensuring patient safety. In addition, nurses' comments suggested that being aware of and following written protocols was part of what constitutes a professional approach to patient care. There were, however, differences of emphasis between nurses at different hierarchical levels. Scrub nurses tended to focus on their individual role in following protocols, emphasising having learned both to follow the procedures and demonstrate that they had done so. More senior nurses emphasised the need to have processes and systems in place to prevent adverse events. A heavy emphasis was placed on protocol knowledge and implementation as part of the process of induction for new staff and of ongoing learning and updating for existing staff. It is not sufficient simply to read new policies; nursing staff are also required to enter their signature to indicate that they have read these policies.

''We have a file in which we have all the policies, everything, so we go through it… if there is any change in that policy, every month we have an audit day and so they tell us that the policy is changing and everything and they then put a new copy into each theatre and then we have to read it, that is compulsory that we have to read that and we have to sign to say that we have done that.'' (Nurse, 71)

No such arrangements exist in relation to medical staff and protocols. The process of providing a signature might accentuate individual responsibility but it may also serve to establish certain areas of activity as being beyond the remit of nursing staff since, if these relate to work undertaken by medical staff, they are not governed by protocols. The lack of a shared sense of responsibility for work primarily undertaken by other members of the theatre team (doctors in particular) avoids the potential for nurses to be placed in the uncomfortable situation of questioning doctors' behaviours, although the encouragement of such questioning, where nurses do have concerns, may lead to a safer working environment.

While there was an implicit assumption among more junior nursing staff that protocols would reduce the likelihood that they would commit an error, more senior nursing staff were more likely to make explicit links between protocols and evidence and the prevention of errors more generally.

''What you have to be able to do for patient episodes is to make sure that we have processes in place, the people and guidelines that people adhere to that will stop us having holes in our armour to protect the patients.'' (Nurse manager, 6)

''Our swab policy … has got research and evidence to back-up the reason behind what we are doing. So all policies, protocols and guidelines need to have a bit of backing, you can't do it until you've got evidence of best-practice. … So our protocols and policies are evidence based, we find the evidence in all those things and use their recommendations … Each senior person in theatre should know these policies and they should be encouraging people to abide by them and checking to make sure that people are following them … each individual has to sign that they have read it and date it.'' (Nurse manager, 4)

This reflects the role played by nurse managers in constructing protocols and ensuring that other nursing staff are aware of them, but it also reflects the role of these nurses as managers responsible for maintaining order and facilitating the smooth running of the operating theatre environment. Indeed, government policy documents emphasise the need to systematise processes and help construct the identity of the good manager, to which all managers are encouraged to aspire.[12] [13] However, the smooth operation of theatres is heavily influenced by the behaviours of medical staff over whom nurse managers have little control, so that guidelines can be seen as providing a legitimate means by which nurse

managers can challenge doctors' actions. The depiction in nurses' accounts of operating theatres as places and activities which were amenable to codification, planning, and control contrasted with the views of doctors. Medical staff emphasised variation and the need to apply flexibility and initiative in response to the individual circumstances. Doctors portrayed themselves as highly competent professionals, undertaking a complex job in difficult and uncertain conditions. Being able to react "on the hoof" was seen as a necessary requirement of the profession.

"Each individual situation is slightly different. You can't say, if this happens, then do this. Also, they could be more dangerous; people may not think for themselves, they don't make good decisions, and prior to the protocol being introduced they may well have thought about things in more detail." (Consultant anaesthetist, 16)

"If you were walking down the road and you saw a car coming towards you, how could you tell if it was a Mondeo or a Rolls Royce? Would you know because of the protocol that you referred to or would you know it because you had seen many many Rolls Royces and many many Mondeos? Experience in medicine is just like train spotting, you recognise patterns and you know what these patterns are … I don't have to assess every patient according to a flow chart where, if X meets Y, I operate … you do reach a stage where you don't have to have everything written down … It might sound terribly uncritical but you just make decisions without actually having to refer to a written protocol … you just know what to do." (Consultant surgeon, 69)

"A laser … they lay down the most incredible protocol for that. For instance, if risk management came along and saw me not wearing goggles they would be appalled. I take off mine and I do the operation because I want to do the operation accurately and safely for the patient." (Consultant surgeon, 66)

Guidelines were viewed as useful for trainees, with the suggestion that "proper" doctors (experienced professionals) would not need to—or even in certain circumstances should not resort to—such measures. Doctors stressed the unpredictability of surgical work and the need to respond flexibly to whatever circumstances presented themselves. Their accounts were used to illustrate the non-routine nature of events, with the argument that "each patient is different" being used as a defence against protocol driven medicine. At the same time, medical staff also developed their own routines for individual practice which were specific to the individuals concerned. The development of this routine over many years was also used to resist the use of guidelines. The statement "you just know what to do" implies a form of tacit knowledge, and places clinical practice beyond the bounds of treatment "rules" since, if such knowledge cannot be articulated, then it cannot be written down or translated into guidelines. Similarly, a perceived failure on the part of nurse managers to understand what constitutes safe practice with regard to laser treatment (as in the above quotation) can be seen as attempting to undermine any claims to legitimacy which those advocating guideline based approaches advance.

Developing trust
The faith expressed in guidelines and protocols by nurses was reflected in their attitudes towards doctors whose behaviour was seen as putting patients at risk. Doctors in general, but surgeons in particular, were portrayed by nurse managers as having cavalier attitudes as well as failing to consider the wider implications of their actions.

"Cavalier surgeons … we wear masks and hats and everything … he just waltzes into theatre with his white coat on which he's been on the wards with, and you know you've got things like MRSA, and he just waltzes into theatre, no hat on, and in his outside gear, and his shoes, and he starts talking … it's ignoring the protocol, but some people don't think it applies to them and the surgeons are the worst

… wanting to use bits of equipment they have invented themselves." (Nurse manager, 4)

"Not everybody is honest, that is the biggest problem … It is the surgeons that don't communicate more than anybody, generally speaking, surgeons don't communicate, they are the worst for communications." (Nurse manager, 10)

"It is probably the nature of the surgeons' work that he has to be very focused on himself and his patient, but it stops him actually seeing the bigger picture, that is my feeling … they ignore what is going on around them." (Nurse manager, 70)

These quotes suggest that nurse managers perceive medical autonomy as a threat to trust. Since nurse managers are concerned with maintaining order, they appear to be concerned with adherence to written rules (such as guidelines) which keep "cavalier" doctors in check, and to unwritten rules of what they see as behaviour which is conducive to maintaining order (such as honesty, open communication, and an acknowledgement of the importance of other team members).

More junior nurses were less openly critical of medical staff. While they acknowledged that they would be willing to highlight deficiencies relating to equipment or obtaining consent (which are related to their immediate area of responsibility), they were less likely to voice concerns if they observed doctors practising in ways which they regarded as less than optimal. On several occasions fear was cited as the reason why nurses did not raise concerns. However, among more junior nurses, the view was also expressed that such behaviour was not appropriate since it would disrupt accepted norms. As one scrub nurse commented, clinical practice which is less than optimal is observed:

"but you don't say it though … I pass instruments and make sure I am giving the surgeon the right things. You have to think ahead for them because you often know what they are going to ask for next, you have to be ready for it." (Nurse, 39)

For more junior nurses, a related concern appears to be the need to gain and maintain acceptance and trust among the medical team and challenging medical practice is unlikely to further this goal. Since the written protocols which these nurses follow contain no reference to any requirement to speak out if they have concerns, scrub nurses can follow the unwritten rules of theatre etiquette without infringing the formal rules which their training and nursing practice teaches are the hallmarks of a professional.

Whereas nurse managers expressed disapproval of doctors, medical staff were much less critical of nurses. Rather than labelling certain groups as possessing particular characteristics which predispose them to error (cavalier attitudes and so on), doctors appeared to base their decisions about trusting other people on personal experience of working with them. In addition, doctors appeared to be more concerned with the quality and nature of these relationships than they were with following guidelines.

"You have also got the person who is assisting you and they are very important when in theatre, the anaesthetic nurse or the ODP, if you have got someone who you know and who you trust then it can make a lot of difference, if you have got someone you don't know, who you have never met before, it can be quite difficult." (Consultant anaesthetist, 23)

"Because you are doing something so you rely on somebody else. That's the reason you have asked them to do it so you can keep an eye on the patient while somebody else is drawing the infusion, so you trust them to draw that up. I personally don't have an issue with that, but the protocol they have on the CSU is that it has to be witnessed and we don't have time to do that in all cases." (Consultant anaesthetist, 14)

"Anaesthetists like the anaesthetic room because they know where everything is, it is their space, and you feel safe with your ODA who you trust … as a rule most anaesthetists they like things boring and

safe and that is the best way to be in my opinion, they are quite conservative.'' (Consultant anaesthetist, 35)

However, the trusting relationships portrayed above may not be consistent with a ''safety culture'' as one in which relationships are open and honest and opinions of all staff are valid. As the following extract illustrates, from the doctor's point of view, trust may be based more on nurses displaying an ability to fit in with doctors' individual routines than on shared values and beliefs. Rather than a mutually supportive environment, doctors' comments suggest that trust may be a one way street.

''The ultimate scrub nurse—and there is only one that I have ever come across—where I can perform virtually the whole operation without saying a word because the sort of surgery I do is incredibly routine, I do not, unless there is a problem, I do not change my routine and the ultimate satisfaction is step by step, and with this particular scrub nurse if I put my hand out she has got the right thing … we all have our different styles and ways of working, but one thing that will upset a surgeon is if a scrub nurse mistakes you for one of your colleagues and gives you the wrong stuff that I don't use, but he uses, they have got to be able to distinguish between us and that may take some time and I always think 'just sit down and write it all down, take some time'.'' (Consultant surgeon, 40)

However, as this doctor and others also pointed out, if things do go wrong in the operating theatre it is much more likely to be doctors than nurses who are asked to justify their actions in the coroner's court. In circumstances where accountability is differentially distributed, doctors are unlikely to view nurses' opinions as being equally as valid as their own.

