Title: To call or not to call: a judgement of risk

Introduction

Arguably ‘contacting a senior’ is at the very foundation of safe clinical practice for doctors in training. It ensures that patient safety is maintained whilst junior clinicians gain meaningful exposure to and experience of managing and delivering care [1]. Despite its importance within medical training, contacting a senior has not been investigated systematically.

The study described in this paper emerged from my interest in how doctors in their first year of postgraduate practice (pre-registration house officers [PRHOs]) recognised some clinical situations as ‘risky’ and others as unproblematic [2] and dissatisfaction with the linear and rationale explanations of algorithms and fault-trees (for example, see Evans[3]). I was interested in understanding the complexity of making judgements within the practice context and in developing a conceptualisation of the messy (rather than the sanitised) world of clinical work. The rationale for studying how junior doctors might judge something as a risk was based on the belief that what was thought of as a risk would be what was acted upon[4] [5]. By understanding how junior doctors’ conceptualised risk we could gain valuable insights into what governs their actions.

Conducted in three phases, this study set out to answer the following questions: what influences a PRHO’s response to a judgement call within a clinical setting and what, if any, are the relationships between these influences? The first phase, not described here, explored the risks of practice with PRHOs. This identified the act of calling a senior doctor for assistance as representative of a situation where the PRHO
recognised ‘risks’ [6]. This paper describes the findings from Phase Two and Phase Three of this larger study which looked at the judgement involved in deciding whether or not to contact a senior.

The study took place when the norm for the postgraduate, pre-registration training in the UK was two 6-months placements in surgery and medicine.

Methodology and theoretical stance

The epistemological position adopted was constructionism [7] and the research paradigm interpretivism [8, 9]. These stances are evident in the following rationale.

In order to capture authentic representations of practice, the phenomenon of ‘risk’ and its judgement were not imposed but allowed to emerge from clinicians’ accounts. Ultimately any story can only ever be partly illustrative of reality but stories may represent many of the hidden aspects of life that can only be made explicit and captured through the teller’s descriptions [10-13]. Clinicians’ stories represent constructed versions of practice which tell of the values and judgements that underpin their clinical work. When analysing these multiple accounts, the researcher needs to deconstruct each of the stories then reconstruct them to give a collective representation of a described reality [7-9].

The study followed the traditions of grounded theory for the purposes of analysis [14] but my intention was only to develop a conceptual understanding of the judgements involved in contacting a senior, rather than to generate substantive theory [15]. The study was designed in phases so that the focus for the investigation was built from previous phases of analysis and allowed PRHO responses to direct the subsequent phase.
Method

Data were collected via interview. Early interviews examined organisational structures using pre-prepared questions. Some exploratory questioning was also used. Later interviews reversed this trend so that exploratory questioning was used predominately. This shift allowed formal, procedural structures to be identified before rich descriptions were added [16] [17]. All interviews were audio-taped and transcribed. Analysis was facilitated by the computer programme NU.Dist [18].

Analysis began by open coding, which included sorting and labelling the data by content and placing these into categories. The categories were then further subdivided and sorted by writing summary accounts of the contents, re-sorting and then, where appropriate, devising diagrams which gave schematic representations of the new category. When a diagram was produced, the category was then revisited to ensure that the diagrams correlated with the transcripts and all aspects were included. Summary comments were made about each category and included descriptions of what the data appeared to indicate [19] [20]. Notes and summaries were kept so that development in conceptualisations could be mapped. These processes allowed patterns to emerge from the data whilst ensuring an accurate representation of the transcripts.

All diagrams and summaries were then considered relative to one another. This created further modifications of the categories and diagrams. In each instance the transcriptions were re-reviewed, ensuring that any new conceptualisations still represented the interview data. This method of analysis and the diagrammatical representation allowed interconnections to be captured. It also allowed established systems and processes to emerge and be mapped, and the reasons why they were not followed or adhered to by the PRHOs.
Throughout the analysis, constant comparative analysis was conducted by systematically reviewing the transcripts to expose data that contradicted or challenged emerging conceptualisations. This analysis process was supported by 36 hours of non-participant observation plus six 1-hour presentations to PRHOs where the emergent findings were described. Undertaken when the interview data was being analysed, the observations and presentations ensured that my interpretations of the interview data were continually appraised and my assumptions challenged by what was being observed or described by PRHOs.

Sampling
The interviews used a purposive sample of PRHOs drawn from hospitals within the North East of England (Phase Two n=21), including a large teaching hospital, a large general hospital, a medium sized general hospital and a small district hospital. Clinical Tutors were asked to submit names of PRHOs in samples that represented a mix of genders and specialties and included PRHOs who were judged to work effectively at that grade.

The observations and the group presentations were performed in hospitals that were not used for the interviews. This meant that all hospitals within the Deanery were involved in the study and input gained from PRHOs at non-interview sites. Only one medium-sized hospital (the most common type in the Deanery) took part in the observations; the decision to recruit only one hospital for the observations was made after considering the purpose of the observations (to facilitate the analysis rather than as a data source) and balancing this with the obtrusive nature of shadowing PRHOs.

