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An ethnographic study of classifying and accounting for risk at the sharp end of medical wards☆

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ABSTRACT

An understanding of how staff identify, classify, narrativise and orient to patient safety risks is important in understanding responses to efforts to effect change. We report an ethnographic study of four medical wards in the UK, in hospitals that were participating in the Health Foundation's *Safer Patients Initiative*, an organisation-wide patient safety programme. Data analysis of observations and 49 interviews with staff was based on the constant comparative method. We found that staff engaged routinely in practices of determining what gets to count as a risk, how such risks should properly be managed, and how to account for what they do. Staff practices and reasoning in relation to risk emerged through their practical engagement in the everyday work of the wards, but were also shaped by social imperatives. Risks, in the environment we studied, were not simply risks to patient safety; when things went wrong, professional identity was at risk too. Staff oriented to risks in the context of busy and complex ward environments, which influenced how they accounted for risk. Reasoning about risk was influenced by judgements about which values should be promoted when caring for patients, by social norms, by risk-spreading logics, and by perceptions of the extent to which particular behaviours and actions were coupled to outcomes and were blameworthy. These ways of identifying, evaluating and addressing risks are likely to be highly influential in staff responses to efforts to effect change, and highlight the challenges in designing and implementing patient safety interventions.

Introduction

Recent years have seen powerful arguments in favour of investigating how people reason about risk issues and account for their corresponding actions (Horlick-Jones, 2005a). Organisational participants at the 'sharp end' (Cook & Woods, 1994) of health care, who are charged with the everyday tasks of caring for patients, may not always share the same risk understandings, definitions or priorities as those at the 'blunt end' who seek to manage safety. In this paper, we are interested in how staff working on medical wards characterise risks related to patient safety. We do not start from the position that staff accounts of risk have any inherent qualities that make them more or less valid or legitimate than any other. But we do wish to argue that it is important to understand how staff identify, classify and orient towards patient safety risks, not least because such understandings are likely to influence efforts to manage risk and to target change.

Having insights into staff practices and discourses relating to risk is especially important when attempts are made to evaluate purposeful efforts at improving patient safety. Here, we report an ethnography undertaken in four UK medical wards that were taking part in a patient safety improvement programme. The Health Foundation's *Safer Patients Initiative (SPI)* is a sociologically interesting example of an attempt to improve patient safety (Health Foundation, 2009). It seeks to penetrate organisations, changing not only processes and standards, but also the attitudes and motives of staff and how they understand the nature of their work. A multiple-site organisation-wide intervention, the centrepiece of its formal programme theory of change is a structured process for identifying problems and developing, testing, and evaluating customised solutions for organisations and users (Dixon-Woods, Tarrant, Willars, & Suokas, in press). Such solutions include standardisation, simplification or modification of processes, use of protocols and checklists, use of constraints and forcing functions, decreasing reliance on vigilance, and improving handovers. A key feature of the approach is

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its rejection of a top-down, edict-driven model. Instead, it tries to engage people working at the front line or 'sharp end' in small scale tests of change so that they can see 'with their own eyes' whether the new ways of doing things makes a positive difference, using a technique known as Plan-Do-Study-Act (PDSA) (Varkey, Reller, & Resar, 2007). This approach would appear to engage many of the inclusive and participatory principles, including the active involvement of workers in the management of risk, that are argued to be ideal in regulation (Hutter, 2001; Macrae, 2008). However, one of the enduring insights of Anselm Strauss's (1978) work on organisations is that changes to the existing order, though itself always dynamic, require renegotiation. It is thus critical that the existing order be understood, and ethnographic methods are especially well suited to such investigation.

The use of ethnography to study aspects of patient safety has been increasing for some time, dating back to Millman's *Unkindest Cut* (1976) and Bosk's (1979, 2003) classic, *Forgive and Remember*. The recent increase in research activity can be traced at least in part to the growing emphasis on patient safety as a management, policy, and governance problem (Department of Health, 2000). However, much research has so far taken place in evidently high risk areas including surgery (Waring, Harrison, & McDonald, 2007) and anaesthesia (Mort, Goodwin, Smith, & Pope, 2005), and there has been a relative neglect of more apparently mundane settings, such as medical wards. Much of the ethnographic research in high risk areas has vividly reported on the uncertainties and ambiguities that attend diagnosis and formulation of treatment plans, and the exercise of discretion in relation to the realisation of medical goals (Pope, 2002). However, the interdependence of staff and processes in everyday hospital work away from the episodic drama of the operating theatres, caring for patients who are not 'etherised upon a table', has remained much less studied.