DISCUSSION

Our study confirms the findings of other research which identifies doctors and nurses as having opposing views on protocol violation[10] and of holding different conceptions of clinical work.[14] In particular, nurses appeared to hold more systematised, less individualistic, conceptions of clinical work than doctors and appeared to be more fastidious in adhering to documented procedures. However, this focus appeared to be on rule adherence rather than safety per se. Many commentators have sought ways of improving compliance with such rules. For example, Lawton and Parker suggest that ''successful implementation of protocols or guidelines in the NHS depends on achieving the right balance between standardising practice and allowing professionals to use clinical judgement''.[15] Our data lead us to suggest that this compromise may not be easily reached in a multidisciplinary setting such as operating theatres which are characterised by differences in beliefs about what it means to be a professional. Modern nursing has been described as a shift from the moral to the professional, accompanied by a closer identification with medical interests, values and practices.[16 17] As Macleod Clark and Hockey see it, nurses must develop the ability to ''defend their decisions and actions on a scientific rather than intuitive or conventional basis. It is on this ability that their claim to professionalism rests.''[18]

The model of medicine to which nurses are supposed to aspire does not, however, seem to be that espoused by the doctors in our study, who largely eschew guidelines and rely on experience and tacit knowledge. Although the doctors and nurses in our study worked together in teams, our data show that they see clinical practice in very different ways. Rather than team values or beliefs, doctors and nurses espouse the collective values of the particular profession into which they have been socialised. As such, these beliefs are likely to prove more resistant to change or compromise than is assumed by advocates of ''safety culture''.

The application of guidelines is already seen by some as part of a ''top down'' monitoring process which changes the relationship between medical professionals and those they serve. Detrimental effects of this shift include a loss of trust and the stifling of individuality and innovation which offer the potential to lead to quality improvements.[7 8] What our study suggests is that the existence of different views about the intrinsic value of guidelines (as opposed to the ''top down'' application of guidelines per se) compounds the situation by impacting on relationships between groups of clinicians. If nurses view professionalism as bound up with guideline adherence then, as our findings suggest, they will view doctors as acting unprofessionally and this is likely to further erode trust between team members.

A safety culture as defined by the NPSA is said to involve fostering a willingness to report and learn from errors and the possession of a shared set of beliefs, attitudes, and norms in relation to what is seen as safe clinical practice. Our study suggests that there are huge differences of opinion between doctors and nurses which derive from different professional norms and values about what constitutes safe clinical practice. Despite a shared commitment to patient safety at a superficial level, it seems unlikely that, when comparing doctors and nurses, the sort of shared beliefs which the NPSA describes will be easily achieved. Paradoxically, the emphasis on guidelines as leading to safer systems may diminish the chances of achieving the cooperation and collective values which are seen as essential components of a safety culture.

Implications of the research

Our study raises questions about the extent to which the achievement of a safety culture as characterised in much contemporary literature[19 20] is achievable in the context of hospital operating theatre departments. A focus on safety culture as embodying a shared commitment to written rules and formal processes intended to improve safety ignores the unwritten rules which govern clinical behaviours. The comments of our interviewees (together with the observational data collected as part of the wider study) suggest that doctors do follow rules, but these are the unwritten rules of medical practice. These rules include applying discretion and judgement—with autonomy and an ability to practise without recourse to guidelines—as key elements of the medical identity.[21] While advocates of standardisation (such as the nurses in our study) view doctors as rule breakers, doctors themselves do not necessarily regard certain rules as

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Key messages

- The creation of a ''safety culture'' requires a shared set of beliefs, attitudes, and norms in relation to what is seen as safe clinical practice.

- The assumption that these shared beliefs will be based on standardised procedures ignores the fact that different groups of staff (such as doctors and nurses) have different and opposing views about the contribution of guidelines to safety and to clinical practice more generally.

- These differences of opinion cannot be easily reconciled since they reflect deeply ingrained beliefs about what constitutes professional conduct.

- The emphasis on guidelines downplays the risks of standardisation and the adverse effects on team working of presenting guideline adherence as synonymous with professionalism.

legitimate or identify with the rules written for them by members of other social groups. In the context of team working, the creation and maintenance of such boundaries may promote silo thinking and militate against shared responsibility.

This suggests that, rather than focusing on guideline development and appealing to clinicians to comply with these guidelines, future safety research and policy should attempt to understand the unwritten rules which govern clinical behaviour and examine the ways in which such rules are produced, maintained, and accepted as legitimate.

Limitations of the research

The research sample was relatively small and comprised staff from only one hospital. It could be argued that the opinions of the staff we interviewed and observed offer only a partial account of the extent to which differences between medical and nursing cultures act as barriers to the achievement of a safety culture. However, the consistency of responses and the ongoing observation of activities over an 18 month period, during which many more staff were observed in addition to those interviewed, counters some of the limitations of small sample size.

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