The Model
Under the headings of ‘underlying principles’, ‘consequences’, ‘underpinning knowledge’ and ‘contributing factors’ I will describe the basic features of the
theoretical model (Figure 1) devised from this study. To conceptualise and understand the practice of asking for senior assistance, readers should think of this model of judgement as something akin to a child’s mobile: it contains influencing factors that constantly change, shift and affect one another. The most important feature of the model (and of mobiles) is how it creates and maintains its equilibrium through counter-balancing competing demands; this is essential to ensure the stability and continuity of its structure and, as argued here, to allow the PRHO to function in clinical practice. This conceptualisation therefore presents judgement as a dynamic, complex cognitive process.

Figure 1. – The conceptual model
Underlying principles

Two principles emerged from the data. These reflect the values that needed to be upheld and demonstrated by the PRHOs in their clinical practice: act responsibly when dealing with patients; progress and develop towards independent practice. The maintenance of these two principles draws attention to the potential tension within a dual role system which requires PRHOs to deliver health care while in training. For example, it was clear from the data that the PRHOs saw their responsibility to patient welfare as paramount and their own needs subordinate to this, but they still needed to develop their skills while in a service situation. To create an environment that allowed the dual roles to co-exist required the PRHOs to create a balance between these roles and to recognise when one took precedence over the other. In order to do this, they needed to be discerning.

So what were the PRHOs balancing and being discerning about?

Consequences

Pre-registration house officers were aware that their actions, including inaction, had consequences. Generally the more consequences they perceived the sooner they would contact a senior doctor. Consequences were also gauged in terms of the chance of an adverse outcome and the potential severity of the outcome. For example, the PRHOs would contact more quickly if multiple events were happening simultaneously and/or the presenting symptoms or underlying pathology had the potential, or looked likely, to cause death or irreparable harm.

Importantly, the consequences described by the PRHOs were not just about patients. PRHOs recognised that their actions could impact on the team, individual seniors or themselves. The inter-relationship between the consequences and the previously described principles explains these multiple impacts. For example, if a PRHO were
contact her seniors continuously, this would indicate that she was not discerning between cases nor manifesting an ability to ‘progress and develop’. Neither would she be taking into account the consequences of this action for the team and therefore other patients. As the PRHOs were reliant on senior co-operation and help to ‘progress and develop’ and maintain their ‘responsibility’ to patient care, their actions were tempered by a reluctance to alienate or antagonise their seniors by constantly contacting them. For example, the PRHOs would try, where possible, to avoid contacting senior doctors because night contact might cause the seniors to be tired and potentially less effective the following day. Moreover, by managing alone, the PRHOs could test and demonstrate to seniors (and to themselves) their progression and development. However, the PRHOs knew that if it turned out to be a ‘bad call’, their seniors were likely to pay increased attention to how well they judged other situations and begin to scrutinise their performance.

**Underpinning knowledge**

Three broad knowledge types were identified from the data: codified, cultural and personal knowledge [21]. These allowed the PRHOs to make the judgements described previously.

*Codified knowledge* or textbook knowledge was important within the first few months of practice and when faced with novel situations.

*Cultural knowledge* refers to the rules and conventions of the practice context. The PRHOs were able to judge when rules were applied but not whether they were applied. This was because the rules related to patient safety and were integral to ‘being responsible’. For example, a PRHO may decide when to contact a senior but the rule was that ‘seniors must always be kept informed’. Whereas the rules were overt, conventions were not explicitly stated and, unlike rules, they were not patient-
orientated but facilitated team working. As such, conventions could be ignored when they jeopardised or interfered with patient care and the principle of ‘being responsible’. The conventions included: ‘contacting the most immediate senior first’ and ‘examine and assess the patient before asking for senior input’.

*Personal knowledge*, the knowledge gained from working within situations and hands-on experience, gave the PRHO insight and an ability to judge situations. Personal knowledge may include information on a patient’s particular condition, its likely outcomes, the way that particular ward worked, what particular seniors expected and whether the time of day changed their expectations. Unlike codified knowledge, personal knowledge represented rich, contextualised knowledge that could be used to inform action in specific clinical situations.

The PRHO not only assessed whether she had the necessary knowledge or skill to continue without a senior but, perhaps more importantly, her own ability to know whether she had enough knowledge or information to make these judgements within any given context. The more assured the PRHO was in her understanding, (and more so if this knowledge had been generated from successful clinical experiences) the less likely it was that the PRHO would contact a senior. The expression of this assuredness was made by stating one’s overall feelings of confidence.

**Contributing factors**

Contributory factors made contact with seniors appear more or less desirable but only ever mediated borderline situations. For example, seniors thought to be unskilled or intolerant might not be contacted. Contact was also less favourably viewed if effort was required to track the senior down. In this instance, the time taken to contact a senior could be better used to think through the situation and, relating
this back to the underlying principles, demonstrate one’s progression and
development by finding a solution for herself.

The data from this study illustrated the multiplicity of factors that these junior
clinicians needed to take into account in their practice. Collectively, these factors
formed a complex matrix of hazards, threats, losses and benefits that PRHOs
needed to weigh up before they can assess the consequences from any single act.
The data also clearly signalled that this judgement drew not just on the PRHOs’
knowledge about conditions and patients but was underpinned by the values and
codes of conduct that were expected of them as professionals.