The focus of our work, following Horlick-Jones' (2005b) approach to risk reasoning, was on how staff on medical wards made sense of the formal and informal practices in which they were engaged, how these were rationalised, and how they gave accounts of these. The analysis we report is based on data collected around the time of the introduction of the SPI in the four hospitals, and therefore at too early a stage to be conclusive about any effects or impacts of the programme. What this analysis can do is begin to generate insights into what might be needed to secure commitments to any new way of doing things, and produce hypotheses that can be tested empirically and theoretically.

Methods

This paper is based on an ethnographic study of four hospitals, one in each member country of the UK, that participated in the pilot phase of the Health Foundation's *Safer Patients Initiative* (SPI). The study areas for the ethnography included two respiratory wards, one general medical ward, and one ward for the care of the elderly. These wards were selected for study as they admitted large numbers of acutely ill patients aged over 65 who were likely to have many co-morbidities. This group is at high risk of acute deterioration and medication error, and these were among the targets of the SPI interventions (though we do not present an analysis of the impact of these interventions in this paper).

In this paper, we report fieldwork conducted in 2006 as the SPI was being introduced. The researcher (AS, a non-clinical female social scientist) undertook a week-long field visit to each hospital, and conducted interviews and informal chats with staff, participant observation of everyday work on the wards including ward rounds, handovers, drug administration, monitoring of vital signs, and other activities of caring for patients. Shadowing of staff members was done carefully to avoid interfering with normal practice or becoming burdensome for staff or patients. Ethnographic field notes were jotted down in a notebook and written up after each phase of the data collection was completed. Semi-structured interviews were conducted with staff on the wards, exploring, among other things, what they saw as risks to patient safety, how they responded to risks, and where and how they saw risks arising. Sampling was largely opportunistic according to availability of staff. Interviews were recorded using a digital recorder and fully transcribed.

Data analysis was based on the constant comparative method (Glaser & Strauss, 1967). Initial 'open codes' were revised, expanded and collapsed as the analysis progressed and organised into categories in a coding scheme, through which data was processed, facilitated by the use of NVIVO software. Simple coding procedures were used to categorise the field notes. Categories were inspected to build a theoretically-informed interpretation. Extracts from the interviews and field notes are presented in the findings to support the analysis. In order to ensure anonymity, these have not been labelled by site, but care has been taken to represent all four sites and all quotations apart from two are from different speakers.

Approval for the study was obtained from a NHS Multi-centre Research Ethics Committee (MREC) and NHS research governance approval was also obtained from each of the sites. Methods of data collection, provision of information and means of obtaining informed consent were piloted in a hospital not included in the main study. Before commencing the fieldwork in the study hospitals, the researcher visited each site once or twice to brief the staff and answer questions. Patient and staff information sheets were distributed on the four wards before and during the fieldwork, and posters about the study were displayed on noticeboards. Patients and visitors were encouraged to address any questions or concerns with the researcher, a member of staff or the research project team. Participation in the study was voluntary and participants could decline or withdraw at any time. Signed consent was obtained from staff who were interviewed, and consent for observing individual activities was obtained verbally. Consent for observing team activities, such as ward rounds or ward meetings, was obtained verbally from medical or nursing staff. Consent for carrying out observations by a patient's bedside was obtained verbally either by the researcher or staff member.

Findings

Around 150 h of ethnographic observations were carried out across the four wards, and semi-structured interviews were conducted with 49 staff including 7 consultants, 3 doctors in training, 26 qualified nurses including ward sisters and ward managers, 7 health care assistants, and 6 members of staff in managerial posts.

We found that staff practices, reasoning, and accounts of risk were strongly shaped by their experiences of life at the sharp end, where staff constantly faced competing demands and inadequate resources. In this context, four different kinds of practices and reasoning could be identified: *normative work*, where staff were dealing with competing priorities about matters that were inherently contestable; *cutting corners*, where staff acknowledged that they did not always do things perfectly, but produced a range of justifications for their behaviour; *process weaknesses*, where risks arose because of fallible and precarious organisational processes; and *tightly coupled errors*, where the negative outcome and the error were clearly linked.

Life at the sharp end: a context of competing demands and scarce resources

Patients on the study wards were characteristically older people with acute medical problems or people with chronic conditions and

multiple pathologies. The ward environments were often highly stressed, with small numbers of staff to cover large numbers of patients with complex problems. Patients were often very ill and in need of much attention and care. Many patients had dementia or were confused through illness, and could become agitated, aggressive, or violent. Staff frequently seemed to be 'rushed off their feet'.

> There can be particular problems with elderly patients with mental illness, particularly the dementias. The ward isn't geared to look after patients who are wandering or severely confused or agitated or noisy, and that's got risks for the patients themselves, plus to the staff, plus to the other patients. When we get one or more of those patients on the wards it can be extremely difficult, because they command so much time and effort from the nurses, and other patients are left high and dry. [Consultant]

There were often problems with the availability of equipment and of staff, and in particular of highly trained senior staff.

> Skill mix is another thing on this ward which seems to go terribly wrong […] I feel that's not safe when the ward's like that. [Healthcare assistant]
> Wards are short of equipment and on average they have two to three portable [vital signs] monitors, and sometimes the equipment was broken or on loan on another ward. Barrier nursed areas did not have their own equipment, although some had a separate cuff available (Extract from fieldnotes)

Some patients lacked the ability to do even basic tasks (such as reaching for a drink or eating) for themselves, while others required considerable technical input into their care, and urgent demands on staff could rapidly arise. This led to situations where staff were stretched between the needs of a number of patients at the same time, balancing the demands of custodial and clinical care. The flows of work could be unpredictable, and it was difficult to control surges.

> The nurse in charge has been trying to do the drugs round since 9pm but she gets constantly interrupted. There are transfers, patients calling and medical staff coming and going. The nurse is also in charge of a bay where one of the patients is on non-invasive ventilation and intravenous insulin which requires hourly blood glucose checks. Between 10pm and 11pm two further patients are admitted to this bay. Both are highly dependent elderly patients – one has severe breathing problems and is put on non-invasive ventilation. During that night most of the charge nurse's time is spent between the two patients on non-invasive ventilation. One patient is restless, can't sleep and keeps pulling his respiratory mask off. He has to be in a half-sitting position supported by pillows. He slides down in bed, the nurses help him up, he slides down again, the nurses lift him up again. (Extract from fieldnotes)

This is important context for how staff sought to manage risks both discursively and practically. The presence of risk makes accounting practices particularly difficult (Horlick-Jones, 2005a, 2005b). Staff engaged routinely in practices of determining what gets to count as a risk, how such risks should properly be managed, and how to account for what they did. These practices and reasoning in relation to risk emerged through their practical engagement in the everyday work of the wards. A notable feature of their accounts of these practices was that they were formulated to manage imputations of blame and responsibility and present themselves in a favourable light, though it should be emphasised that this is a near universal feature of human discourse (Edwards & Potter, 1992).

It was also evident that rushed and complex environments continually presented dilemmas and challenges that staff routinely had to resolve, and shaped what Weick and Sutcliffe (2003) term 'behavioural commitments'. Behavioural commitments involve the justification of behaviour by referring to features of the environment that support it. The social context supplies the context of the justification in the forms of norms and expectations within socially acceptable bounds. Thus, on the wards we looked at, behaviours that appeared to default from the proper standards (as defined by others) could be justified and legitimised by invoking the features of the environment that made such behaviours necessary, though only when it was culturally plausible to do so. The imperative to cope and get on with things, for example, was seen as a culturally acceptable explanation for letting some things slip.

> I was doing the night shift and noticed that many of the cupboards were left ajar and the padlock on the fridge (e.g. for insulin) was hanging open. There were stacks of drugs left on the desks. Nearly all the cupboards were unlocked. […] I said to the nurse […] ' all this stuff lying around and all the doors left open and cupboards unlocked – anyone could just walk in and take their pick'. [..] The nurse said that it's not unusual for the drugs to be left on the desks - especially in the evenings - and stored later when the staff have the time to do it. (Extract from fieldnotes)

The busy-ness, under-resourced and demanding nature of the environment was thus frequently produced in participant interview accounts as increasing riskiness and explaining why staff might not be able to be as diligent, thorough, or attentive as might be proper. For example, staff were frequently critical, in interviews, of the number and skill-mix of personnel available on the wards to cope with the nature of the problems they faced.

> The maximum [of patients on non-invasive ventilation] is three, and as soon as you have all three, and you only have three staff on a shift, they don't have the observations done that they should be having done, they don't … you don't get the time with the family to explain things because you're too busy running off to the next patient trying to do their observations, and then the next patient who needs the commode. [Nurse]

As well as offering what appeared to be a plausible account of why risks might be heightened, this also allowed an externalisation of blame, where the causes of problems were located in deficiencies in the resources available to any particular individual.

Normative work in managing risks

As Mary Douglas (2003: 59) notes, 'Risks clamour for attention; probable dangers crowd in from all sides, in every mouthful and every step. The rational agent who attended to all of them would be paralysed.' The kinds of norms and values that guide what staff see as the priorities in patient safety deserve particular attention, because they influence what staff do. Our analysis identified what we termed 'normative work', where staff were engaged in making decisions about which values to promote in the context of limited resource, as a distinctive form of work and accounting in relation to risk.

An important example concerned the ways in which staff sought to resolve tensions between priorities for infection control and other priorities. It was clear from interviews that risks of infection were a major concern for staff. Though hand-washing and other hygiene techniques were seen as important infection control measures, approaches such as 'barrier-nursing' (involving staff wearing special protective clothing, masks and gloves) and isolating patients known to be infected on side-rooms were also used. However, the physical geography of the

wards was frequently seen to cause difficulties in isolating infected patients.

> The layout of the ward doesn't lend itself to isolation of the patients that [are infected]. We've got a limited number of cubicles but because of the sort of the nature of the four bays of six beds, as soon as one patient in a bay became infected the others were automatically infected. [Consultant]

One ward in the study had six side-rooms that potentially could be used for patients known to have infections. But during a week of observations, two patients with MRSA and one with C-Difficile were on the main ward, and no barrier-nursed patients were in the side-rooms. This occurred because other priorities often competed with isolating infectious patients.

> Who was put in a sideroom? Patients with terminal cancer, patients who were dying, patients who probably had terminal cancer and would soon receive bad news, and one patient who was confused and kept shouting and calling the nurse. [Extract from fieldnotes]

The side-rooms (in all wards) were often used for reasons of human dignity. Staff were concerned that dignity was infringed when patients were dying on the main wards, often in view of other patients, and that families' rights to private time with their relatives were undermined. Staff were acting on their sense of the 'right thing to do', given that the interests that lay in the balance were dignity and protection against infection. The perceived obligations to defend humane standards, and the use of dignity language, suggests a concern with human rights. But in an interesting testing of Merton's (1936) observation about unintended consequences, official rules about who could occupy which space (the UK Government's policy on mixed-sex wards) had a role too, and highlighted how global rules may not always make sense in local settings.

> Staff discussed transferring the patient to another ward as she could get a sideroom there – this ward can't provide a sideroom as the patients that could be moved out are male, and you can't put them in a female bay [due to Government guidance]. But [doctor] says the patient is too unstable to go to a non-respiratory ward. [Extract from fieldnotes]

Other important reasons for maintaining some infected patients on the main ward concerned patients' need for close observation, which could not be provided on side-rooms as patients would not be visible to staff.

> I would say that's a risk patient coming in with all these kind of infection. We have one MRSA on the ward now, but because she needed [non-invasive ventilation], which we cannot use in the side room [because] it needed constant observation, again that's a risk. I know we are maintaining barrier nursing by the bedside but it's not adequate, it's not enough. [Senior nurse]
>
> The patient is MRSA positive, has dementia and is nil by mouth. She was first put in a sideroom. All patients needing barrier-nursing are put in a sideroom and this system seems to be working well here. However, they had to move her to the main ward because she tried to drink from the tap, and when the tap was turned off she then tried to drink the alcohol gel. She is also at risk of falling and hurting herself. So she was given a bed next to the nurses' station so staff can keep an eye on her. [Extract from fieldnotes]

Other examples of where staff were involved in prioritising different values included wards where routine clinical observations were deferred until patients had had their breakfasts and been washed, on grounds that this was more humane.

Cutting corners

In marked contrast to the normative work (where staff were making judgements about inherently contestable matters) was the phenomenon of 'cutting corners'. Even when it was generally known that there was a official 'right' way of doing something or a standard to be reached and there was no serious dispute among staff that this was indeed an ideal, defaults were nonetheless common for some types of practices. It was relatively rare for equipment to be cleaned between patients, and not all members of staff were consistently thorough about hand-washing.

> I often saw staff taking the obs[ervations] without cleaning the cuff and the clip – this is really very typical – although some did clean the equipment the best they could, or they cleaned it when I was shadowing them. (Extract from fieldnotes)
>
> Each time you've handled the stethoscope with a patient you might have to wipe it down. Interviewer: SO THAT'S NOT DEFINITELY HAPPENING IS IT? … (quietly) It doesn't happen. (normal volume) I do it occasionally when I'm thinking about it. [Consultant]

Observations and, to a lesser extent, interviews, suggested that one reason why behaviour in relation to infection control might not be optimal (at least when assessed against official guidance) was that the behaviour was not seen by staff as tightly coupled either to the outcome (infection was not the invariable result of failure to wash hands), nor could any infection easily be traced to any one individual, meaning that blame could be diffused or relocated. In interviews, the cast of characters implicated in poor infection control included doctors, nurses, patients themselves, relatives and visitors, healthcare assistants and domestic staff, porters, and virtually everyone who entered the ward.

Defaults from rules about hygiene standards posed problems for the preservation of a valued social identity, however, because they might appear to undermine professional character. Non-adherence was sometimes explained by practical difficulties, such as chapped sore hands and time away from duties, or by questioning the legitimacy of the standards, for example by querying the quality of the evidence linking the behaviour to the outcome.

> I have rather assumed that the microbiologists might actually have taken the trouble to swab doctors' stethoscopes to find out if they actually carried any microbes. If they don't carry any microbes then we'd wasting our time cleaning them all the time [Consultant]

But blaming others and questioning the evidence were evidently recognised as not being fully accountable reasons, since staff accounts appeared to suggest that these arguments did not provide adequate explanations for why they themselves did not comply with the official rules. One way in which potential threats to identity could be managed by participants was by showing, in their accounts, that the behaviour was normalised. That some people were prepared to acknowledge openly that they themselves did not always maintain the standards can be seen as evidence of the extent to which the behaviour was normed.

> I'll be honest sometimes I do get a bit lazy and not tend to wear gloves or aprons (Healthcare assistant)

The normalisation of hygiene lapses posed challenges for enforcing official rules. People generally (not just staff in hospitals) are predisposed to consensus, and tend to avoid norm-breaching (Goffman, 1971). Dealing with problems of conscientiousness is often a challenge for professional structures (Mintzberg, 1979). When an action to enforce official rules amounts to norm-breaching (calling attention to another's wrong-doing, especially when

others are committing similar kinds of wrong-doing), it tends to be punished by being socially sanctioned.

> I caught her [member of domestic staff] with a cloth wiping the floor and then wiping the tea trolley, but if you say something here you're made to look the big baddy (Healthcare assistant)

Further evidence of how attempts to enforce official standards may be seen as illegitimate could be found in some of the reactions to the researcher, who was sometimes treated as an 'inspector' to whom displays of compliance should be made, but who could not escape some resentment or suspicion. This is an interesting inversion: it shows how, once a practice has become rendered as non-deviant and acceptable and remains formally unsanctioned, informal sanctions can in fact operate to prevent the restoration of the official rules.

Process weaknesses

A third category of risk-related reasoning concerned the risks that arose because of fallible or precarious processes. In interviews, staff participants frequently described the absence of certainty that a process would be reliable: they could not take it for granted that things would happen as they were supposed to happen, particularly if some kind of collaborative work was required, no one individual was overseeing the process from beginning to end, or coordination was required across professional, team, departmental and shift or time boundaries. It was clear, from comparison across the sites, that some processes were simply more poorly designed, enacted, and controlled than others. For example, in some sites, handovers seemed to work well: the information was clearly structured and transferred effectively. In others, handovers appeared to be handled less well.

> All teams hand over simultaneously - I can't help thinking that this type of handover is less disciplined. […] People are swarming from one to another, and those who have arrived a bit earlier may start the handover a bit earlier, and those who come in a few minutes later join in a bit later. There is no summing up for everyone. There is also an element of chitchat […] Some of [the information] was probably not written down or updated on the handover sheets, because they only had this one computer and the nurses were so rushed off their feet anyway.. (extract from fieldnotes)

Particular problems arose from the need to coordinate, share and integrate all of the information needed for a particular patient. Difficulties included making sure that the patient's notes were united with the patient; that the decisions of medical staff were communicated to the nursing staff; and that all the necessary information was transferred to the members of staff who needed it.

> Tuesday evening handover reports that [the patient] was put on insulin the previous day. The nurse says that the patient was handed over in the morning as a diabetic on tablets, and that she only found out during the day that the patient should be on insulin. (Extract from fieldnotes)
> [Sometimes] handover is not complete and sometime if the morning staff […] they are very busy to check the notes [..] and the doctor's orders. Sometimes there's a patient going for bronchoscopy in the morning and it's not handed over, and then it end up that the patient [..] have eaten their breakfast so they're not going to do the bronchoscopy, and it will be cancelled and rescheduled again [Nurse]

These weaknesses in process were problematic for staff because it was often unclear who was able to, ought to, or was entitled to act to change the process. Staff were instead left with problems of trying to rescue situations where processes failed or worked sub-optimally. Staff usually described recovering these 'near misses' through the exercise of their own vigilance and diligence.

> When you take something over don't just assume it's right from the last person, check it, which is what I did, and one of the patients had [intravenous antibiotic] in situ that was going at the completely wrong rate, and the volume to be infused was the wrong amount left so I stopped it. [..]The nurses in A&E had put it up incorrectly and only one person had signed to say that it had been ch … it's supposed to be checked by two people, the nurses that accepted the patient on [this ward] had not checked the pump was going at the correct rate. [Senior nurse]

But the ways in which these weaknesses were described also displayed features of what Everett C. Hughes (1971) describes as a collective rationale which people 'whistle to one another to keep up their courage' and that contain a risk-spreading logic; no individual is named as being responsible in these accounts, but rather a failing exists somewhere in the system. As Bosk (2005: 3) puts it: 'A course of action is not any one individual's property or the result of any individual's agency, but rather it is shared within a community of fellow workers'.

Tightly coupled errors

Tightly coupled errors were the kinds of significant lapse in patient safety that could be directly attributed to someone doing something incorrectly. Few of these were seen over many hours of sustained observation, and only one potentially very serious error was witnessed. The risk of what Hughes (1971) terms a 'fateful' mistake (the kind of mistake that matters greatly for the person who makes it, colleagues, or the person on whom the mistake is made) surfaced only occasionally in interviews, usually in response to direct questioning. The general tendency not to discuss fateful mistakes in interviews is likely to be associated with the moral qualities of such errors, and in particular their shame-generating properties.

Narratives that did describe such incidents had a characteristic form. That something had gone (sometimes quite badly) wrong was not in doubt; the error was one that erupted visibly into a consequence, and there was no deeming the outcome a matter of judgement. It was extremely rare for those interviewed to admit to having committed a fateful error; instead, their narratives described harmful consequences associated with the behaviour of others. Unlike defaults from hygiene standards, or normative work, errors that were tightly coupled to a harm or danger (there was a direct and indisputable link between the action and the outcome), and for which there were difficulties in producing legitimate explanations for what had happened, were socially inadmissible and were seen as discrediting to professional identity. Typically, in these accounts, the person who committed the lapse is anonymous (and often located in another part of the hospital or another professional group), so much so that the accounts are usually rendered in the passive voice, thus making the perpetrators invisible and (paradoxically) revealing their shamed status.

> The penicillin allergy incident happened because somebody had … obviously the box was signed, it was checked, all the checking procedure was excellent, was all carried out, the armband was checked. However it said, 'No allergies', but the lady was allergic to penicillin. (Senior nurse)

While staff accounts of such incidents acknowledged that the person who committed the lapse may have been either incompetent, clumsy, inattentive or careless, they sometimes justified the

person's actions through suggesting that it was an 'understandable' mistake that could 'happen to anyone', hence avoiding the placement of blame. But no-one wanted to commit such an error, and even 'understandable' errors were blameworthy. Thus, appeals to 'busy-ness', or to professional judgements, might be seen as insufficient justification, as in one incident where a patient was not given a much-needed drug over a long period:

> I think they learnt that [..] not administering a particular drug because they weren't entirely sure about the urgency of it, or because they were too busy, or because they weren't entirely sure about how to administer the drug, weren't good enough reasons for that drug not to be administered. [..] 'Yes you are busy, you've got so many things to do, you've got so many nursing [needs] but there's things that can wait, things that it doesn't matter if they don't happen, if somebody doesn't get a shave for example. But an antibiotic that saves a life needs to get in there'. [Junior doctor]

Discussion

How categories and standards are brought to bear in the pragmatic conduct of everyday work is a focus of growing interest in many disciplines (Roth, 2005). This ethnography of patient safety on four medical wards suggests that staff are routinely engaged in the classification and response to risks. They engage in practices of determining what gets to count as a risk, how such risks should properly be managed, and how to account for what they have done. These practices emerge through their practical engagement in the everyday work of the wards, but are also shaped by social imperatives. Risks, in the environment we studied, were not simply risks to patient safety; when things went wrong, or when rules were broken, professional identity was at risk too. Staff are therefore motivated to produce accounts of their actions that will be seen as legitimate. We have identified four distinct but related ways in staff orient to risk: normative work; cutting corners; process weaknesses, and tightly coupled errors. These different classifications of risk were influenced by the particular features of different risks, by how staff sought to manage their identities, and by the availability of plausible legitimatory discourses. These ways of identifying, evaluating, and addressing risks are, in turn, likely to be highly influential in staff responses to efforts to effect change. They have important implications for the introduction of a programme for change such as the *Safer Patients Initiative*.

Our analysis suggests that the very ways in which staff accounts were constructed offered powerful insights into the normative properties of different kinds of risks and how staff reasoned and acted upon them. It is possible that longer periods on the wards would have resulted in different kinds of accounts being made available to the researcher, including different accounts of the externalisation of blame, but the data nonetheless allow valuable insights into how features of risk management at the sharp end are also features of wider organisational and institutional processes. In particular, they show, rather like Garfinkel's (1967) analysis of 'good' organisational reasons for 'bad' clinic records, that informal logics operate alongside formal ones, and may be necessary to make the system work at all. It is likely to be generally unhelpful to think of these informal practices, reasoning and accounts in relation to patient safety as necessarily irrational, feckless, or unruly. Moreover, it is important to recognise that they involve important forms of normative judgements and identity work (Green, 1997).

This is evident in the way in which classifications, actions, practices, and justifications emerge in the context of heavily pressured clinical environments. The impact of low staffing is not trivial (Aiken, Clarke, Sloane, Sochalski, & Silber, 2002); under-resourcing may erode the buffers of safety. This may have implications for efforts to use participative approaches to the resolution of patient safety problems, such as the SPI, in perhaps three important ways. First, it may be difficult to engage staff in, for example, the Plan-Do-Study-Act (PDSA) cycles promoted by the SPI programme, simply because staff may experience real difficulties in diverting the time and resource when there is so much to be done on the shop-floor. Second, and relatedly, staff may lack the energy and enthusiasm to do something new, and may have a strong orientation towards stability ('getting by') rather than change. Third, as long as low staffing and resource can be produced as the explanation for any problems, it may be difficult to innovate. But the implications go beyond simply suggesting that that staff at the sharp end may not always be wholly enthusiastic in greeting change: different kinds of risk classifications may be consequential for how staff respond to efforts to engage them in patient safety efforts.

Normative work involves staff in the resolution of disagreements about the nature of the risks they confront. The kind of reasoning used in such judgements might be seen to share some characteristics of what Flybjerg (2001) would term the 'virtuoso' model of expert performance, one where professionals deploy specialised expertise that enable them to make intuitive decisions based on tacit knowledge of the right thing to do. Staff accounts of risk-related reasoning reflected what Horlick-Jones (2005a) terms an 'informal logic of risk', that emerges in the practical everyday work of getting on with the jobs at hand, and involves tolerating some trouble. Staff behaviour, and how they account for it, may further reflect embedded logics about the span of control: staff may never be fully in control of infection, for example, but they can do something about dignity when making decisions about allocation of side-rooms. These decisions, and the reasonings that produced subsequently to justify them, were not the property of any one individual. Rather, they drew upon shared, negotiated understandings, and were often concerned with moral (rather than strictly technical) judgements. Our findings are thus evidence of what Durkheim (1991) identifies as the kind of professional morality that emerges in everyday professional practices: 'no professional activity can be without its own ethics' (p. 15), and that is grounded in regular, repeated interactions between individuals in particular settings. That our findings held across all four sites reinforces this insight.

Normative work of this nature may well pose problems for programmes such as the SPI seeking to increase the weight given to 'patient safety': when value-based conflicts are rooted in normative beliefs (such as the need to secure patients' dignity), they are much more difficult to resolve than those deriving simply from lack of information (Horlick-Jones, 2005a). It might be hypothesised that it is only if such normative work is convincingly shown to be based on the wrong values and to result in fateful outcomes (e.g. hygiene should be prioritised above dignity) that behavioural commitments are likely to change. Whether a PDSA cycle, or other persuasive strategies, would be able to achieve this is an important question, and one that should be considered broadly – in terms of both its normative dimensions as well as effectiveness.

'Cutting corners' involved distinct forms of reasoning. Here, the adequacy of their behaviour was assessed by staff both in relation to the formal rules and in relation to the informal, normed rules governing the situation. The particular characteristics of behaviours relating to hygiene are important here. The outcome (infection) was seen as being only contingently and loosely coupled to the behaviour; responsibility was seen to be widely diffused; and blame could easily be spread. Breaking the rules was a threat to professional identity only when the occasion demanded a display of compliance, because the defaults could be shown in staff accounts to be consistent with cultural expectations. To some extent, perhaps, non-

adherence to rules can be seen as expressing patterned resistance to efforts at control, and sometimes the reasons given by staff for non-compliance seemed very close to those they gave for 'normative work'. In particular, the imperative to 'get on with things' functioned normatively. Changing practice that is so strongly supported by norms (and the sanctions applied to those who seek to enforce the formal rules) may be very difficult. A process such as PDSA may be able to influence norms by involving staff themselves in the negotiation of new norms, but it may be prone to failure if, for example, the 'Study' phase does not demonstrate significant improvements related to changes in staff practices.

Process weaknesses were also normalised in some of the study areas, in the sense that they were accepted as 'the way things are'. But the reasons why such weaknesses persisted had little to do with legitimacy: staff often complained bitterly about them, recognised the problems they caused, and spent time and effort in rescuing situations or dealing with the consequences. The fallibility of processes seemed to be closely related to issues of interdependence that made staff feel disempowered (individuals lacked mastery over the situation or the means to assert control).The problem in resolving process weaknesses seemed to derive from their diffuse nature and the difficulty in identifying who or how the process could be reformed and made to work reliably. An intervention such as the SPI might be hypothesised to be welcome, because it offers a way of sorting things out – devising routines and preventing them from misfiring. Being able to forestall problems, feeling more in control, and experiencing less frustration and waste are likely all to appeal to staff. However, there are perhaps a few hints of a need for caution. There may be some comforts in a system where no one person can be blamed if things go wrong. If a patient safety programme involves people being made to 'own' problems or to take responsibility and be accountable for particular processes, some resistance might be encountered because it reduces the possibility of guilt-sharing; formalising processes makes them more auditable. People might be perversely more comfortable with systems that, as Hughes (1971) comments, spread the risks and guilt of mistakes and the losses that result from them. The introduction of improved processes therefore needs to be attentive to the need for staff to feel safe, and that they will be treated fairly if anything does go wrong, while at the same time promoting a sense of increased personal responsibility.

This may also be a problem with 'tightly coupled' errors, in the sense that everyone is keen to avoid committing fateful mistakes. What appeared to define a fateful error was one where someone was harmed or came very close to being harmed. This apparently simple definition has important implications. First, a fateful error is not defined by whether a rule had been broken – though the breaking of a rule might be significant in other ways. Second, fateful errors may result from normative work, process weaknesses, and cutting corners, but be seen as culpable no matter what the reasoning behind the failing. Those who commit fateful mistakes are at high risk of being seen as deviant. It might therefore be hypothesised that people may be motivated to cooperate with programmes that seek to reduce the possibility of tightly coupled error. However, interventions that aspire to staff taking ownership of risks need to be attentive to the interest of staff in maintaining a valued social identity (Thelander, 2003). The promotion of a 'no blame' culture in health care has sought to facilitate this by the disconnecting errors and 'near misses' from judgements about the actions of specific individuals (Iedema, Flabouris, Grant, & Jorm, 2006). A tension remains in understanding whether the evident interest of people in maintaining their professional identity is likely to be a deterrent to taking responsibility for risks, or a major motivator for cooperation with risk management programmes. Better understanding of how to harness the natural properties of socio-technical systems, including the use of voluntary collaborations to solve problems, may be useful here (Braithwaite, Runciman, & Merry, 2009).

Conclusions

The ways in which staff identify, evaluate and address risks are likely to be highly influential in staff responses to efforts to effect change. Our study suggests that staff are routinely engaged in the classification and response to risk, both to patients and their own professional identities and roles. This has important consequences for understanding how targeted interventions may work, suggesting that efforts to formalise systems and increase the weighting of patient safety must be understood in the context of perceived threats to identity and the ways in which staff reason and account for risks. The context in which classifications and responses emerge will influence capacity to engage and respond. These should be important considerations in further evaluations of patient safety interventions, but also more broadly in understanding increasing efforts to manage risk by effecting deep organisational change.

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