Study implications and discussion
This study presents a model which illustrates the complexity of a single clinical
judgement – whether or not to contact a senior. It also transposes the supposition by
Redelmeier et al. [22] that ‘judgement is a complement to but not a substitute for
knowledge’. From these findings, rather than being complementary, judgement is
essentially established as the act of deliberating and evaluating knowledge:
deliberating upon its completeness and accuracy, and evaluating its applicability
within a specific context and its transferability to another situation or context and
appreciating the consequences of being wrong in any one of these. As such,
knowledge underpins judgement.

For judging whether or not to call a senior, codified knowledge was less valuable and
less useful to the PRHOs than personal knowledge. This was because the clinical
situations that utilise codified knowledge present themselves as tangible, clearly
defined, uni-dimensional, stable and predictable problems. The problems that
required the PRHO to judge whether to call were ill-defined and/or multifaceted,
where a multiplicity of consequences needed to be taken into account and weighed
up – hence the need for judgement. Rather than using algorithmic processing, appropriately judging ‘whether or not to call’ required active discernment about what could and ought to happen. Contextually-rich personal knowledge, gained from the PRHOs’ experiences, allowed them to do this.

Cultural knowledge was central in guiding the PRHO about ‘what was the right thing to do’ and was reinforced by seniors who controlled aberrant behaviour via sanctions for those who digressed (such as being checked up on). Seniors were therefore important for developing the PRHO judgement because they gave the PRHOs tangible boundaries to what constituted ‘acceptable / unacceptable’ practice. This developed from learning what seniors expected, knowing their preferred ways of working and the standard to which the PRHO must perform while working with seniors.

In terms of training, being able to contact someone more senior was important as it allowed these PRHOs to experience a level of independence in their practice whilst ensuring patient safety was upheld. This controlled freedom gave PRHOs a sense of responsibility because they knew that their actions mattered clinically and that they were accountable for them. This idea is supported by Lave and Wenger’s [13] notion of Legitimate Peripheral Participation and Douglas’ [23] descriptions of how hierarchical systems function, explains why it works. The need to manage multiple and competing demands was instrumental in making the PRHO consider the consequences of their actions and with this they learned what ‘responsibility’ means in a clinical context; as educationalist Paulo Freire observed ‘Responsibility cannot be acquired intellectually, but only through experience’ [24].

For the above reasons, the conceptual model developed from this study supports the view that judgement is nearer the ‘art’ than the ‘science’ of the decision-making
process [25] and involves a capacity for humane as well as technical competence [26]. It also explains why the delivery of medical care in a training setting needs to involve the cooperation of all practitioners and, as such, clinical judgements are unlikely ever to take into account only the needs of patients. It may be that the complex interplay between the factors described also mirrors the attributes essential for clinical practice: an independent yet co-operative and discerning practitioner who is able to balance multiple considerations whilst ensuring patient care. As such, when judging whether to contact a senior or not, the PRHOs were practising what they needed to become.

The introduction of Modernising Medical Careers MMC initiative, implemented after this study was conducted, was intended to mark ‘a shift in postgraduate medical education from apprentice-style training’ [27] and to introduce shorter clinical placements, outcome-based programmes, defined competencies and specified assessments. The model presented in this paper therefore captures how clinical training worked before MMC. It is also based on what the PRHOs were willing or able to disclose when interviewed. By also using only PRHO perspectives, the findings cannot be said to characterise all practice or reflect ‘other’ perspectives. What is captured is the PRHOs’ conceptions of how they thought about situations and how they thought they ought to act – their theories of action [28]. I would argue, that despite these limitations and changes to the post-registration year, these findings reflect how practice is understood by clinicians.

My personal concerns about how the recent changes to the pre-registration year will impact on practice would be as follows. With less time in practice post-graduates may take longer to internalise and appreciate the situationally specific cues for when to call a senior. This, in turn, may lead to prolonged dependence on the part of ‘juniors’ and place more strain on their seniors. The reduction from 6 month jobs to
transient 12 week placement means that individuals could potentially avoid taking responsibility for what they do or don’t do and by doing so potentially ‘put off’ developing this ability. It is also somewhat paradoxical that the perceived value of multiple and varied experiences may shift the doctors’ attention away from learning about the clinical care of patients as precious time is taken up getting to know routines and conventions of wards and the work practices of ‘significant’ others (Melia [29] describes similar issues with trainee nurses).

The model presented in this paper helps us appreciate the complexity of judgement and why an ostensibly simple task such as deciding whether or when to contacting a senior cannot be viewed purely as a discrete competence to be achieved and ticked off a list. Neither can it be thought of as yet another item to be covered in the undergraduate curriculum, although the knowledge foundations to it are undoubtedly being laid there: this judgement is developed and refined by prolonged and repeated exposure to the clinical context and mediated through senior support and intervention within that context [30]. By failing to recognise the complexity of such processes, the profession is in danger of undervaluing the very skills that take clinical practice beyond technical competence.

Reference: