Accountability and Patient Safety:

A Study of Mess and Multiplicities

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CERTIFICATE OF AUTHORSHIP/ORIGINALITY

I certify that the work in this thesis has not previously been submitted for a degree nor has it been submitted as part of requirements for a degree except as fully acknowledged within the text.

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Abstract

Over the past decade, patient safety has emerged as a major issue in hospitals, arising from reports of unacceptable levels of harm to patients caused by the process of health care itself rather than any underlying disease. A growing research movement has developed around finding out why so much harm occurs, and what can be done to reduce it. The ever-increasing complexity of health care provision is consistently cited as an underlying factor, and alongside calls for more accountability and transparency, formal systems of accountability such as guidelines and incident reporting have emerged in response, designed to govern frontline activities and to manage complexity through standardisation. As popular as these approaches are however, they are also controversial, and a large subset of patient safety research is focused on identifying and overcoming local 'barriers' to their implementation.

In this thesis, I analyse the problematic implementation of this formal accountability and challenge its assumptions. I propose that we insufficiently understand how safety is currently practiced by clinicians, and likewise, how accountability is practiced. My thesis therefore focuses on exploring safety and accountability as *practices*. I describe accountability not only in formal terms, but also as informal and everyday talk and behaviour. Furthermore, I propose that the problems of implementation described above can be reframed instead as tensions *between accountabilities*. In this study therefore, I examine how clinicians negotiate multiple accountabilities in their practices of safety. With a multidisciplinary group of 72 clinicians in a children's hospital in New South Wales, Australia, I created ethnographic data through observations, field interviews and feedback sessions in two phases of field work, over ten months in total. Following each phase, data were iteratively coded and analysed using a grounded theory approach.

With these data, I show how clinicians are enacting safety through their practices of accountability, in contexts complicated by multiple accountabilities and multiple meanings of safety. I show how clinicians inevitably produce accounts that are partial and ‘incomplete’, at risk of becoming problematically disembedded from complexity. I also show how clinicians are re-embedding these partial accounts, by engaging in accountability practices that foreground multiplicity, diversity and reciprocity. I argue that if we wish for practices of accountability to reflect and support clinical practices that we see as complex and interconnected, then we need to embrace more complex and *interconnecting* practices of accountability. Rather than calling for more accountability, we need to practice more *accountabilities* instead, to increase the reciprocal and reflexive engagement of participants with one another in (and beyond) the health care system. In doing so, we would enable care that is ‘safer’ by enabling more people to participate more variously and directly in negotiating the complexity and shifting boundaries of health care delivery.

Glossary of abbreviations

ANT	Actor-Network Theory
CEC	Clinical Excellent Commission
CNC	Clinical Nurse Consultant
CNE	Clinical Nurse Educator
CNS	Clinical Nurse Specialist
EBM	Evidence-Based Medicine
HA	High Acuity
HD	High Dependency
ICU	Intensive Care Unit
IIMS	Incident Information and Management System
IOM	Institute of Medicine
M&M	Morbidity and Mortality
NSW	New South Wales
NSW Health	New South Wales Department of Health
NUM	Nurse Unit Manager
RCA	Root Cause Analysis
RCT	Randomised Controlled Trial
RN	Registered Nurse
SAC	Severity Assessment Code

Glossary of key terms

Accountability	A practical and on-going accomplishment, enacted through the creation, exchange and use of accounts that can be representative of practice, as well as explanations or justifications of practice. See below for Informal Accountability and Formal Accountability.
Articulation work	Work that is involved in coordinating action around formalised models of work, that deals with unanticipated contingencies, and is generally invisible in formalised models of work.
Combinability	Combinability allows for accounts to be *paired* and *compared* across distances and time, at the risk of estrangement from more local and complex understandings and interpretations.
Directionality / unidirectionality / multidirectionality	Directionality attunes us to consider for whom accounts are created, whose accounts are made visible, and the reciprocity of their exchange. Unidirectionality describes the exchange of accounts in only one direction, lacking reciprocity. Multidirectionality describes a multiplicity of reciprocal interactions between people.
Distance	Not necessarily geographical, it can also refer to hierarchical differences or differences in perceived power, for example.
Dis/embeddedness	The degree to which an enactment of accountability engages with, and adequately represents the complexity of contexts in which multiple meanings of safety may co-exist. Dis/embeddedness has implications for how practices of accountability connect and disconnect practices of safety.
Evidence-based medicine (EBM)	A movement that emphasises the use of scientific evidence in clinical decision making, particularly evidence that meets standards of objectivity and generalisability, epitomised by the randomised controlled trial (RCT).
Formal accountability	An approach designed to act ‘at a distance’ to control or impact upon local frontline activities, in what is imagined to be a unidirectional relationship.
High dependency / High acuity	High Dependency patients are those who are determined by doctors and/or nurses to require increased nursing care, for various reasons. High Acuity patients are a subset of HD

	patients, who are determined by doctors to be acutely unwell, and are to be seen by a medical team at least once every shift.
Informal accountability	Accountability that is not formal (see Formal accountability) or otherwise formally prescribed, usually initiated locally and contingently.
Intercontextuality	The re-creation of accounts and/or accountabilities across different contexts such as when past accounts are repeated or reproduced in subsequent account-exchanges, via the clinicians who are also situated within and across these contexts
Mobility	The ability of an account to travel between contexts and across distances.
Multiplicity	The claim that there is more than one way of describing or defining something, as opposed to singularity.
Reciprocity	A relationship describing the continual and mutual exchange of accounts between parties, as opposed to unidirectional accountability.
Resilience	The ability of actors to recover from unexpected change, or other adversity.
Stability	Can be thought to have two facets, namely the durability of the physical/tangible form of an account, and the reliability of its interpretation or meaning. These facets are inseparable, with the interpretation of an account emerging from the interaction between the form of the account and the context of its interpretation, rather than being somehow distinct and independent. Stability therefore is a contingent, relational effect, always in production. It is dependent on the relations generated between contexts by the accounts and accountabilities that flow between them.
Transparency	A relational effect, linked with stability, mobility and visibility, achieved by the interconnectedness of practices and people through the reciprocal flow of accountabilities.
Visibility	The degree to which an account (and the practices represented therein) is able to be 'seen' or otherwise attended to by others. Inextricably linked with the mobility and stability of the account.

Glossary of participant titles

Clinical Nurse Consultant (CNC)	An experienced nurse with expert skills and knowledge in one particular area. The CNC manages the overall care for their group of patients and helps the medical team with clinical decisions. They may also do procedures, provide education and support.
Clinical Nurse Educator (CNE)	An experienced qualified nurse who works with nursing staff to develop their nursing skills and knowledge and develops hospital-wide nursing education.
Clinical Nurse Specialist (CNS) / Specialist nurse	An experienced registered nurse with demonstrated competency in an area of specialisation.
Consultant	The most senior doctors in the team, who have finished their speciality training.
Dietician	An allied health professional who gives parents, nurses and doctors advice on nutrition. This includes assessing patients' needs and devising and managing nutritional care plans for patients.
Fellow	A doctor who is finishing their specialty training. They will usually become a consultant within a year or two. A fellow works under the supervision of a consultant, and is more experienced than a registrar.
Junior doctor	In this thesis, a junior doctor can refer to a fellow, a registrar, or a resident (see relevant entries in this glossary)
Nurse Unit Manager (NUM)	The nurse in charge of managing the ward. They are in charge of staffing, and coordinate admissions, discharges and transfers of patients. They do not care directly for patients.
Play Therapist	Play therapists use play to help children have a positive experience of hospital by encouraging normal appropriate play activities.
Nurse / Registered Nurse (RN)	A trained nurse who cares for patients in the wards.

Registrar	A doctor who is training in a particular medical specialty, such as paediatrics. They rotate placements about every three months. A registrar is more experienced than a resident.
Resident	The most junior doctor on the team, also known as a Resident Medical Officer (RMO). They rotate placements about every three months.
Senior doctor	A consultant (see glossary entry above).
Senior nurse	In this thesis, a senior nurse can refer to a CNC, CNE or CNS (see glossary entries above), or another experienced nurse, such as the shift team leader on the ward.
Social worker	An allied health professional who works with families and health professionals to help with practical and personal issues a child and family may be facing.
Speech therapist	An allied health professional trained to assess and treat people with a communication disability or a problem with eating or swallowing.

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Chapter 1

Introduction

1.1 Background and approach

This thesis is written against a backdrop of change and controversy in health care, arising from concern for patient safety. In the past two decades, reports have been steadily emerging of unexpected and excessive levels of iatrogenic harm – that is, avoidable harm caused by health care, rather than any underlying illness – in the hospitals of developed countries such as the US, the UK and Australia (Andrews et al., 1997; Brennan et al., 1991; de Vries, Ramrattan, Smorenburg, Gouma, Boermeester, 2008; Jagsi et al., 2005; Kohn, Corrigan & Donaldson, 2000; Leape et al., 1991; Vincent, Neale & Woloshynowych, 2001; Wiengart, Wilson, Gibberd & Harrison, 2000; Wilson et al., 1995).

Iatrogenic harm is no small matter, having been calculated to be extremely costly both in human and financial terms (Kohn et al., 2000). As such, patient safety in hospitals has become an unavoidable issue in health care delivery and management, and one that potentially affects nearly everyone as current or future users and/or as employees of hospital services. In the past decade especially, the momentum for taking action on patient safety has increased to the point where it has increasingly stabilised (Law, 1992) in the development and establishment of nation and state-wide patient safety organisations, safety monitoring systems, information technologies, safety experts and professional associations, and the field of patient safety research, with its own journals and international conferences (Wachter, 2010).

Within this activity, the main approach has been to find out *why* so much harm occurs, and what can be done to reduce it. The ever-increasing complexity of health care provision is consistently cited as an underlying factor, and in response, the main body of approaches have focused on managing this complexity by *reducing* it through *implementing* technologies of formal accountability such as standardisation and technology, in accordance with human factors and process engineering understandings of safety (Leape, Berwick & Bates, 2002; Runciman, Merry & Walton, 2007). Accordingly, a significant body of patient safety literature is invested in the success of these formal approaches, uncovering 'barriers' to their implementation (Pfeiffer, Manser & Wehner, 2010) and arguing for cultural change and the like in order to facilitate the simplification of clinical work, thereby improving safety.

In this thesis, I offer an alternative response. The main threads running throughout the following chapters are the importance of studying safety and accountability as *practices*, and of describing and acknowledging the complexity involved in these practices. As Zuiderent-Jerak, Strating, Nieboer and Bal (2009) argued, the "most productive contribution of a sociology of safety [is] the ability to redefine the problem space" (p. 1714) – that is, to shift the aim of safety research from 'uncovering barriers to implementation' to "unpacking how patient safety is done and which possibilities and problems this produces" (Zuiderent-Jerak et al., 2009, p. 1720).

In this thesis therefore, I look for (and find) patient safety and accountability as everyday talk and everyday practice[1]. I 'unpack' these practices over the following chapters, building an argument that we should be approaching safe practice by *matching complexity with complexity* – by engaging with the mess and multiplicity found in clinical work. I do not suggest that we reject standardisation and formality, but rather that we should recognise their limits, and the complexities inherent in their production and use. Finally, I suggest that we do not need more accountability, but instead more *accountabilities*, to increase the reciprocal engagement of clinicians with one another, with patients, with managers and other participants in the health care system (and

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[1] This approach to accountability as a practice diverts from most research on accountability, especially in psychology and organisational studies, that treats accountability as a cognitive process, as 'a state of mind', and/or as a mechanism, or goal-oriented set of rules (Dubnick, 2003a, 2003b; Frink & Klimoski, 1998, 2004; Lerner & Tetlock, 1999).

beyond) in order to enact care that is ‘safer’ because it is more responsive to the changing and multiple needs of the people who are involved.

I build on this argument over the following chapters, which describe, almost chronologically, my journey through the research process. The thesis is, at first glance, organised ‘traditionally’. Following this introduction, I present two literature review chapters (Chapters 2 and 3), a methodology chapter (Chapter 4), three findings chapters (Chapters 5 to 7), the discussion and conclusion chapter (Chapter 8), and a final chapter on reflections and recommendations (Chapter 9). This structure is borrowed from the traditional sequence of scientific research, which begins with a body of literature that is reviewed to discover a ‘gap’, a problem for which a research question is developed; the methodology is explained to suit the problem and to describe how the research was carried out; the findings are a report of the results obtained by applying the methods; and in the discussion, the findings are linked back to the research question and the earlier literature review, stitching this study back into the ‘fabric’ of research from which it draws and establishes its legitimacy.

In this thesis however, this model is disrupted, and necessarily so. For example, the literature review is not confined to a single chapter, but is distributed throughout Chapters 2, 3, 4, 6, 8 and 9, reflecting my iterative reading of the literature, particularly of the different bodies of literature that I engaged with at different stages of the research. Inasmuch as I have written this thesis as a ‘fiction of coherence’ (Law, 2004), it also tells a story of messiness, iteration and multiplicity, which is more ‘faithful’ to the process of its creation and its arguments. To explain, I will now describe the following chapters in turn, to show how each of them ‘maps’ in turn to a different stage of the research journey.

1.2 An overview of the thesis

This study began as a broad exploration of patient safety, which narrowed in focus over time. In the first section of Chapter 2, I begin as I began my study, by reviewing the patient safety literature, outlining in broad terms some of the key tensions and issues that underlie research and practice in this area. I also describe the aims and justifications for the focus of my study. In contrast with the safety-deficit approach of much of the patient safety literature, I undertook this research with the positive aim of finding out how clinicians are interacting with one another to create safety in their everyday work practices (Mesman, 2009). As I describe later in Chapter 4, I adopted a set of ethnographic methods for this purpose, and carried out field work in two phases, for a total of ten months, in a children's hospital in New South Wales, Australia. My participants in this study were a multidisciplinary group of clinicians including a multidisciplinary specialty team and the staff on a particular ward[2]. I analysed my field notes and transcripts using a grounded theory approach, in particular the constructivist approach outlined by Charmaz and Mitchell (2001).

Early in this field work, I began to view clinicians' practices around safety as being generally ubiquitous, but also distinguishable as informal or formal. That is, there were things they were doing such as verbally checking with one another or asking questions that were more informal, and others such as documentation, signing off on medication checks, and using protocols, that were more formal. When I described this observation to a Chief Investigator on the project who was also a senior hospital executive, he agreed, and noted that "there is a push towards more of the formal, because of accountability"[3]. At this point, after approximately four months of field work, my interest in accountability began, and my research focus sharpened further towards considering the impact of accountability, associated initially with the formal practices I was observing.

In the second section of Chapter 2 therefore, I present my review of the literature around this new focus of accountability. In this section, I describe how systems of accountability are increasingly proposed and implemented as solutions to problems of patient safety, and describe how these systems share the characteristics of being approaches designed or created 'at a distance' to control or impact upon frontline activities in what are largely imagined to be unidirectional relationships. These approaches are not only popular however, they are also controversial. Using evidence-based medicine (EBM) and guidelines as examples of these systematic approaches in clinical practice, I outline the main tensions and controversies that have arisen around their implementation. I suggest that these tensions arise from a kind of false separation

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[2] This study was part of a larger research project funded by the Australian Research Council Discovery Grants Scheme. The principal investigator on this project was Professor Rick Iedema, who also supervised this thesis.

[3] Personal communication, 3 November 2006

between these approaches and the local contexts and practices they are meant to act upon or control. Furthermore, I find that these controversies involve not only clinical practices, but also research practices, in particular the ‘gold standard’ research methodologies promoted by EBM and applied to studies of clinical practice. This thesis therefore is not only interested in how clinicians engage in accountability around practices of safety, but also in how researchers account for their own practices, and the practices of others. My research methodology therefore is closely implicated in the findings of this thesis, much in the way described by Law (2004).

In Chapter 3, I extend my literature review by exploring the issues highlighted in Chapter 2 at a more theoretical level. In the first two sections of Chapter 3, I grapple with the question of why the approaches described in Chapter 2 have been so problematic in their implementation. I identify these approaches as *formal* systems of accountability, and review the literature around two ‘points’ at which these formal accountabilities intersect with local practices: when formal accounts of practice are created, and when they are used. I structure my exploration of these contested intersections around the key concepts of distance, disembeddedness and visibility, and challenge the necessary independence of formal accounts by showing how they are dependent on local integration and engagement. In the third section, I expand the concept of accountability in use by introducing the literature around multiple and informal accountabilities in practice.

In this last section of Chapter 3, I set the stage and name the players for the data analysis chapters that follow. In particular, I relocate the controversies described earlier away from the interactions *between formal accountability and local practice*, to a focus instead on interactions *between multiple accountabilities in practice*. The new research aim that followed therefore was to better understand how multiple accountabilities are currently enacted in clinicians’ practices of safety. From the literature reviewed in this chapter, I also developed a conceptual framework, outlined in Chapter 4 and elaborated in Chapter 5, to guide my analysis of accountabilities in practice.

In Chapter 4, I discuss my methodology, beginning with a justification for the use of ethnography to support the implications for research described in Chapters 2 and 3. In this chapter, I also outline the theoretical perspectives that have informed the thesis – that is to say, those which underlie the literature that I have cited to justify this study and my perspective. These perspectives are not presented as an account of how I planned and carried out my study, but rather, as a kind of post-hoc assemblage.

This research, as I conducted it and as I have reported it in this thesis, was guided at the very beginning by the field of health services management research, as well as patient safety research that claimed few ties to traditional sociological theories, relying more instead on psychological and systems theories of safety (Reason, 2000), or avoiding the mention of theory altogether (Foy et al., 2011). As I continued to explore more theoretical literature however, especially in Chapter 3, I also began to explore the theoretical perspectives that informed these studies. In Chapter 4, I describe these perspectives broadly as constructionist (Crotty, 1998), including practice theory (Schatzki, Cetina & von Sevigny, 2001), actor-network theory (ANT) (Latour, 1996, 2005; Law, 1992, 2004), ethnomethodology (Garfinkel, 1967; Maynard & Clayman, 1991; Rawls, 2002; Ten Have, 2004), and negotiated-order theory/symbolic interactionism (Strauss, 1978; Strauss, Schatzman, Ehrlich, Bucher & Sabshin, 1963; Strauss, Fagerhaugh, Suczek & Wiener, 1985). Much later, after I had analysed my data and was working out my findings, I realised through more reading of the literature that this thesis aligns most closely with sociotechnical (STS) approaches (Berg, 1999; Jensen, 2004; Sismondo, 2004; Zuiderent-Jerak, 2007), which overlap with the perspectives listed above. I refer to this in Chapter 8 (the discussion chapter), but for Chapter 4, the perspectives described above were the ones that had, to that point, informed my research methods.

In Chapter 4, I begin to deal with the notions of multiplicity and mess, because that was what I was finding as I read the literature on theoretical and methodological perspectives. As earnestly as I sought them, I did not find fixed, bounded and singular definitions of these perspectives. Instead, I was forced to deal with the complexity of these theories and the multiplicities, ambiguities and shifting boundaries of their description and use in the research literature. As such, I present them in this chapter not as theoretical statements in their own right, but in relation to one another, focusing especially on their similarities, and on their links to ethnography. In this chapter, I prefigure my findings, by writing an account of my research methods that acknowledges mess and multiplicity, foregrounds connections and interrelatedness, and in doing so respects not only the complexities of the clinical practices I studied, but also of the fields of research and research practices I drew from and engaged in.

In Chapters 5 to 7, I describe my findings, illustrated with examples of practice observed during my field work, and analysed according to the conceptual framework outlined in Chapter 4. The framework is as follows: I take accountability to be a practical and on-going accomplishment (Garfinkel, 1967; Yakel, 2001), enacted through the creation, exchange and use of accounts that can be representative of practice, as well as explanations or justifications of practice. I analyse accounts by their *stability, mobility, combinability* and *visibility*, which are in turn attributes that are interdependent and interrelated with those that describe the movement of these accounts, namely *distance*, *dis/embeddedness* and *directionality*.

In Chapter 5, I introduce my field site and participants, describing how multiple accountabilities manifested in the practices of safety enacted by nurses on the ward. I introduce the ubiquity and multiplicity of safety, and ground the concepts in my framework with excerpts and vignettes from my data, numbered in order of their appearance in each chapter. In this chapter, I also elaborate on the concepts I have selected for the framework, and describe how they are interrelated.

In Chapter 6, I present a case study of an incident reporting system, a formal system that has been designed specifically to account for safety. As part of my analysis of this system, I also review and analyse the patient safety literature around incident reporting, and the accountabilities articulated therein. In this chapter, I build on the multiple accountabilities described in Chapter 5, to discuss how they can be found in conflict around the incident reporting practices of nurses and doctors, and how this conflict can be linked to the notion of disembeddedness. In Chapter 7, I describe two kinds of meetings conducted by the multidisciplinary team of clinicians, to demonstrate accountabilities in confluence, and to show how they may be productively re-embedded by clinicians engaged with multiplicity in their practice.

In Chapter 8, I deliver the main discussion of the thesis, where I review my arguments from the beginning, and take a step back to reflect on and interpret the findings described in Chapters 5 to 7. In this chapter, I relate my findings back to the literature already cited, and also introduce new literature related to my findings and arguments, particularly around the notions of multiplicity, inclusions and exclusions. In this chapter, I answer my research question, describing how clinicians are currently enacting multiple accountabilities in their practices of safety, and conclude by offering the implications of my findings for encouraging safe practice.

Finally, this thesis concludes with Chapter 9, where I reflect on this research as a recursive process – where my methodology and findings informed each other in turn. In this chapter, I take the things I have learnt through this research and step outside of the research project to offer recommendations in the areas of health policy, medical education, safety research, and research in general. In the spirit of reflecting my findings back onto my research, I end this chapter with a brief reflection on some of the exclusions enacted in this thesis; that is, the things that I did not include, which might productively be included in future generations of these ideas.

In the following chapter, Chapter 2, I start at the very beginning, by introducing the fields of patient safety and accountability in health care.

Chapter 2

Patient Safety and Accountability

2.1 Introduction

In this chapter, I introduce the fields of patient safety and accountability in health care, focusing particularly on the issues identified in the literature that are addressed by this research. I begin with a brief overview of the research literature in the relatively young field of patient safety, tracing its recent history, shifts in perspective and changing narratives. I follow this section with an introduction to accountability in health care, tracing its (longer) history and describing its controversies. In this second section, I pay particular attention to where accountability intersects with patient safety, primarily around the notions of Evidence-Based Medicine (EBM) and guidelines.

I focus here primarily on empirical studies and reviews, drawing them from fields and disciplines alongside patient safety, such as organisational studies, health services management, sociotechnical studies, and health sociology. In the following chapter, I take a more theoretical perspective on the issues identified in this chapter to articulate the theoretical concepts and analytical frameworks used in this thesis.

2.2 On patient safety

Rapid and dramatic advances in biomedical knowledge and technology in the last few decades have resulted in health care delivery that is increasingly sophisticated and complex, and correspondingly, more susceptible to iatrogenic harm (Irvine, 1999; Leape & Berwick, 2005), that is, “avoidable harm caused by the process of healthcare itself, rather than by an underlying injury or disease” (Runciman, Merry & Walton, 2007, p.

1). In the last two decades especially, a number of large studies carried out in the US, the UK and Australia have reported and argued that medical adverse events are common, pervasive, often preventable and costly, both in human and financial terms (Andrews et al., 1997; Brennan et al., 1991; de Vries et al., 2008; Jagsi et al., 2005; Kohn et al., 2000; Leape et al., 1991; Vincent et al., 2001; Wiengart et al., 2000; Wilson et al., 1995).

An early example was the Harvard Medical Practice Study, which looked at patient records in New York state hospitals in 1984, and estimated, based on a random selection, that there were 98,609 adverse events that year, defined as injuries to patients caused by medical management (Brennan et al., 1991). Another oft-cited statistic included in the seminal Institute of Medicine (IOM) report, “To Err is Human”, put forward the possibility of 44,000 deaths in American hospitals each year as a result of medical errors (Kohn et al., 2000). In Australia, the Quality in Australian Health Care Study found that 16.6% of over 14,000 admissions to hospital in New South Wales and South Australia were associated with an adverse event caused by health care management, with 51% of these adverse events considered preventable (Wilson et al., 1995). These studies and their methods have been questioned, and accused of exaggerating their estimates (McDonald, Weiner & Hui, 2000). Nevertheless, in combination with negative publicity surrounding cases of medical error and hospital scandals, the scale of the problem these studies put forth helped to publicise the issue and galvanise public pressure on and within the health care community, to focus on improving patient safety (Leape & Berwick, 2005; Millenson, 2002).

What has ensued since then has been a great deal of soul-searching within the health care professions, in trying to understand the causes of such high rates of error. The culture of medical practice has been identified as a culprit, with its emphasis on infallibility and individual professional responsibility that makes it difficult for clinicians to acknowledge and learn from error when it occurs (Bates & Gawande, 2000; Leape, 1994; Reason, 2000). Furthermore, individual culpability has been identified as counterproductive to learning from most situations (Bates & Gawande, 2000; Leape & Berwick, 2000; Runciman, Merry & McCall Smith, 2001; Waring, 2005). The more recent focus therefore, has moved towards viewing errors as resulting from the way systems are designed, based on the argument that humans will inevitably make mistakes, and that systems which are not designed to take that into account are particularly susceptible to error (Kohn et al., 2000; Leape, 1994; Nolan, 2000; Perrow, 1984/1999; Reason, 2000; Sharpe, 2003). The popularity of this perspective is widely credited to its promotion in the seminal IOM policy report (Kohn et al., 2000), which drew its recommendations from studies of other complex high-risk industries such as aviation (Sharpe, 2003, 2004; Jensen, 2008; Millenson, 2002).

This systems-based perspective on patient safety moves towards a discourse of organisational learning and improvement, by focusing on how systems allow or create errors, whether already made, or latent, as in “accidents waiting to happen” (Department of Health, 2000; Leape, 1994; Reason, 2004). Reason (2004), for example, asserted that even ‘*active* errors’, which involve people acting directly with the system or with patients, are often “the direct consequence of error provoking circumstances within the local workplaces. And these, in turn, are the product of higher-level *latent* conditions: prior decisions by equipment designers, senior managers, the writers of protocols, and the like” (p. ii29). Leape (1994) suggested that patient safety initiatives need to focus on these ‘root causes’, namely the system errors in design and implementation, arguing that developing solutions to unsafe acts alone would be futile, as other errors would soon occur if the underlying causes were to remain.

These proposed foci and perspectives on error underlie patient safety research and initiatives, in the form of ‘error management’ (Reason, 2000), by developing knowledge about error that then drives learning and system changes to prevent future errors from occurring (Helmreich, 2000; Nolan, 2000). Incident reporting, for example, has been recommended as a means to this end, by collecting information about safety events that can then be used to learn from and prevent future occurrences of these events (Kohn et al., 2000; Vincent, 2006). However, the transfer of systems-based knowledge to learning and then again to change and improvement is not unproblematic.

For example, researchers have examined the process of Root Cause Analysis (RCA) as one such method proposed for allowing clinicians to learn from significant incidences of error and to translate those lessons into systematic changes (Iedema, Jorm, Braithwaite, Travaglia & Lum, 2006; Iedema, Jorm, Long, et al., 2006). RCAs are carried out on the most serious reported incidents, such as wrong-site surgery and suspected suicide, and involve multidisciplinary teams of medical practitioners who investigate these incidents through interviews with the clinicians involved. In this process, RCA team members are required to “develop statements about causal relationships conjectured to underlie the incident” (Iedema, Jorm, Braithwaite, et al., 2006, p. 3) and to then prepare a report that identifies the main ‘systems’ causes behind the adverse event, and offers a set of practice change recommendations to prevent such events from re-occurring. Researchers however found problems with this systems-based approach, which arose from the difficulty of “having to navigate between the complexity and indeterminacy of individuals’ actions and the abstractness and immutability of formal rules” (Iedema, Jorm, Braithwaite, et al., 2006, p. 1203). Basically, they found that the devising and implementation of systematic changes could be incompatible with the dynamic and volatile context of the hospital environment, which constantly requires clinicians to mediate between system rules and procedures and the sometimes unpredictable situations they face.

In another study, Waring (2007b) found that doctors were engaging in a form of ‘systems thinking’, by readily identifying ‘the system’ as a threat to patient safety, but “despite openly acknowledging the causal role played by ‘the system’, doctors maintain an individualized and ‘person-centred’ approach for responding to these threats” (p. 43). In other words, the problems at a systems-level were acknowledged by doctors, but they saw these as issues to be accommodated or tolerated, rather than necessarily acted upon. These findings highlight the problem of disassociating ‘the system’ from *in situ* activity. In contrast, Berwick and Nolan (1998) echoed the definition of a system from the IOM report as “a set of interdependent elements interacting to achieve a common aim” (Kohn et al., 2000, p. 52), and noted that this definition “emphasizes the importance of interdependence and interaction. The elements alone do not constitute the system; rather, the elements plus their interactions constitute the system” (p. 291). Nolan (1998) elaborated further on this understanding of systems, suggesting that improvement and change depend on clinicians viewing themselves as members of a wider system, and calling for cooperation amongst clinicians as a basis for change, although he too identified the system itself as the focus for change.

This interest in interaction between clinicians on the one hand and between clinicians and systems on the other is bolstered by an ethnographic investigation of adverse events in a hospital setting (Andrews et al., 1997), which found that although individual causes were most often attributed to adverse events, health care workers also attributed interactive causes, such as interaction between individuals, between individuals and teams, or between teams, to 15.6% of adverse events. Similarly, many others have argued for the importance of intra- and interdisciplinary cooperation, communication and team-based education, training and work in efforts towards improving patient safety (Barach & Small, 2000b; Carter, Garside & Black, 2003; Clemmer, Spuhler, Berwick & Nolan, 1998; Irvine, 1999; Leonard, Graham & Bonacum, 20i04; Rafferty, Ball & Aiken, 2001).

This focus on the interactive nature of systems and clinical work highlights the potential for an understanding of patient safety in terms of the interactions within the clinical work environment. Strauss et al. (1963) for example, outlined relationships between daily clinical practices and the abstracted structure of rules and policies in a hospital. They pointed out that "one might maintain that no one knows what the hospital 'is' on any given day unless he has a comprehensive grasp of what combination of rules and policies, along with agreements, understandings, pacts, contracts, and other working arrangements, currently obtains" (Strauss et al., 1963, p. 164). The also suggested that such understandings of the system, what they called "order", are iteratively created anew following any changes. Basically, they suggested that a hospital operates as a result of negotiations and interactions at the local, daily level of clinical practice, as well as negotiations and interactions between the local and the broader, more formalised rules and policies of the hospital or health system.

As such, if systems within hospitals are manifest through interaction and subject to such constant re-creation, it follows then that patient safety might not be "a conduct that can be fully mapped out a priori" (Iedema, Jorm, Braithwaite et al., 2006, p. 1210). Instead, what is understood as safety depends on contextual factors and clinicians' interactions with each other and their environment. This new perspective on systems and safety focuses attention on the everyday goings on of clinicians and their practices, and suggests that clinicians themselves define errors (Bosk, 2003) and create safety (Cook, Render & Woods, 2000). This, as Cook et al. (2000) pointed out, goes against the previously described understanding of safety as something that can be designed into a stable and objective system, to prevent or mitigate human error when it inevitably occurs[4]. Instead, the emphasis is on clinicians as producers of safety, in their everyday practices, in their negotiations and interactions with one another and with the formalised

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[4] See Helmreich (2000) and Nolan (2000) for examples.

norms and technologies of their work environment. As Gherardi and Nicolini (2000a) argued:

> The meaning of safety is given in its consequences, out of joint practices in a workplace community, not in its a priori analytic specification. Communities construct safety from the heterogeneous materials of cultural referents, artifacts, rules, and constraints that originate inside and outside the formal boundaries of the organization. (Gherardi & Nicolini, 2000a, p. 16)

This alternative perspective does not denigrate the impact or utility of formalised 'systematic' approaches to patient safety. Instead, it explores how such formalised approaches manifest in day to day practice, with emphasis on health care professionals as the key actors in not only determining what safety means in their particular contexts, but also in delivering safe practice at the frontline of clinical care. This perspective has been taken up by researchers in safety who have focused on studying practices *in situ* (Gherardi & Nicolini, 2000a, 2000b, 2002a, 2002b; Gherardi, Nicolini & Odella, 1998b; Mesman, 2009) and who have highlighted the benefits of such a perspective, including that of allowing for a positive focus in a field arising from a very negatively-framed problem. Mesman (2009), for example, argued that we should examine "not only what is missing, the so-called gaps in the safety net, but also the fibre of the safety net itself" (p. 1706).

> One should not just focus on the explicit, intentional or formal safety measures that make up the constituents of patient safety, such as protocols and technological equipment designs. One should also analyze the informal or implicit elements of the safety structure. Patient safety is also achieved through an unplanned, and perhaps unarticulated, set of actions and initiatives that can still be effective. (Mesman, 2009, p. 1706)

This research perspective therefore encourages us to pay attention to practices of resilience, and to develop a more complete understanding of how safety is constructed as opposed to an understanding of error alone (Mesman, 2009). Without this understanding, patient safety initiatives may potentially inhibit or harm existing but unknown practices that deliver safety, or at the very least, fail to harness them.

Summary of patient safety

This brief overview of the recent discourse on patient safety has mentioned some of the key tensions and issues that underlie research and practice in this area. First, the rhetorical distinction between individual and system culpability for adverse events and error. Second, the dissociation between systems-based approaches towards improvement and change and individuals' ongoing activities. Third, the consideration that the locus of safety is held neither in individuals nor systems separately or alone; instead, it is located in practice, in the interactions between individuals as well as in the interactions between individuals and systems, with individuals as part of systems. This perspective underlies both the theoretical and methodological frameworks of this thesis – to look for safety in clinical practice, by examining how clinicians navigate the formal structures of safety within the indeterminacy and fluidity of their work environment.

The next section of this chapter provides an overview of formal accountability, as a concept parallel and central to the field of patient safety. I describe a similar trajectory, from a past focus on individual and peer-regulated accountability of health care professionals, to the current systems-focused and formally-regulated accountability of monitoring systems, accreditation, procedures, rules and guidelines. I present literature that highlights tensions similar to those identified earlier, between systemic forms of accountability and local contexts of practice, and describe these tensions through challenges to the authority, validity and applicability of these formal accountabilities.

2.3 On accountability

A brief history

Sharpe (2000) provided a useful account of the history of accountability in medicine, from the early 19th century to the beginning of the 21st century. She began from the time of the "gentleman physician" (p. 29), when gentlemanly honour was ascribed to the notion of accountability as a matter of individual conscience. In other words, physicians accounted primarily to themselves in processes of private reflection and self-evaluation. Sharpe also observed however that "shifts in theories of health and illness are always accompanied by new forms of accountability" (p. 33).

In 1917, with the rise of biomedical science as a backdrop, Ernest Codman caused a stir by arguing for medical practice to be treated as a science. That is, he called for medical treatments to be evaluated through the documentation and follow up of records of patient care (Codman, 1917/2001; Sharpe, 2000). In his own words, “Medicine is surely enough of a science to enable us to use the great principle of comparison as in other sciences. Records we must have, clear, honest records, no matter how brief, if they fearlessly face the facts. If we do this, our records will be of more scientific value than at present” (Codman, 1917/2001, p. 72). He proposed to use patient records “as data to form a basis for study to increase the efficiency of the hospital”, noting that “we must confess that it has been the duty of no person or department in most hospitals to inquire into the efficiency of treatment” (Codman, 1917/2001, p. 72).

Codman’s ideas were unpopular and certainly not widely adopted at the time nor even several decades later[5]. Nevertheless, he is considered a pioneer in both proposing, as well as applying to his own practice, the notions of documentation, comparison, evaluation, and visibility of practice for improvement and efficiency (Sharpe, 2000; Neuhauser, 2002). In fact, his ideas mirror many of the principles that have more recently taken shape around the concept of accountability in the context of the patient safety and quality improvement movements (Donabedian, 1988; Neuhauser, 2002; Sharpe, 2000).

The more recent focus on accountability in health care however has been attributed not only to rising concern about patient safety (Irvine, 1999; Sharpe, 2000, 2004; Wiener, 2000; Woods, Patterson & Cook, 2007), but also to various concomitant changes, including the decreasing insularity of the medical community (Sharpe, 2000; Wiener, 2000), the growth of the nursing profession (Wiener, 2000) increasing advocacy for patients’ rights and self-determination in health care decision-making (Emanuel & Emanuel, 1996; Sharpe, 2000), and the reform and restructure of health care systems as corporations and industries, with quality assurance and improvement processes and more economic models of accountability (Allen, 1998; Donabedian, 1988; Emanuel & Emanuel, 1996; Sharpe, 2000; Wiener, 2000). These factors culminated in a public desire and expectations for health care organisations and governments to account more *visibly* and *publicly* for their performance, representing a shift away from self-regulation

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[5] For example, Mizrahi (1984) and Bosk (1979) studied physicians and surgeons respectively, and both concluded that their participants considered professional responsibility primarily as a matter of private accountability solely to themselves.

to external and more formal regulation for health care professionals (Irvine, 1999; Sharpe, 2000, 2004).

In turn, this has manifested in processes of visibility through checking, such as audit, accreditation and continuous monitoring of clinical outcomes (Degeling, 2000; Lambert, 2006; Power, 1997; Quick, 2006; Wiener, 2000), with the corresponding setting of formal standards to which health care professionals are to be held accountable.

2.4 Systems of accountability

Looking briefly in the wider literature, we find that the recent trend in calling for accountability is not limited to the healthcare professions, and has been invoked as a kind of catch cry solution to address concerns in multiple private and public sectors such as education, academia, politics, business and climate change (Janasoff, 2003; Lerner & Tetlock, 1999; Michael, 2005; Strathern, 2000).

> We live in the Age of Accountability - or at the least that is what it feels like if you are engaged in or subject to any form of management, and that includes a growing number of us in the public, private and nonprofit sectors. (Dubnick, 2007, p. 3)

Similarly, Power (1994) described an ‘audit explosion’ that occurred in Britain in the 1980s and 1990s, which he suggested was a result, amongst other reasons, of changes to the idea of government, fiscal pressures, preoccupations with quality assurance, “the rise in human-made risks” (p. 13) and “public grievances against experts and professionals” (p. 13). Power (1997) also differentiated between ‘normal’ exchanges of accounts and the motivation to audit, to explicitly check accounts, in situations of uncertainty:

> It is through the giving and monitoring of the accounts that we and others provide of ourselves, and of our actions, that the fabric of normal human exchange is sustained. These accounts only become objects of explicit checking in situations of doubt, conflict, mistrust, and danger. Only then do we check restaurant bills carefully, make sure that the children have put on their car seat belts, see whether the ball was over the line on the action replay, go to the reference library, seek a second medical opinion, ask independent witnesses what really happened, take up

> references for a prospective employee, and even hire private detectives. (Power, 1997, p. 1)

Interestingly, one aspect of these ‘new’ widespread processes of checking is that they are often characterised as involving the evaluation of systems of control or regulation, rather than directing attention to frontline activities. Power (1994), for example, noted that “audits generally act indirectly upon systems of control rather than directly upon first order activities. As organisations have grown in scale and complexity direct forms of inspection have become too expensive” (p. 15). Similarly, Wanna, Ryan and Ng (2001) charted the trajectory of audit within the Australian National Audit Office, and noted that from the 1960s to the 1980s,

> The focus of audit during this period was on the verification of the operation of the internal control systems. Due to the fact that few detailed transaction-based audits were carried out under this approach, audit opinion was formed through analysis, investigation and inquiry of *accounting systems* [emphasis added]. (p. 202).

This change away from individual to systems-based auditing was primarily attributed to the increasing complexity of what was to be audited and the limitations of resources available to carry out the audits (Wanna et al., 2001). Returning to health care, Braithwaite, Healy and Dwan (2005), promoted the similar notion of meta-regulation as one of a number of styles of regulation to govern health safety and quality reform, proposing it as a way to synthesise both internal and external perspectives. They described it thus:

> Internally oriented reformers for health safety and quality are (…) too micro in their orientation, and the external reformers (especially the health economists) are too macro. What is needed is more micro-macro synthesis. Regulatory theory provides an alternative path to such a synthesis, particularly through the idea of meta-regulation. (…) meta-regulation is about macroregulation of micro-regulation, and the external regulation of internal regulation. (Braithwaite et al., 2005, p. 24)

In other words, “meta-regulation involves an external regulatory body ensuring that health care providers implement safety and quality programs and practices” (Braithwaite et al., 2005, p. vii). In following these characterisations of accountability (as formalised audit and regulation), we find a similar theme with our earlier discussion of patient safety, namely a shift in attention away from individual and local frontline activities to more distal, systems-based approaches intended to control or impact upon the former. As an example of the rationale behind such approaches, O'Leary (2000) explained how accreditation, an audit strategy, was anticipated to impact on patient outcomes:

> It begins with the setting of contemporary standards that address important organisational functions - for example, patient assessment, medication usage - and then encourages organisations, through the awarding of accreditation, to comply with these standards. The operating thesis is that if organisations are doing the "right things right", as reflected in the standards, then errors and adverse outcomes are less likely to happen than if there were no such standards. (O'Leary, 2000, p. 728)

This quote reflects a distinction between the *programmatic* level of accountability which refers to "the ideas and concepts which shape the mission of the practice and which, crucially, attach the practice to the broader policy objectives which exist in the political sphere" (Power, 1997, p. 6), and the *operational* level, where "the programmatic concept is then implemented with concrete tasks, routines, and checklists" (Michael, 2005, p. 100). I focus now on the operational level which involves the setting and distribution of standards and the implementation of processes, whereby the rhetoric of systemic accountability is operationalised and intersects directly with practice.

2.5 Standard setting – Evidence based medicine

Any discussion of standard-setting in clinical practice in recent years is unavoidably a discussion of Evidence Based Medicine (EBM) (Timmermans & Berg, 2003), commonly defined as "the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients" (Sackett, Rosenberg, Gray, Haynes, & Richardson, 1996, p. 71). Lambert (2006) noted that:

> [EBM] exemplifies, within the particular domain of clinical medicine, the kind of 'audit culture' that has become characteristic of all State monitored public sector

> institutions as public trust in authority declines and the perceived need for transparency and accountability increases. (Lambert, 2006, p. 2640)

Lambert (2006) also pointed out that “there were good reasons for EBM’s proponents to attempt to shift medical practice towards a more ‘science-based’ approach”, referring to the increasing recognition “within and outside the profession that doctors are not infallible and that many medical interventions have historically been based on tradition or preference, unsupported by any evidence of benefit other than the conviction of the administering practitioner” (p. 2634). The concept of ‘best evidence’ however, is not as broad and self-evident as the previous definitions might imply (Sehon & Stanley, 2003). Goldenberg (2006) noted that “the evidence-based medicine (EBM) movement purports to eschew unsystematic and ‘intuitive’ methods of individual clinical practice in favour of a more scientifically rigorous approach,” (p. 2621) echoing Codman’s (2001) arguments made nearly a century earlier. Pope (2003) points out, however, that the notion of using scientific research in medicine is not new, and that EBM may be seen instead as a social movement that “has organized to ensure that a particular (explicit) form of evidence, epitomized by the randomized controlled trial, is incorporated in medicine” (p. 269).

As an example of how EBM has been promoted not just as a standard in individual clinical practice but also within the wider discourse of health care improvement, Batalden and Davidoff (2007) stated that “if healthcare is going to benefit fully from the science of disease biology, we need to be sure that the changes we make systematically incorporate generalisable scientific knowledge,” (p. 2) which they describe as knowledge “constructed from empirical studies that work to control context as a variable, thus minimising or eliminating its effect on what is being studied” (p. 2).

Batalden and Davidoff (2007) proposed five different ‘knowledge systems’ which would combine in a linear formula to produce improvement (see Figure 1). Firstly, the aforementioned ‘generalisable scientific knowledge’(1) is ‘added’ to knowledge of the local context in which improvement is to be effected (2), through knowledge about applying and adapting the generalisable evidence to particular contexts (4). This then leads, through the political and managerial knowledge of how to ‘make things happen’ (5), to improvement, identified using knowledge of performance measurement (3).

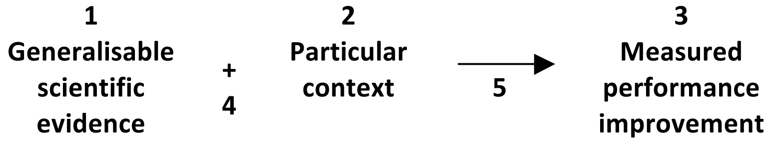

Figure 1. Formula by Batalden and Davidoff (2007, p. 2) illustrating the way in which the different knowledge systems they propose can combine to produce improvement.

This formula and the description of its elements contain an implicit assumption, that de-contextualised scientific evidence can be used as a basis for informing change in different contexts despite explicitly lacking information about the effects of different contexts on this evidence (Berwick, 2008). Additionally, knowledge about specific contexts, described as "the identity of local care settings—their processes, habits and traditions," (Batalden & Davidoff, 2007, p. 2) is cast as a separate and discrete body of knowledge. The two are bridged, in this formula, through knowledge about applying the de-contextualised evidence to different contexts, "including standardisation, forcing functions, academic detailing, and so on" (Batalden & Davidoff, 2007, p. 2), which seem to articulate only *unidirectional* relationships between the scientific evidence and local contexts. This conception of quality improvement and EBM, published recently in a patient safety journal, highlights the perceived detachment of the distilled evidence that is currently valued and promoted as the basis for decision-making and improvement, and the relatively passive characterisation of the local clinical contexts in which improvement is to occur.

2.6 Guidelines as standards of practice

As above, these conceptualisations follow the pattern of a focus on distal, systems-based approaches intended to control or impact unidirectionally upon local frontline activities. To understand how this plays out in practice, I turn our attention to the 'coalface' of clinical practice, where EBM is perhaps most commonly manifest through the implementation and use of guidelines which distribute "proven diagnostic and therapeutic knowledge" (Timmermans & Berg, 2003, p. 3), developed by 'expert committees' that sift through the scientific literature, to offer "coherently sequenced recommendations based on the best available evidence aimed at everyday decision-making situations" (Timmermans & Mauck, 2005, p. 18). I use the term 'guidelines' here also as an umbrella term referring to standards of practice, procedures, protocols, policy and other "tools that structure action by providing a written guide for what to do in a specific, circumscribed situation" (Berg, Horstman, Plass & van Heusden, 2000, p. 787)[6].

The introduction of guidelines has been attributed to the desire for risk and resource management, clinical practice standardisation and the more rapid incorporation of research evidence into practice, in the name of cost effectiveness and quality improvement (Lawton & Parker, 1999; Timmermans & Mauck, 2005). Notwithstanding these positive intentions and the finding that the principles of EBM have largely been accepted as a "new orthodoxy – at least outwardly" (Dopson, Locock, Gabbay, Ferlie and Fitzgerald, 2003, p. 319), Lawton and Parker (1999) reviewed a number of studies investigating the use of guidelines in practice, and concluded that "compliance cannot be assumed" (p. 354), guidelines do not seem to have a rapid effect on behaviour, and moreover are generally considered a "contentious issue" (p. 354). Likewise, McGlynn et al. (2003) produced an oft-cited statistic that only 54.9 percent of patients in their study were receiving recommended preventative health care, a calculation based on indicators that were developed from national guidelines and the scientific literature. Timmermans and Mauck (2005) also reviewed a number of studies, and cited a range of adherence to guidelines from about 50 to 67 percent.

Dopson et al. (2003) discussed this discrepancy, commenting that:

> It has been assumed that evidence-based ways of thinking and behaving would diffuse in a linear and rational way, even in the face of clear empirical evidence that diffusion of specific pieces of research evidence was not happening in that way. Yet paradoxically, despite this being precisely the problem that led to the need for EBM, policy makers and EBM enthusiasts alike have frequently taken a somewhat simplistic view of the implementation gap that they aim to address[7]. (Dopson et al., 2003, p. 317)

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[6] Berg et al. (2000) noted that "although many authors would claim that there are relevant differences between 'guidelines' and 'protocols', for example, the terms are used interchangeably and there is no general agreement on the relevance or clarity of the claimed differences" (p. 787).

[7] Interestingly, Timmermans and Mauck (2005) noted that one consequence of the sudden proliferation of EBM and guidelines has been a range and variability in the guidelines produced that threaten the uniformity promised by the process. In fact, in much the same vein of thought, we now see an iterative and recursive call for the development of "guidelines for clinical guidelines", in order to standardise their production (Shaneyfelt, Mayo-Smith & Rothwangl, 1999).

Dopson et al. (2003) elaborated on this, noting that alongside the improvements in clinical outcomes anticipated, EBM also allows for more managerial and political intervention in medical practice, as a political tool to respond to calls for accountability and to improve the public's perceptions of health services. This shifts EBM away from being a primarily medically-driven movement, exposing it to conflict between the sometimes competing interests, values and identities of clinicians, managers and politicians (McDonald, Waring & Harrison, 2006). Furthermore, they noted the contested notion of evidence amongst practitioners, an observation also made by Pope (2003), that "much of the resistance to the EBM movement is located around its specification of evidence – and therefore the knowledge base of medicine – as rational/technical rather than contingent/experiential" (Pope, 2003, p. 269). Finally, Dopson et al. (2003) pointed out that the importance of local contextual factors have been underestimated in guideline implementation, and when finally investigated, these factors are studied inappropriately, using the biomedical paradigm of isolation and de-contextualisation in tackling perceived organisational and behavioural 'barriers' to EBM implementation.

These three issues may guide us in understanding the problematic uptake of guidelines in practice despite their positive aims. First, the perceived threats to clinician autonomy from the new authority of EBM and guidelines. Second, the contentious nature of the 'evidence' underlying guidelines and the implications for their authority; and third, the disjuncture between guidelines and the local contexts in which they are to be implemented and used. We are reminded at this point of Codman's (2001) early arguments for systematic and scientific evaluation of medical practice, and of the unpopularity of those ideas in his time (Sharpe, 2000). One of the main reasons put forward for this unpopularity was that they challenged physician autonomy by proposing that "not only was a physician's performance to be judged, it was to be judged by others than himself and compared with the performance of his peers" (Sharpe, 2000, p. 35). Today, as before, the means (both the methods and the norms) by which these judgments are to be made are just as significant and therefore rightly subject to scrutiny and debate. In the following sections, I discuss the issues of autonomy, authority and applicability in more detail, to examine what the literature suggests are some of the effects on frontline activities of the current emphasis on distal, systems-based approaches.

Guidelines as challenges to autonomy

As Berg et al. (2000) explained:

> Guidelines aim at increasing the base of objective evidence underlying health care work, at increasing the 'transparency' of medical practice, at reducing unnecessary practice variations and so forth. As such, they may strengthen a profession's status by increasing, for example, its perceived scientific character. They do this, however, by enhancing transparency (and thereby facilitating external influences), reducing the subjective aspects of health care work and by reducing the maneuvering room of individual professionals and clients. (Berg et al., 2000, p. 767)

Berg et al. (2000) highlighted the tension between the desire for the status and authority conferred by a more scientific image (with its emphases on objectivity and standardisation), and the dissatisfaction in relation to the costs (in terms of the de-valuing of subjective expertise and threats to autonomy) undertaken in consequence. Placing this tension in context:

> Whenever an expert community comes under increased outside pressure, the legitimacy of personal expertise that typifies disciplinary objectivity erodes, and the expert community is forced to transfer their legitimacy to independently verifiable rules and procedures. When a profession becomes vulnerable, merit shifts from 'character' to 'method'. (Berg et al., 2000, pp. 784-5)

As such, this new ‘external’ resource of legitimacy is seen to threaten to undermine medical identity by aligning medical professionalism with adherence to formal rules and thus restructuring its traditional basis of authority (McDonald et al., 2006). This concern has been expressed in the medical literature as criticism of a ‘cookbook’ approach to medicine, where guidelines, protocols and the like were seen as “recipes for a mindless cook” (Cutler, 1998, p. 34). Along the same lines, the promulgation of guidelines has also been accused of inhibiting the care of patients as diverse and specific individuals, and of representing an intrusion of unnecessary bureaucracy and external control into clinical practice (Berg et al, 2000; Timmermans & Berg, 1997; Woolf, Grol, Hutchinson, Eccles & Grimshaw, 1999). The following quote comes from an editorial in the British Medical Journal that attempted to assuage this widespread view by declaring that EBM outcomes should be subordinate to individual clinical expertise.

> Evidence based medicine is not "cookbook" medicine. Because it requires a bottom up approach that integrates the best external evidence with individual clinical expertise and patients' choice, it cannot result in slavish, cookbook approaches to individual patient care. External clinical evidence can inform, but can never replace, individual clinical expertise, and it is this expertise that decides whether the external evidence applies to the individual patient at all and, if so, how it should be integrated into a clinical decision. Similarly, any external guideline must be integrated with individual clinical expertise in deciding whether and how it matches the patient's clinical state, predicament, and preferences, and thus whether it should be applied. (Sackett et al., 1996, p. 72)

Similarly, Hurwitz (1999) stated that in the UK, “rigid, uncritical adherence to guidelines is not the formal, administrative or managerial expectation in the NHS,” (p. 663) and that some measure of interpretation is always called for in translating guidelines into action. Lambert (2006) pointed out however, that “in reality, the establishment of clinical protocols to *enforce* [emphasis added] ‘best practice’ is undoubtedly one manifestation of EBM” (p. 2637). Berg et al. (2000) sounded a similar note, pointing out that:

> Although guidelines usually come with the disclaimer that professionals can disregard them when they have good reasons to do so, they remain a direct intrusion into that professional's jurisdiction. A guideline, after all, is the ultimate bureaucratic instrument: it explicates what to do when, in what way and with what means. It categorises patients, each with their own specific stories, into distinctive, homogeneous categories to ensure uniform treatment of 'equal' cases. (Berg et al., 2000, p. 766)

The above quotes reflect clearly the view that guidelines are convincingly seen to challenge clinical autonomy and individualised patient care, by suggesting that there is ‘a right way’ of doing something, that is determined, in part, away from individual clinicians' expertise[8] and their patients' experiences. Questions then arise about how clinicians might be dealing with this new voice of authority within their jurisdiction.

Lawton and Parker (1999) described data from focus groups, of clinicians expressing concerns about inflexibility in guidelines and questioning their validity for every situation. Allen (1998) provided some empirical support to these criticisms, finding that the nursing record at a hospital in her study was being used by hospital managers as a tool for quality assurance, "which had the effect of indirectly controlling nursing work through standard-setting" (p. 1227). For example, she observed that "nurses felt pressurised to routinely include certain problems on patient care plans in order to satisfy the quality assurance programme, irrespective of whether they had any relevance to the patient concerned" (Allen, 1998, p. 1227).

Adding further to concerns about the inappropriate authority and rigidity of guidelines, McDonald, Waring and Harrison (2005) addressed the issue of patient safety directly, drawing from their interview data to suggest that if safety and risk management is framed in terms of protocol adherence, then clinicians may feel particularly vulnerable to criticism if they speak out against protocols, and those who decide not to may avoid blame if anything goes wrong. Similarly, they described data showing that when protocol deviation is seen as risky behaviour attracting blame, then such behaviours may be less likely to be reported and thus become less visible, with implications for maintaining protocols that may need to be changed (McDonald et al., 2005). Similarly, Lawton and Parker (2002) found that healthcare professionals in their study were reluctant to report behaviour that had negative consequences for patients when that behaviour demonstrated either protocol compliance or an improvisation in the absence of a protocol. They too highlighted worrying implications, nothing that "without informal reports of situations where compliance with a protocol has led to a bad

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[8] The threat to autonomy in this discussion is conceived mainly for individual practitioners rather than the medical profession as a whole. For example, Berg et al. (2000) noted that the autonomy of physicians as a group may actually be protected and bolstered if they are able to make their own guidelines. In other words, if physicians are following standards and using guidelines created by other physicians, then "the medical profession maintains its *overall* position by reinforcing a stratification *within* the profession" (Berg et al., 2000, p. 767). Lambert (2006) made a similar point, that "EBM actually constitutes a retrenchment of, rather than an assault on, clinical medical autonomy via its relocation from individual doctor to collective professional body" (p. 2640). Waring (2007a) likewise argued that, "the future of medical regulation and also medical/managerial relations may not be characterised by expanding the domains of management over medicine, but rather expanding the domains of management within medicine." (p.164)

outcome for the patient, efforts to improve existing protocols may be hampered" (Lawton & Parker, 2002, p. 17). They also noted that "improvisations with poor outcomes are also unlikely to be reported, which means that the organisation will be unable to learn from experience" (Lawton & Parker, 2002, p. 17).

The picture is not quite so simple however, as Lawton and Parker (1999) also described data in which clinicians spoke of guidelines positively when allocating them to supporting roles, such as during situations when junior clinicians were insufficiently experienced and needed a guide, or when they were seen to be particularly valid, for tasks with little variation and 'good evidence' that a particular way of doing things would be beneficial and harmful otherwise. Others have also argued that when clinicians deviate from protocols about which they have been well-educated, that are well-established and also engineered to be easily performed, such as hand-washing rules, these deviations may quite reasonably be seen as violations of safety, and deserving of appropriate blame and punishment (Goldmann, 2006; Wachter & Pronovost, 2009). Similarly, the authority of protocols has been described to be useful by clinicians who were able to use them as support when challenging the practice of a colleague, or changing the practices of older staff members (Lawton & Parker, 1999).

The literature seems to be suggesting that guidelines in and of themselves are not the main concern for clinicians, especially when they are seen to be valid, or to play a supporting role. Rather, clinicians are concerned with what they view as inappropriate expectations for their use, whether in promulgating overly homogenous care for a heterogeneous patient population or in assuming inappropriate authority and rigidity, especially when seeming to surmount clinicians' own knowledge and decisions in ambiguous contexts.

In contrast to these concerns, Berg et al. (2000) presented data of insurance physicians positively appraising a set of guidelines that engaged with their professional judgement. They observed that "the guidelines were seen to leave a space for interpretation and judgement that could only be filled by the specific knowledge and experience of an insurance physician" (Berg et al., 2000, p. 775). Not only did these guidelines support physicians' professional autonomy, but they were themselves also easier to follow, functioning "as a *resource* much more than as a *restraint*" (Berg et al., 2000, p. 777). This finding seems to suggest a kind of paradox, that guidelines, which presently derive authority from the objectivity and universality of their supporting evidence, may actually be more effective and useful when engaged with local specificities in their use. The next section addresses this assumption of authority that guidelines both carry and confer upon those who use them, by delving into the contested nature of the ‘evidence’ that is taken to underlie these guidelines.

Guidelines as authority

The ‘objectivity’ of the scientific evidence that is valued and promulgated through EBM has been brought into question from several perspectives. For example, taking an Actor Network Theory perspective, Berg et al. (2000) explained that objectivity is “a term that means rather different things in different times or situations”, with “notions such as ‘empirical reliability’, ‘procedural correctness’, ‘emotional detachment’, ‘being true to nature’, [and] ‘being without perspective’ (…) all intermingled in our current usages, which are epistemological as much as moral” (pp. 767-768). They also pointed out that “the objectivity of a fact or activity is no longer seen as a quality of that individual fact or act. Rather, it is a quality of the historically and locally specific *network* to which this ‘fact’ is attached” (Berg et al., 2000, p. 768). Right from the start, therefore, we see that objectivity, despite its currently furnished attributes of independence, universality and certainty, has itself been thrown into question as a mutable and context-dependent construct.

Following that, Goldenberg (2006) offered a critical appraisal of the assumption of objectivity in EBM and its consequences, reminding us of the work of post-positivist, feminist and phenomenological philosophers and researchers who have demonstrated that ‘scientific evidence’ is never entirely ‘objective' (according to our present understanding of objectivity). She contended that “rather than empirical evidence *increasing* certainty by factoring out the subjective features of everydayness that bias our understanding of things, the constructs of ‘objectivity’, ‘universality’, and ‘value-free’ instead *obscure* the subjective elements that inescapably enter all forms of human inquiry” (Goldenberg, 2006, p. 2626).

> EBM’s ability to guide healthcare decision-making by appealing to “the evidence” as the bottom line is attractive to many because it proposes to rationalise this complex social process. Yet it does so through the positivistic elimination of culture, contexts, and the subjects of knowledge production from consideration, a

> move that permits the use of evidence as a political instrument where power interests can be obscured by seemingly neutral technical resolve. (Goldenberg, 2006, p. 2622)

Several researchers have backed up these concerns, finding evidence of financial (industry) bias in medical research, and describing the increasing power of financial interests to shape medical practice (De Vries and Lemmens, 2006; Sismondo 2008a, 2008b). De Vries and Lemmens (2006) noted, ironically, that EBM has become “a tool of industry interests” (p. 2697) by harnessing the scientific status of randomised controlled trials to mask the financial interests of those who conduct these studies. They showed that:

> The “scientific process” – often heralded as a fundamental part of EBM – is capable of being used as part of a marketing campaign. When commercial interests influence the design of the research protocol, the selection of research subjects, the conduct of the trial, the collection of data, the interpretation of results, and the publication of the outcome, there is good reason to worry about the integrity of the process that produces medical evidence. (De Vries & Lemmens, 2006, p. 2698)

De Vries and Lemmens (2006) also addressed the issue of cultural bias in medical research through an examination of how cultural differences in views about home birth have impacted on this area of research in the Netherlands. They found that:

> The co-existence of two sciences of obstetrics in the Netherlands demonstrates how ideology about the “best” way to give birth affects both the generation and interpretation of the evidence that is so vital to EBM. Research by advocates of home birth supports the safety of birth at home while research done by those opposed to domiciliary deliveries provides evidence that the practice is unsafe. (pp. 2703-4)

De Vries and Lemmens (2006) argued that their particular examples showed mainstream obstetric science actually following mainstream obstetric practice, rather than the other way around as it is normally characterised in EBM. In their words, “the assumed relation between science and practice is turned on its head: practice is not based on science; rather science is based on practice” (De Vries & Lemmens, p. 2704).

> A patient and expectant approach to birth in the clinic, where all is considered normal until proved otherwise, produces a science that proves intervention to be unnecessary. Alternatively, an aggressive approach to birth in the clinic, where birth is regarded [as] normal only in retrospect, generates a science that demonstrates the need for monitoring and intervention. (De Vries & Lemmens, 2006, p. 2704)

Thus we find that the objectivity, independence, universality and self-evidence of the scientific evidence underlying EBM to be philosophically and empirically disputed, challenging the authority of guidelines based on these assumptions. In doing so, the intention is not to discredit and dismiss them and 'throw the baby out with the bathwater'. Instead, this prepares us to begin engaging with the multi-dimensionality of EBM and guidelines, and how they might actually intersect with practice, keeping in mind the established views of how they should operate.

Earlier, in discussing the intended functionality of EBM, I noted the dissonance of using contextually-removed 'evidence' to inform quality improvement in various health care contexts, when it explicitly lacks information about how different local contexts might interact with this evidence. In the next two sections, I address this issue of contextual detachment, which, I argue, underlies the problematic articulation of EBM with clinical practices in local contexts. First, I review the applicability of the scientific evidence that is promoted to inform guidelines, and, in the section that follows, I review the applicability of EBM methodology for studying local practice improvement and behavioural change. In these sections, I argue that the philosophy underlying EBM is not always appropriate, and is in fact insufficient for both governing and understanding clinical practices and practice improvement.

The applicability of EBM and guidelines

It may be useful to reiterate here the functional definition of guidelines in this literature review, as an umbrella term referring to those "tools that structure action by providing a written guide for what to do in a specific, circumscribed situation" (Berg et al., 2000, p. 787). As noted earlier, 'guidelines' as a term here also refers to protocols, procedures, pathways, policies and other such tools of accountability that formally model aspects of clinical practice not only as prescriptive guides to action but also as standards of practice.

Earlier, I examined the literature on the research methodology underlying the problematic assumptions of objective *authority* in these guidelines. Here, I examine the *applicability* of these research methods and their findings, and the guidelines that result in clinical practice. Dopson et al. (2003) set the stage, pointing out that:

> The day-to-day rhetoric of EBM accepts a high degree of predictability and generalizability of well-founded research evidence. It relies on the assumption that systematic review of randomized trials will provide reasonable certainty about what works and what does not work, and that this will be generally true across all relevant patients. (Dopson et al., 2003, p. 324)

Sackett et al. (1996) provided an example of this rhetoric:

> Because the randomised trial, and especially the systematic review of several randomised trials, is so much more likely to inform us and so much less likely to mislead us, it has become the "gold standard" for judging whether a treatment does more good than harm. (Sackett et al., 1996, p. 72)

In the section above, I reviewed the work of Goldenberg (2006) and De Vries and Lemmens (2006), who challenged the assertion that such evidence is ‘less likely to mislead us’. Whether or not it is ‘much more likely to inform us’, however, is also in question. The main concern was described succinctly by Woolf et al. (1999), who pointed out that “scientific evidence about what to recommend is often lacking, misleading, or misinterpreted. Only a small subset of what is done in medicine has been tested in appropriate, well designed studies” (p. 529).

The contention therefore is not that scientific evidence cannot or does not inform medical practice, but rather that it does not inform *all* aspects of medical practice. Evans (1995) offered a useful analogy for this concern:

> There is a fear that in the absence of evidence clearly applicable to the case in hand a clinician might be forced by guidelines to make use of evidence which is only doubtfully relevant, generated perhaps in a different grouping of patients in another country at some other time and using a similar but not identical treatment. This is evidence-biased medicine; it is to use evidence in the manner of the fabled drunkard who searched under the streetlamp for his doorkey because that is where

> the light was, even though he had dropped the key somewhere else. (Evans, 1995, p. 461)

Evans (1995) thus pointed out that even if there is scientific evidence available, it may not be appropriate. Similarly, Van Spall, Toren, Kiss and Fowler (2007) warned that “even the most well-designed clinical trials are of limited use to clinicians if the results have poor external validity and are not generalizable to the patient population for whom the intervention may be applied” (p. 1233). A number of studies have highlighted under-representation of parts of the patient population in clinical trials, including a study by Masoudi et al. (2003), who found that no less than 75% of hospitalised older patients would have been ineligible for inclusion in three landmarks trials that represent “contemporary evidence based heart failure treatment” (p. 255). Other studies found under-representation of patients over 65 in cancer treatment trials (Hutchins, 1999), under-representation of women and patients over 75 in trials of myocardial infarction (Lee, Alexander, Hammill, Pasquali, & Peterson, 2001), and under-enrolment of women in mixed-sex trials of cardiovascular disease (Harris & Douglas, 2000).

Van Spall et al. (2007) researched the exclusion criteria applied among the randomised controlled trials (RCTs) published in major medical journals, and found “frequent exclusions of children, the elderly, women (particularly those lactating, pregnant, or able to become pregnant), patients taking common medications, and those with common medical comorbidities” (p. 1237). They noted that such exclusion criteria could have been pragmatic responses to the challenges of high costs, limited funding, concerns about participant safety and regulatory restrictions faced by designers of clinical trials. Nevertheless, they also found that “reasons for exclusions were frequently not justified in the context of individual RCTs" (Van Spall et al., 2007, p. 1237), and warned that this could leave excluded populations susceptible to harm from “inappropriate generalization of trial results” (p. 1237). Van Spall et al. (2007) cited a few cautionary examples, including “a dramatic increase in the rates of hyperkalemia-associated morbidity and mortality following publication of the Randomized Aldactone Evaluation (RALES) trial, largely attributed to the application of trial results to populations that were excluded from the RCT” (pp. 1237-1238), as well as a “long-standing prescribing uncertainty for blacks with hypertension due to limited RCT generalizability” (p. 1238).

‘Gold standard’ evidence, in other words, is not necessarily generalisable, nor is it always “much more likely to inform us” (Sackett et al., 1996, p. 72). It may also be the case that generalisability is not always an appropriate aim in research practice, such as when undertaking to study practices of safety improvement.

The applicability of “gold standard” evidence in safety research

Mol (2006) noted that the clinical trial has become “the dominant style of public accountability in health care—not just for drugs but for *just about any kind of intervention* [emphasis added]” (p. 406). She also argued that “however well clinical trials might be able to prove or disprove therapeutic claims, and however strong their credentials when it comes to seeking evidence, they have their limits when it comes to assuring good care" (Mol, 2006, p. 406). Dopson et al. (2003) made a similar point, arguing that restricting systematic reviews of organisational change to evidence based on the biomedical paradigm such as “randomized controlled trials, controlled clinical trials, controlled before and after studies and interrupted time series analyses [was] unlikely to provide reliable and helpful insights into organizational change” (p. 324).

A report prepared by Shojania, Duncan, McDonald and Wachter (2001) for the Agency for Healthcare Research and Quality in the U.S. Department of Health and Human Services can perhaps be taken here as an illustrative case. Their brief was to review the scientific literature on safety improvement practices, and develop “a compendium of evidence-based safety practices” (Shojania, Duncan, McDonald & Wachter, 2002, p. 508). They followed a hierarchy of study design with systematic reviews and meta-analyses at the highest level, followed by randomised controlled trials, non-randomised controlled trials, observational studies with controls, and at the lowest level, observational studies without controls, such as “cohort studies without controls and case series” (Shojania et al., 2001, p. 32). In introducing their method of review, Shojania et al. (2001) reported a “paucity of high quality evidence” (p. 2) for many patient safety practices, attributing this to the relative youth of the field, as well as methodological reasons, including the difficulty or impossibility of using double-blind study designs in evaluating ongoing interventions, the difficulty or impossibility of capturing all relevant outcomes, the multidimensionality of interventions, uncommon errors, and the difficulty of “establishing firm epidemiologic links between presumed (and accepted) causes and adverse events” (p. 2).

These factors reflect the problematic nature of the evidence that arises from such reviews and foreshadowed the subsequent criticism from patient safety notables such as Leape, Berwick and Bates (2002), who argued that the report's authors had wrongly concentrated on practices which were more to do with medical advances than practices which prevented error. Reminiscent of the analogy of the drunkard searching under the streetlamp for his doorkey (because that was where the light was shining), Leape et al. stated that "the search for formal evaluation data led the authors to concentrate not on the topics of greatest importance to improving safety, but on those for which researchers have recently produced data" (p. 504). As a consequence, many of what Leape et al. considered to be key safety initiatives and established practices, such as sponge counts in surgery and wrong site surgery prevention techniques, were "downgraded or omitted (…) because of inadequate evidence, either because of a lack of data from controlled trials or because the available data did not prove a reduction in [adverse events]" (Leape et al., 2002, p. 504).

Leape et al. (2002) went on to argue that the evidence sought in the report by Shojania et al. (2001) was "neither appropriate nor essential for all of the interventions needed to improve patient safety" (p. 505). Instead, Leape et al. (2002) recommended selecting safety practices based on the following four criteria. First, by using human factors principles "designed to compensate for human cognitive failings" including "standardization, simplification, and use of protocols and checklists" (p. 506). Second, creating practices based on making from processes to adverse events. Third, borrowing accepted practices in other industries, and finally, by using common sense, although they were careful to note that common sense alone should not be sufficient to recommend a practice. Shojania et al. (2002) responded to these suggestions by advising caution and relating an instructive anecdote of what happened in one hospital when intravenous potassium was removed from general wards to prevent deaths from iatrogenic hyperkalemia – a safety practice that had seemed "apparently straightforward" (p. 510).

> After concentrated potassium chloride was removed from the general floors of one hospital, ward personnel could not obtain potassium chloride solutions from the pharmacy quickly enough to meet their patients' needs, and some of the ward personnel began to hoard intravenous potassium chloride on their floors. Pharmacists were forced to chase after these hidden stashes and intensive care units

> (which were allowed to continue to stock potassium chloride) quickly became de facto satellite pharmacies, informally distributing potassium chloride to ward personnel from other floors in an uncontrolled and chaotic fashion. (Shojania et al., 2002, p. 510)

Shojania et al. (2002) used this example to question the human factors notion that improving safety is simply a matter of removing hazards and preventing human error. They also cited other examples of intuitive practices that have had counterintuitive results when tested in controlled studies, emphasising the importance of evaluating safety practices, even those which seem “obviously beneficial” (Shojania et al., 2002, p. 510). This reminds us that the formal evaluative methods hailed by proponents of EBM can be useful for testing assumptions and questioning otherwise unchallenged beliefs. It is interesting to note, however, that despite the significant limitations of these methods as acknowledged by both Leape et al. (2002) and Shojania et al. (2001, 2002), neither set of authors offers any alternative approaches towards the *empirical* study of safety practices, nor do they address the incapacity of their preferred methodological approaches to deliver the kinds descriptive evidence found to be so useful in the example described above.

Having challenged the appropriateness and sufficiency of ‘gold standard’ research methodologies for underwriting guidelines for safe practice and for studying safety and improvement, we recall that similar charges have been laid at guidelines themselves, as discussed in the sections above on ‘guidelines as challenges to autonomy’ and ‘guidelines as authority’. These shared criticisms may arise from having in common the characteristics of distal, systems-based approaches designed to control or impact upon local frontline activities, in what are largely imagined to be unidirectional relationships. These principles are common to all the processes of accountability that I have reviewed so far, and are representative of much of the current focus in the patient safety literature.

2.7 Summary

In this chapter, I presented an overview of the current literatures pertaining to patient safety and accountability in health care, and highlighted several of the main debates and tensions that can be found across the literatures. These issues may be summarised as the tensions arising from a kind of disconnect or distancing between local contexts and individual practitioners, and the formal, systems-based approaches that have been formulated to act upon them, in response to safety concerns.

Furthermore, in a kind of recursive fashion, these issues are also relevant to how researchers seek to study the field as a whole. In the last section especially, I showed that tensions between the local and the formal are also played out in studies of safety practices and safety improvement. In this chapter therefore I introduced these continuing themes that I will expand upon in the following two chapters. In my methodology chapter (Chapter 4) for example, I will elaborate upon the implications of these issues for my methodological framework.

In the next chapter (Chapter 3), I take a slightly different perspective on the topic by drawing on the work of researchers and thinkers who have grappled more theoretically with the problems identified above. I categorise the ‘distal, systems-based approaches’ reviewed in this chapter as *formal* accountabilities, and analyse their contested relationships with local practices through the factors of *distance*, *visibility* and *disembeddedness*. I also follow up on my discussion of the patient safety literature in this chapter, to emphasise the re-integration and interdependence of the formal and the local. Finally, in the next chapter, I introduce the concepts of *multiple* and *informal* accountabilities, to name all the terms with which I make my arguments in this thesis.

Chapter 3

Accountabilities in Practice

3.1 Introduction

In the previous chapter, I reviewed the production and use of guidelines, and their foundations in Evidence-Based Medicine (EBM) and ‘gold standard’ research methodologies. These systems of accountability face a number of shared criticisms, primarily charges of insufficiency and inappropriateness, even as they are concurrently heralded as revolutionary, urgent and necessary to counter problems of patient safety. I argued that what these systems share in common is that they are approaches designed to act ‘at a distance’ to control or impact upon local frontline activities, in what are largely imagined to be unidirectional relationships. In this chapter, I take a more theoretical approach to their analysis, and argue that these systems share as well a *formal* conception of clinical practices, ‘systematising’ them by way of modeling these practices (Coiera, 2000), in order to create formal representations that can be used across distances (Star, 1995).

For example, in the development of guidelines, not only is the guideline itself a model or ‘form’ of ‘idealised’ practice intended to impact upon a distanced context, the process itself is also an attempt to translate scientific findings from studies that have used models of medication schedules and treatment processes. Such models are representations of clinical practice, deployed at a distance from their original context. Without disparaging their utility, I suggest that the dependence of systems-based accountabilities on such distanced representations is also key to understanding their problematic implementation.

In the first two of the following three sections, I explore how these tensions arise by reviewing the theoretical literature, organised around two ‘points’ at which formal systems of accountability intersect with local practices: when formal accounts of practice are created, and when they are used. In the first section, I structure my exploration of these contested intersections around the key concepts of distance, decontextualisation, disembeddedness and visibility, in how formal accounts are *created*. In the second section, I make my argument for the conceptual re-integration of formal accountability with local practices, by exploring the *use* of formal accounts in practice. In the third section of this chapter, I introduce the concepts of *multiple* and *informal* accountabilities in practice. I propose that the contestations relating to the *implementation of formal accountabilities in practice* can be reframed instead as tensions *between accountabilities in practice*. In this chapter, I outline the new perspective on accountability and patient safety undertaken in this research.

3.2 Creating formal accounts: The problem of representation

> Traduttore, traditore. [Translator, traitor.]
>
> (An Italian adage)

On distance

Hurwitz (1999) compared the current clinical guidelines movement with a thought experiment by Plato in the 4th century BC, who explored the possibility of medicine as practiced only according to rules formed through councils by majority. Hurwitz suggested that for Plato this scenario was problematic because “the knowledge and analysis that go into the creation of guidelines are not rooted in the mental processes of clinicians, but in the minds of guideline developers *distant* [emphasis added] from the consultation” (Hurwitz, 1999, p. 661).

Distance however, is not simply problematic because it disconnects the field of practices from those who wish to act on them. Rather, in the attempt to connect the two, *representations* have to be made that traverse those distances. In the theoretical literature, we find that distance, or rather, the wish to *act at a distance* is seen as the impetus for the creation of accounts (Latour, 1987). As Robson (1992) noted:

> The more remote (…) the actor is from the setting he or she wishes to act upon, the more *translations* or *forms* of the setting ("in*form*ation") need to be mobilised in order to overcome the problem of distance. (Robson, 1992, p. 691)

Latour (1988) suggested that there are different kinds of accounts, and that action at a distance demands accounts that are particularly convincing.

> If you are in the setting x' you do not need to explain it - practice and weak accounts will be sufficient. If you are away from the setting and indifferent to it, you do not need to explain it either - practice in the new setting x will do. If you are away and simply remembering how it was when you were in setting x' you still do not need powerful explanations - story-telling will do the job much better. You start to need a stronger explanation when you are away and still wish to act on the setting x'. Why? Because you now have to be in two settings x and x' at once. You need to hold in the setting x some elements or features of x'. (Latour, 1988, p. 159)

Robson (1992) noted too that action at a distance implies the capacity, through 'strong' explanations, to influence *many contexts* at the same time. With this description, we begin to see how the results from 'gold standard' methodology and the guidelines that follow are designed to be *strong* accounts that not only represent practices, but are also expected to influence many contexts at the same time.

On decontextualisation and disembeddedness

Tsoukas (1997) described an 'information society' in terms that may sound familiar:

> The advent of telecommunication has brought about the uncoupling of space and time and led to what Thompson calls 'despatialized simultaneity': it is now possible for one to experience events as simultaneous without being close to where they happen. In a society of generalized communication the world tends to be experienced as *information,* namely as a collection of codified, abstract, decontextualized representations." (Tsoukas, 1997, p. 829)

Tsoukas' (1997) description here of information as 'codified, abstract, decontextualized representations' could also be applied to accounts, explanations, translations, forms, and, more specifically, guidelines, protocols, rules, and 'gold standard evidence'.

Furthermore, underlying the attribution of ‘strength’ to this information may be what Tsoukas (1997) called an *objectivist* view of the world:

> First, the world, social and natural alike, is conceived of consisting of sums of information (namely, sums of decontextualized representations), waiting ‘out there’ to be used by someone-this is what I have called information reductionism. Secondly, information is seen through the lenses of the conduit metaphor: information is supposed to be objective and existing independently of human agents. And thirdly, in an information-rich society, social engineering tends to be the dominant form of policy making: the world is thought to be rationally governable only through the collection, processing, and manipulation of the necessary information about it. (Tsoukas, 1997, p. 832)

This perspective of the value of collecting, processing and manipulating information (or knowledge) is well represented by Batalden and Davidoff’s (2007) model of quality improvement reviewed in the previous chapter (p. 21) and that I will summarise again here. Batalden and Davidoff identified five different ‘knowledge systems’ which they proposed could combine in a linear formula to produce improvement. Firstly, ‘generalisable scientific knowledge’ is ‘added’ to knowledge of the local context in which improvement is to be effected, through knowledge about applying and adapting the generalisable evidence to particular contexts. This then leads to improvement, identified using knowledge of performance measurement, through the political and managerial knowledge of how to ‘make things happen’.

This employment of ‘objective’ and decontextualised information or ‘knowledge’ is very much also akin to Giddens’ (1990) notion of ‘disembedding’, which, he argued, underlies the development of modern social institutions. Giddens described disembedding as a kind of ‘time-space’ distanciation, that is to say, “the ‘lifting out’ of social relations from local contexts of interaction and their restructuring across indefinite spans of time-space” (p. 21). This is similar to the ‘despatialised simultaneity’ referred to by Tsoukas (1997), and is made possible by the creation, distribution and use of representations as decontextualised information. Giddens went on to identify ‘symbolic tokens’ and ‘expert systems’ as ‘disembedding mechanisms’, which he defined thus:

> By symbolic tokens I mean media of interchange which can be "passed around" without regard to the specific characteristics of individuals or groups that handle them at any particular juncture. (Giddens, 1990, p. 22)
>
> By expert systems I mean systems of technical accomplishment or professional expertise that organise large areas of the material and social environments in which we live today. (Giddens, 1990, p. 27)

We see here that guidelines and protocols can be seen as approaching the characteristics of symbolic tokens, and the production of these guidelines, the processes of EBM, medical science and ‘gold standard’ research methodologies alike can represent expert systems that, together with guidelines and other symbolic tokens, “remove social relations from the immediacies of context” (Giddens, 1990, p. 28)[9].

Similarly, Robson (1992) charted the development of quantification in accounting, and argued that the popularity of numbers could be explained by their qualities in enabling action at a distance, rather than any “general epistemological privilege” (p. 686). Numbers are an excellent example of disembedded and decontextualised ‘information’, and are regularly found in formal systems of accountability in health care. Within the research methods valued by EBM, concepts are operationalised into measures which are quantified and compared using statistical calculations, the results of which are then translated into dosages, limits and ranges in guidelines and protocols. Looking outside guidelines, we see that numbers are also crucial to health care delivery – endemic in all kinds of ‘information’ used by clinicians, patients and hospital managers, such as patients’ cell counts, heart rates and body temperatures, staff numbers, beds available, categories of severity, and so on. Drawing on Latour (1987), Robson (1992) argued that numbers are particularly suitable for effecting action ‘at a distance’ because they are *mobile* and *stable* across distances, and also because they are *combinable*.

Robson (1992) showed that numbers are mobile across distances – that is, they can travel from one setting to the next and back, and they are also stable in form – they conform to stable conventions of numerical systems that make them recognisable to their users, and are durable enough to resist decay across distances. These qualities may be attributed to other forms of writing or language that are stable and common. It may

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[9] The profession of medicine itself could also be described as one such expert system.

be the combinability of numbers however, that best explains their suitability and popularity for allowing action at a distance.

> Combinability allows the actor to accumulate inscriptions, aggregate them, tabulate them, recombine them in order to establish new relationships, and calculate "norms" through which to compare the settings to be influenced in accordance with his or her specific objectives, aims or ideals. (Robson, 1992, p. 697)

The effect of combinability in numbers is made more apparent in this example:

> It is commonly assumed that we can only count "meaningfully" those things sharing some common essence. In economics one is taught at an early stage that we need a common (real) value for measurement of objects. Thus we cannot add apples and oranges "meaningfully". But this ignores the power of numbers qua numbers. We can add apples and oranges and call the result fruit. (Robson, 1992, p. 698)

We see therefore that numbers and similar inscriptions allow us to 'hold', combine and manipulate aspects of a setting when we are *away* from that setting (Latour, 1987). This affordance is further strengthened when it is supported by an objectivist epistemology, "a rhetoric of science and (…) theories that seem to suggest there is greater representational and explanatory precision to be achieved through quantification" (Robson, 1992, p. 703).

In this chapter so far, I have shown that the formal systems of accountability described in the previous chapter can be characterised by decontextualised and disembedded accounts of clinical practice, and that this disembeddedness may be seen simultaneously as a *symptom* of the distances involved in the increasing complexity and size of health care provision, as well as a *strength*, allowing others to act through these accounts, to have an impact on multiple contexts, across multiple distances. Recursively, this strength also supports the status quo.

> While distance (…) is the fundamental problem for action and control, it is also a source of "power" that those who act upon a setting through power/knowledge[10]

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[10] In this thesis, the Foucauldian conceptualisation of power/knowledge (Foucault, 1980) is not directly engaged with, but is accessed primarily through the lens of actor-network theorists such as Latour (1987, 1988) and Law (1992, 2004).

> are distanced from that setting. Inscriptions provide a means of distancing oneself from the actions that they enable. (Robson, 1992, p. 691)

This disembeddedness is not only seen as a strength, however, and is key to understanding the problem of representation. Tsoukas (1997), for example, challenged the sufficiency of information as representations of ‘the world’:

> The more information we have about the world, the more we distance ourselves from what is going on and the less able we become in comprehending its full complexity. Information becomes a surrogate for the world - what is actually going on tends to be equated with what the relevant indicators (or images) say is going on. (Tsoukas, 1997, p. 833)

Tsoukas reminds us that accounts are not the same as the practices they represent. As apparent as this may seem, a deeper analysis of this difference may give us additional insights into the issues associated with systems-based accountabilities in the previous chapter. As such, in considering the disembeddedness of these accounts, their removal from ‘local contexts of interaction’, it becomes important to consider what exactly is being removed, and conversely, what is being made visible in these accounts.

On visibility

On the construction of representations, Suchman (1995) noted that:

> A map or other representational device is a piece of craftwork, crafted in the interest of making something visible. Things are made visible so that they can be seen, talked about, and potentially, manipulated. It is the last that constitutes the power, for better and worse, of the construction of representations of work. (Suchman, 1995, p. 62)

Here, we see that the power or control that is asserted across a distance is effected through what is made visible across that distance. We can recall from the previous chapter the threats to clinician autonomy that were perceived when credibility, validity and authority for clinical decision-making began to be located in guidelines that made clinical practice visible, rather than “hidden” within clinical expertise. Waring (2007a) for example, argued that current patient safety reforms in the UK are “providing managers with an expertise or ‘gaze’ to engage in the regulation of medical work and quality through a bureaucratic panopticon of surveillance” (p. 166). At the same time however, the legitimacy and status conferred by this scientific and ‘objective’ approach is valuable to the medical profession (Berg et al., 2000). Likewise, Lawton and Parker (1999) found that the authority of protocols was described to be useful by clinicians when using them to challenge the practices of colleagues, even as they noted their contentious implementation. Star and Strauss (1999) summarised some of these tradeoffs involved in making work visible:

> On the one hand, visibility can mean legitimacy, rescue from obscurity or other aspects of exploitation. On the other, visibility can create reification of work, opportunities for surveillance, or come to increase group communication and process burdens. (Star & Strauss, 1999, pp. 9-10)

Another implication of practices made visible, involves what is *not* made visible. For example, Bowker and Star (1999) noted that:

> Each standard and each category valorizes some point of view and silences another. This is not inherently a bad thing - indeed it is inescapable. But it is an ethical choice, and as such it is dangerous - not bad, but dangerous. (Bowker & Star, 1999, p. 5)

In other words, when practice is represented and made visible, aspects of practice are selected accordingly and problems result when the way these selections are made are taken to be necessary, natural and obvious, rather than as matters of practical, political and economic decision-making. We are reminded here of the work of Goldenberg (2006) and De Vries and Lemmen (2006), who argued that the assumptions of ‘objectivity’ and neutrality attributed to scientific research obscure the political, social and economic concerns that can have significant impacts on the production of scientific evidence.

Turning our attention from the production of scientific evidence to the production of guidelines, we have the work of Timmermans and Berg (1997) who presented fascinating data on how protocols themselves are created through processes of negotiation that then become *invisible* in the final product.

> The protocol designers, funding agencies, the different groups of involved physicians, patients' hopes and desires, organizational facilities, laboratory capabilities, drug companies, the patients' organs' own resilience, and so forth, all come into play in the negotiation processes leading up to the 'final' protocol. What kind of drugs are used, how they are to be dosed, who should receive them: all these 'decisions' are not so much a product of consciously developed plans as a result of these continuous, dispersed and often contingent interactions. (Timmermans & Berg, 1997, p. 283)

Using the example of the development of a CPR protocol, Timmermans and Berg (1997) found that:

> The creation of a protocol, then, is the result of work widely and loosely dispersed through space and time. Neither its origin nor its development can be traced back to singularities - whether a central actor or a central historical event. It is a struggle fought on many different fronts, in different times, by many different network-builders. (Timmermans & Berg, 1997, p. 287)

We see therefore how we are creating disembedded accounts at every level. Not only are we distanced from the practices that the accounts represent and therefore less able to “comprehend their full complexity” (Tsoukas, 1997, p. 833), we are also distanced from the complex practices through which we realise these formal accounts.

The creation of formal accounts in clinical settings is therefore not a straightforward extraction of some kind of objective information about clinical practices from one context to be made visible and used in another. Instead, such translations requires active work by practitioners to create ‘transportable’ data (Berg & Goorman, 1999; Star, 1983). For example, we find that influential RCTs are being conducted with selectively homogenous representations of the patient population (Harris & Douglas, 2000; Hutchins, 1999; Lee et al., 2001; Masoudi et al., 2003; Van Spall et al., 2007) to achieve results that are ‘internally valid’. That is, free from the effects of factors extraneous to those explicitly under study, in order to be *generalisable* – to discover ‘context-free’ knowledge that would apply to multiple contexts. The problem with this attention to internal validity however, is that it actually works against the transferability of these findings to other populations and contexts (Lincoln & Guba, 1985, p. 297). Concerns have therefore followed that this scientific data and the guidelines that result do not adequately serve the full range and heterogeneity of the patient population.[11]

Similarly, Russell, Greenhalgh, Byrne and McDonnell (2008) criticised the naïve rationalist model of policy-making, which describes policy-making as a straightforward decision-science. They described the policy-making process instead as:

> A communicative process of sense-making, embedded within specific political and institutional structures, and influenced by the interaction of individual and collective values, in which research evidence plays an important but only one part alongside other types of evidence, and rather than being 'put into practice' is dynamically constructed through local and contingent practices. (Russell et al., 2008, p. 40)

In the creation of formal accounts therefore, we see that this work of translation and sense-making is often rendered invisible in the final product, whether it be the political, economic or practical decision-making behind what to make visible (what to represent), or the acknowledgement that such choices have been made. Representations inevitably 'leave things out', and are incomplete. This is not unexpected, and not inherently a flaw, but this incompleteness becomes problematic when representations are taken to be complete, accurate and sufficient. As I described in the previous chapter, guidelines become problematic when they are assumed to be neutral and universal and therefore authoritative; or when the findings of a clinical trial conducted solely with middle-aged white males are taken to be applicable to a more heterogeneous patient population.

I have identified here one aspect of the 'problem of representation': that representations can be equated with the practices that they represent. The recommendation to follow then might be to acknowledge the limitations of formal accounts and to remind ourselves that they are incomplete and insufficient, but still useful. This conclusion would still leave unchallenged however the notion that such accounts can and do 'exist' in a form unbound from contexts and independently transportable. In the next section, I

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[11] This is perhaps more accurately a *sampling* problem rather than a problem with the notion of *generalisability* per se. For instance, the findings of such RCTs are arguably generalisable, but only to young white males with only one diagnosed disease, for example. Nonetheless, this example demonstrates the limitations and difficulties of establishing generalisability in practice. In fact, in the next section of this chapter, I argue against the possibility of establishing generalisability as context-free knowledge, an argument also made by Lincoln and Guba (1985), who linked the assumptions of generalisability with naïve realism (p. 297).

challenge this assumption, reviewing the literature around the notion that information, and formal accounts, are never really decontextualised – or rather, that they are always necessarily contextualised in order to be made sense of. Correspondingly, we move our attention away from the *creation* of accounts to the *use* of these accounts.

3.3 Using formal accounts

> The idea that information is something that can travel freely, independent of its medium, is highly problematic. Searching for the 'pure' content of information, unrelated to its context or carrier, is like "searching for the river by breaking away its banks".
>
> (Berg & Goorman, 1999, p. 58)

In this section, I turn our attention to the ways in which accounts are used, or are meant to be used. I argue against the notion of information as decontextualised representation in three parts. Firstly, I discuss the promise of transparency that often accompanies the rhetoric of formal accountability. Transparency involves the use of formal accounts to make practices visible at a distance from the contexts in which they are created, and this analysis allows us to apply some of the insights discussed so far in this chapter. Secondly, I look at how clinicians are articulating and adapting formal accounts, generated externally or locally, into their local contexts of practice. This literature highlights the articulation work carried out by clinicians, and foregrounds the importance of local practices in the efficacy of work processes. Finally, I review the literature around the effectiveness of guidelines that substantiate my conceptual 're-embedding' of the disembeddeding mechanisms we have discussed so far.

On transparency

Our earlier discussion around visibility and distance comes into play when we look at the promises of transparency that often accompany implementations of formal accountability. To take a recent example from the Australian news media, Ruth Pollard of the Sun Herald wrote an editorial defending the paper's recent decision to publish comparative data about hospital performance on its web site. Her article was entitled, "Greater accountability can only make system healthier", and it began with: "Greater transparency, better informed hospital patients and higher quality care" (Pollard, 2010, para. 1). Pollard then went on to challenge the suggestion that this data, which was already publicly available elsewhere, would be misused.

> Yes, information can be misused or misconstrued, numbers fiddled, figures fudged. Health departments have been guilty of these sins for years.
>
> And, yes, it is easy to dismiss comparative tables as blunt instruments, unable to properly distinguish between the inherent risk associated with difficult procedures performed on the desperately ill in the larger teaching hospitals (transplants, vascular surgery) and the less risky procedures performed daily in smaller hospitals (cataract surgery, chemotherapy). But until there is greater openness on hospital figures at both state and federal level, there will be no real national benchmarks for excellence, no across-the-board guidelines for improving performance.
>
> Increasing accountability in the health system will come at a cost: the system's inevitable flaws will be exposed and hospitals will come under pressure to do better, but we will all be healthier for it. (Pollard, 2010, paras. 7-9)

Pollard has clearly equated transparency with accountability, describing the publication of hospital data in comparative tables and graphs as ‘openness’ and exposure. She did this even as she acknowledged the insufficiency and incompleteness of the data that was made visible. She suggested that the need for national benchmarks and ‘across-the-board’ guidelines justified the use of this otherwise flawed information, and indeed she was right, in that benchmarks and such guidelines do in fact depend on such representations of practice. What she did not question nor attend to in this short editorial, however, was the validity of these national benchmarks and guidelines, if they were to be based, as she suggested, on such avowedly contestable data.

This optimistic belief in transparency via accountability is echoed in this statement by Gray (1992):

> [The development of accountability] increases (…) the number of things which are made visible, increases the number of ways in which things are made visible and, in doing so encourages an increasing openness. The ‘inside’ of the organisation becomes more visible, that is, transparent. (Gray, 1992, p. 415)

Here, we see that the promise of transparency via formal accountability is primarily about making practices *visible across a distance*, a counterpoint to an opacity that is otherwise seen to exist[12]. We have already noted however, that what is made visible in these formal accounts is not the same as the practices they represent. As such, the assumptions of transparency as described above come dangerously close to mistaking representations for what they represent. Tsoukas (1997) for example, warned that transparency is illusory, as others have likewise observed (Roberts, 2009; Strathern, 2000). Roberts (2009) for example, noted that transparency "involves a sort of masking of the complexity of organisational reality and its reduction to a few simple indicators" (p. 963). More specifically however, Tsoukas (1997) pointed out that these 'simple indicators' and other decontextualised information actually need to be "placed into a context in order to be made intelligible" (p. 835); and since the contexts of those 'at a distance' are not the same as the contexts of those whose practices are being made 'transparent', there are likely to be discrepancies in interpretation.

> Transparency inevitably presupposes a subject: transparent to who? If this question is raised, one realizes that what the outsiders see (and the significance they attach to what they see) is not the same with what the insiders see (and the significance they attach to their experiences). There is an important knowledge asymmetry between the two parties that cannot be removed with generating more information. (Tsoukas, 1997, p. 834)

Roberts (2009) offers an illustrative account of this asymmetry, reflecting on how accounts are interpreted locally, and at a distance, and the consequences that follow from these travelling accounts:

> At a recent departmental meeting the annual accounts were on the agenda and the conversation quickly fell to exploring the ways in which the figures were in various ways nonsensical. Transparency in this local context offered no great difficulties for its omissions and abstractions could quickly be concretised and re-contextualised by virtue of everyone's rich and elaborate local knowledge. But despite the pleasures of this conversation (…) the meeting was silenced by the

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[12] Leape et al. (2009) countered this trend, arguing for an expanded, "extreme" conceptualisation of transparency, based around the open sharing of information between colleagues, caregivers, patients and institutions, as well as formal reporting practices. I agree with their proposal, and argue for something very similar in my final chapter, after problematising and analysing the notion of 'information sharing' as accountability.

> chair's observation that whilst we knew that the figures were rubbish, the trouble was that our (absent) boss believed in them.
>
> The problem is real. The boss does not have our local knowledge and knows the local only through the ways in which accounting figures render it transparent. Without the transparency he is blind and dependent on the local, with it he is potent for he can compare us with others, challenge past conduct and set demanding targets. (Roberts, 2009, p. 964)

The boss in this example is thus 'enabled' to act, at a distance, by 'holding' these locally disputed accounts. The difference therefore between the interpretations of the accounts at the local level and the managerial level becomes particularly problematic when we consider the 'power' facilitated through these accounts as tools for change. As Chua (1995) noted, such accounts enable "people far away from the scene of activity to ostensibly have a window on those activities and intervene in the name of better management. One organization's financial health may be compared with that of another's, conclusions drawn about relative efficiencies and effectiveness, and action initiated to correct evidence of ill-health" (p. 116).

A negative consequence of this kind of transparency therefore is to render problematic the other promise of accountability, that "how decision makers are held accountable is presumed to influence how they make decisions and the quality of those decisions" (Woods et al., p. 469).As reviewed in the previous chapter, one problematic way in which accountability was seen to influence decision-making and practices was when local practitioners changed practices to align with and produce favourable accounts, despite these new practices being less relevant or useful to local goals and expectations. Allen (1998), for example, found in her study that nurses felt pressured to fill out patient care plans in excessive detail, even when they were irrelevant to patients, in order to satisfy quality assurance requirements. The impact of transparency therefore can influence practices towards the goal of "keeping up appearances" (Tsoukas, 1997, p. 838), and away from what remains invisible.

Finally, we are reminded by Power (1994), of the ironic opacity of processes of transparency, even as the processes themselves seek to overcome opacity. Power used the example of audit to describe this contradiction.

> Audit is linked to ideals of organisational transparency and accountability. Yet audits are themselves often very specialised and opaque to a wider public. Audits may provide comfort to stakeholders who are remote from day to day practices but, in doing so, they often deter substantive inquiry which would empower stakeholders. Audit arrangements can bring an end to dialogue inside and outside organisations, rather than helping it. (Power, 1994, p. 39)

As we observed in the creation of guidelines, we see that the substantive work that is carried out in the name of transparency and openness can actually be quite opaque and closed itself, and can be thought of as arising from differences between members of the relevant contexts, as Tsoukas (1997) suggested. For example, the opacity of audit as described by Power (1994), could be due to differences in statistical and accounting literacy between those who generate the accounts and those to whom these accounts are then made 'visible'.

Literacy in fact was mentioned by Robson (1992) as a component of the stability of accounts across distances. He pointed out that the stability of numbers in accounting was dependent on the stability of numerical conventions across the world. Furthermore, he noted that "the power of accounting inscriptions is contingent not only upon the stability of the inscriptions in terms of readability, etc., but also upon the development of a literate culture" (p. 696).[13]

Numbers, therefore, are seen to be particularly stable because they are recognisable and common. Statistical calculations however, are stable when they are used or read by those who are literate in statistics, but are perhaps less so otherwise. Likewise audit processes, or the processes of developing guidelines from scientific literature. As such, I would argue that the stability (or the transparency) of an account is not something that can necessarily be determined without close attention to the contexts of its use.

Again, this challenges the notion of accounts as decontextualised information, and reminds us that we need to attend to these accounts not only within the contexts of their production but also the contexts of their use. In the following section, I review the literature around the use of formal accounts in local contexts of practice. Here, we find

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[13] This is similar to Rose's (1991) argument that democracy is dependent on the numeric 'literacy' of its populace.

another kind of work, known as articulation work (Strauss et al., 1985) that also ‘disappears at a distance’.

On articulation work

Articulation work is described by Star (1991) as “work that gets things back ‘on track’ in the face of the unexpected, and modifies action to accommodate unanticipated contingencies” (p. 275). In particular, she identified articulation work as the coordination work that is required “in the face of breakdowns of rational models” (Star, 1991, p. 275). Articulation work is therefore interesting here as a kind of work involved in coordinating action around formalised models of work. Furthermore, like translation work, it is generally invisible and not credited in those models and representations.

> Although it can be seen as the 'glue' that holds complex work practices together, articulation work tends to be paradoxically invisible to outsiders. It does not result in clear-cut 'products', it is not highly valued, and it is generally not even recognized in work descriptions or by managers. (Berg, 1999, p. 91)

In a similar vein, Sachs (1995) reviewed several studies of actual work practices, and concluded that “the efficiency of work is in fact determined not so much by the logic and sequencing of task flow as by the capabilities of people for troubleshooting vexing problems in complicated situations, which inevitably arise in all workplaces” (p. 38). In other words, she suggested that it was the less visible and less valued articulation work that was more central to the ‘efficient’ performance of work than the explicit representations of work.

Sach’s (1995) findings suggest powerfully that the work that is carried out in local contexts is undervalued, and that focusing solely on formalised models of practice is insufficient to understanding clinical work, much less patient safety and quality improvement. In fact, the sociotechnical literature on computer supported cooperative work has demonstrated some of the unintended consequences on local practices, when computerised systems that depend on static models of work are implemented (Berg, 1999; Symon, Long & Ellis, 1996). For example, studies have been done on electronic patient records, computerised physician documentation and computerised medication administration support, all implemented with the aims of improving clinical practice and patient safety. In amongst the success stories (Nightingale, Adu, Richards & Peters, 2000), researchers have also found unintended side effects, including the creation of new kinds of errors (Ash, Berg & Coiera, 2004; Patterson, Cook & Render, 2002) and negative impacts on other aspects of clinical care (Ash et al., 2004) such as organisational culture, medical education, communication networks, local coordination and social interaction (Embi et al., 2004; Patterson et al., 2002).

These unintended side effects have been attributed, amongst other reasons, to the mismatch between the representations of health care work that are built into these computerised applications and actual clinical practices (Ash et al., 2004), and the disruption to communication practices that occurs if informal interaction is replaced with more formalised information retrieval or exchange (Coiera, 2000; Embi et al., 2004). Essentially, these findings suggest that formalised processes that are designed or developed without an adequate understanding of actual clinical practice may not take into account the informal and less visible aspects of clinical work, which are likely to be key ingredients in the delivery of care (Ash et al., 2004, Berg & Goorman, 1999; Symon et al., 1996).

At this point, it may be worth noting that in the current and previous chapter, I have primarily reviewed theoretical and empirical literature that is critical of the rhetoric and practice of formal accountability. This is not intended as an argument against its use, but rather as a counter-balance to the less-critical discourse promoting formal accountability that currently dominates the patient safety and quality improvement literature, as presented in Chapter 2. In fact, the sociological literature has long been critical of formality (Stinchcombe, 2001), and, in reaction to that tradition, has also produced arguments strictly in favour of it (Freeman, 1972), as well as arguments for a more nuanced view of the role of formality in local practices (Bardram & Hansen, 2010; Stinchcombe, 2001; Timmermans & Almeling, 2009).

I suggest therefore that the literature does not guide us towards discarding formal accountability, but instead towards looking more closely, and critically, at how formal accounts are used in local practices (Araujo, 1998). Suchman (1995) for example, offered the following wisdom around managing the problematic juxtaposition of incomplete normative accounts and complicated practices:

> The problem is not that normative accounts are incomplete, or that actual practice fails to realize them, but that by definition normative accounts represent idealizations or typifications. As such, they depend for their writing on the deletion of contingencies and differences. As long as such representations remain embedded in the doing of the work, they serve as a useful tool for organization members in their practical reasoning about and action within the organization. Problems arise, however, when normative representations are either generated at a distance from the sites at which the work they represent goes on or taken away from those sites and used in place of working knowledges. (Suchman, 1995, p. 61)

Previously in this chapter, I identified guidelines and other normative accounts as disembedded (Giddens, 1990), and noted that this disembeddedness and decontextualisation explained their popularity and utility, especially across distances. Here, however, Suchman (1995) has suggested that embeddedness instead is key to their local value and utility, and that disembeddedness and distance are the problems. In the following section, I review the support for the ‘re-embedding’ of the disembedded accounts discussed so far, using a number of studies that looked at the use of guidelines in practice.

‘Re-embedding’ the disembedded

In the previous chapter, I reviewed a study by Berg et al. (2000) who described a set of guidelines that were positively appraised by insurance physicians. Written into the form of these guidelines was a dependence on the specific expertise of the physicians in order to be interpreted and used accordingly. By being thus embedded, it seems, they were not only described as non-threatening to the physicians’ autonomy but also described as being easier to follow and use. Similarly, Grol et al. (1998) explored links between the attributes of guidelines and their compliance rates with general practitioners in the Netherlands, and found that successful guidelines demonstrated a close alignment with current practices.

> Guidelines should be compatible with existing values among the target group and not be too controversial. They should not demand too much change to existing routines and be defined precisely, with specific advice on actions and decisions in different cases. They should be compatible with current values and routines.

> Indeed, some recommendations probably expressed what general practitioners were already prepared to do. (Grol et al., 1998, p. 860)

Taking an even closer look at how guidelines are used in practice, Timmermans and Berg (1997) explored the development and use of two medical protocols in an international study, and found that:

> The first thing that becomes obvious is how patients and medical personnel are not turned into mindless followers of some pre-set script. On the contrary, seen from their perspectives, it is the protocol's trajectory which is secondary and which is aligned to their own goals and trajectories, if need be. For all those involved, the protocol is an additional, sometimes highly relevant, factor in the shaping of their own trajectory, but it is dealt with in terms of local specificities. (Timmermans & Berg, 1997, p. 288)

Furthermore, Timmermans and Berg (1997) argued that for a protocol/standard to become actual standardised practice, it requires a pre-existing infrastructure of networks that are compatible enough to accept it. Similarly, Willmott (1996) noted that “formal accounting systems are always embedded in already established frameworks of accountability that make such systems relevant and meaningful” (p. 23). For example, Bosk et al. (2009) noted that a successful infection control intervention in the U.S. was erroneously reported as “a triumph of the “simple checklist” as a solution to patients’ safety problems” (p. 444). Instead, they argued that:

> Emphasising checklists as the explanatory mechanism for the reduction in catheter-related infections obscures the complex labour necessary to create a collective local faith in checklists. How support was mobilised for coordinating work around infection control is the real story of the Keystone ICU project. (Bosk et al., 2009, p. 444)

Similarly, Timmermans and Mauck (2005) discussed an example of a successful Australian asthma guideline, and noted that “change in health care is possible with guidelines if standard creation and implementation reflect the local interdependent and collaborative nature of health care delivery” (p. 26).

> The substitution of metered-dose inhalers for nebulizers was not simply imposed by health care providers out to maximize their profession's jurisdiction, but rather involved fostering relationships and collaborations among a wide variety of relevant local stakeholders aligned with the aim of using new therapies to lower asthma morbidity. The guideline helped coordinate and strengthen these relationships. (Timmermans & Mauck, 2005, p. 26)

Pertinently, Timmermans & Mauck (2005) also challenged the fear of guidelines threatening to supplant medical autonomy, by questioning the validity of professional 'autonomy' itself, in a health care system that is increasingly, necessarily, collaborative.

These studies therefore foreground the primacy of local collaboration, and *also* the value of formal accounts. They do so however by highlighting the one-sidedness of the systems of accountability detailed so far, which are imagined to influence frontline practices in only one direction, using normative representations of work that are, more often than not, designed at a distance. These findings reinforce the argument that we cannot assume to know how a protocol or guideline will affect practice without actually observing it being put into practice. Therefore, going back to the previous chapter, we cannot do what Leape et al. (2002) suggested, which was to make inferences about safety practices based on what we imagine will happen, using human factors principles, examples from other industries or common sense. Dekker (2005) elaborated on the wider consequences of such a detached approach, noting the inability of these assumptions to deal with the larger picture of safety in an organisation:

> Current human factors and system safety models cannot deal with drift into failure. They require failures as a prerequisite for failures. They are still oriented toward finding failures (e.g., human errors, holes in layers of defense, latent problems, organizational deficiencies, and resident pathogen), and rely on externally dictated standards of work and structure, rather than taking insider accounts (of what is a failure vs. normal work) as canonical. Processes of sense making, of the creation of local rationality by those who actually make the thousands of little and larger trade-offs that ferry a system along its drifting course, lie outside today's human factors lexicon. (Dekker, 2005, p. xii)

As such, Leape et al. (2002) were correct in pointing out that the biomedical clinical trial model of evaluation is insufficient and inappropriate to the study of safety practices. A qualitative and practice-focused ethnographic approach instead is more likely to aid our understanding of safety. Using such an approach, Timmermans and Berg (1997) found that:

> When the protocol is studied as an artefact immersed in practice, more trajectories appear to be affected, and in more ways than is apparent from a bare reading of its text. The interests at stake, the redistribution of costs, the research careers involved, the technologies which are skipped, the laboratory tests which are deemed more crucial than others - all these issues often only come into view when the protocol is being implemented and/or used. (Timmermans & Berg, 1997, pp. 281-282)

Garfinkel (1967) makes a similar point in relation to the instructions that student researchers under his supervision were asked to follow in coding a set of clinic records. He found that students were interpreting these records through 'ad hoc' considerations not inscribed in the instructions, which he acknowledges would normally be seen as a flawed process. He argues, however, that this 'ad hocing' is in fact essential to the coding process:

> To treat instructions as though *ad hoc* features in their use were a nuisance, or to treat their presence as grounds for complaint about the incompleteness of instructions, is very much like complaining that if the walls of a building were only gotten out of the way one could see better what was keeping the roof up. Our studies showed that *ad hoc* considerations are essential features of coding procedures. *Ad hocing* is required if the researcher is to grasp the relevance of the instructions to the particular and actual situation they are intended to analyze. (Garfinkel, 1967, p. 22)

Garfinkel's work becomes important in the next section, when I look at conceptions of accountability in practice that are different to the formal accountabilities discussed so far. Here, his point about the essentiality of having to relate instructions (such as policies) to the 'particular and actual situation' reiterate the arguments above that the articulation work involved in translating policy to practice is not just happening in practice, but is in fact essential to the workability of these protocols.

This attention to the importance of the local articulation work required to translate policy to practice, as well as the need for policy to be compatible with local practices, is a kind of *re-embedding* of the disembedding mechanisms I have discussed so far (Araujo, 1998). Policies, guidelines and their like may be designed to be 'distance-able' from "local contexts of interaction" (Giddens, 1990, p. 21), but it seems that their successful use may well depend instead on how closely they 'fit' these local contexts, and on how practitioners in these local contexts are able or willing to articulate them into their own practices.

On formal accountability – A summary

In summary, formal accounts such as guidelines, protocols and reports can be seen as depictions of work, ideal and/or representative, that are designed to be disembedded from local contexts. Firstly, they are not only developed at a distance from local contexts of practice, but also designed to *act across* distances, often unidirectionally. Their *form*al nature enables communication and impact across distances by being mobile, stable and, in the case of numbers, combinable. These characteristics lend formal accounts a sense of being decontextualised, of being independent of context, a notion that is supported and encouraged by current objectivist discourse.

Looking more closely at how practices are translated into formal accounts however, we see that this is not a straightforward process, and that work is required to translate the complexity of clinical practices into transportable accounts. Inevitably, aspects of practice are left out, and others rendered visible, with various consequences for this in/visibility. Furthermore, the translation work itself is often rendered invisible in the final products

When we look at how these issues play out in the *use* of formal accounts, we find that we can challenge, for example, the promises of transparency that usually accompany calls for accountability. Transparency via accountability is currently a proposition that mistakes accounts for the practices they represent. Even when those who propose it acknowledge the insufficiency of these accounts, it is often still considered to be a worthwhile process. Indeed, the desire to reduce the opacity of 'distance' between the public and health care organisations is palpable and urgent. This sense of estrangement between the public and health care organisations unfortunately is not assuaged by the formal distance-spanning solutions proposed, even as they are largely seen to be an improvement on the past, and still the way forward.

In this chapter, I challenge the formality of formal accountability. I suggest that the distance-spanning attributes of these formal accounts are conditional, and that it can be misleading to conceive of these accounts as decontextualised, or to depend on them as such. I argue that formal accounts need to be contextualised and localised in order to be made sense of, and that it is more helpful to think of them instead as variously embedded in the relevant contexts of their use. In fact, their very stability across distances depends on the consistency between the contexts thus linked across these distances. When we look at how formal accounts are used in practice, we find studies that show them to be most effective and useful when they are compatible, engaged with by clinicians and embedded within local knowledges, relationships and practices.

These studies disrupt the discourse of quality improvement described in the previous chapter, of calls for systems of accountability that unidirectionally impact upon frontline practices, using decontextualised accounts of practice to effect change across distances in multiple contexts. We have seen how problems ensue when these accounts are not only mistaken for the practices they represent, but also when they are also mistaken to be stable and interpretable, independently of context. In fact, the studies reviewed overwhelmingly indicate that the ‘impact’ of formal accounts on local practices is not straightforward. Instead, researchers who study the use of guidelines *in situ* paint a more nuanced picture, one that foregrounds the articulation work carried out by health care practitioners in order to make policies, guidelines and protocols ‘workable’ in their local contexts of practice.

In this thesis, I undertake this perspective and approach, looking at how accountability is enacted within local practices of safety, but with another twist. In this chapter, I challenged the formality of accountability in safety discourse. Accountability however has also been theorised differently, as informal rather than formal, social rather than hierarchical, and as everyday, ordinary activity. I argue that these alternate perspectives on the practice of accountability afford new insights on the potentials and pitfalls of accountability in response to patient safety in health care. I review this theoretical literature in the next section of this chapter. Accountability, in this final section, is located not only in formal mechanisms, but also in everyday practices. As such, accountability can be described not only in formal and informal terms, but also as a multiplicity. In this section, I build my argument for exploring how clinicians enact *multiple* accountabilities, and the implications that follow for patient safety.

3.4 Multiple accountabilities

The idea of multiple accountabilities is not a particularly new one, and the term carries a number of different meanings. For example, in the accounting literature, Gray and Jenkins (1993) presented a structural model of accountability, and argued that there are different codes of accountability (financial, professional and managerial), which consist of different combinations of different rationalities (technical, legal, economic, social and political), by which meaning and significance are determined and action is evaluated. Similarly, in the medical literature, Emanuel and Emanuel (1996) described three different models of accountability applied to heath care:

> 1) The professional model, in which the individual physician and patient participate in shared decision making and physicians are held accountable to professional colleagues and to patients; 2) the economic model, in which the market is brought to bear in health care and accountability is mediated through consumer choice of providers; and 3) the political model, in which physicians and patients interact as citizen-members within a community and in which physicians are accountable to a governing board elected from the members of the community, such as the board of a managed care plan. (Emanuel & Emanuel, 1996, p. 229)

These accountabilities are primarily differentiated by different rationalities – the standards of measurement and evaluative norms by which members of these communities are held, or hold each other accountable. Berg (1997) for example described multiple rationalities enacted through competing formal decision-support tools, which defined “what medical practice is, what a rational practice looks like, and how a rational practice may be achieved” (p. 40). Gherardi and Nicolini (2000b) similarly identified multiple and competing ‘discourses’ of safety in the Italian building industry, each of which revealed “a specific understanding of the issue and a specific manner of interpreting and explaining events and actions” (p. 339). The implications of this multiplicity are twofold. Firstly, with multiple accountabilities comes the possibility of dissonance between different rationalities (Degeling, 2000), which I will elaborate upon later in this section. Secondly, accountability is not located in one formal system or another, but rather, in the interactions between parties involved. Accountability can therefore be conceived of as informal as well as formal.

Informal accountability

I use the term ‘informal’ here to describe a kind of accountability in contrast with the formal systems detailed so far in this thesis. This term needs further clarification however. Emanuel and Emanuel (1996) for example, described as ‘informal’ accountability, procedures including “comments during consultations between physicians for professional competence, selections of providers in the marketplace for financial performance, and evaluations by the press, such as the ranking of hospitals by U.S, News and World Report” (p. 230). While we might agree on the first example, by the descriptions employed so far in this thesis, the other examples would seem more indicative of *implicit* accountabilities that are still formal, rather than informal processes per se.

The contrast between formal and informal accountability that is constructed in this thesis is more akin to Roberts’ (1991) comparison of individualising and socialising accountabilities. In introducing Roberts’ ideas here, I direct our attention to a different level of abstraction in our thinking about accountability, that allows us to go beyond the formal systems and structures that we have so far been discussing. For Roberts (1991), the systems of formal accountability that I have discussed so far in these two chapters are seen to be *isolating* in their reliance upon formal, distancing and disembedded accounts, thus inspiring individuals to concentrate on their own actions and performance in comparison with others. He also warned that these individualising effects could become valued over what he called “the quality or adequacy of reciprocal understanding" (p. 361).

Roberts’ (1991) proposal here was that more socialising forms of accountability are also present in workplaces – more informal accountabilities that highlight *interdependence* by engaging the social processes of “making sense of what is going on” (p. 362), and creating reciprocal understanding and consensus by way of communicative action, as opposed to individualising, distanced and distancing impositions of judgment.

> In writing of a socializing form of accountability one can suggest the possibility of a form of talk where others are encountered directly. Rather than treating others

> narcissistically as a mere mirror for self, or instrumentally merely as means or obstacles to my private projects, unrestrained talk draws me *into relation with others* [emphasis added]. (Roberts, 1991, pp. 362-363)

Gray (2002) pointed out that the giving and receiving of all kinds of accounts – formal and informal – has always been an essential part of human experience, and that only with the increasing complexity of organisational life has formal (economic) accounting risen in importance to become such "ubiquitous and powerful phenomena" (p. 689). Similarly, Munro (1996) stated that "accountability is already, and endlessly, going on: the giving of accounts is that in which everyday activities subsist. Whether in what we say, or by what we do, we are always giving explanations and reasons for our conduct" (p. 4).

A contrast is set up therefore, between the rigid and formal kinds of hierarchical accountability exemplified by audit, accreditation, protocols and reporting, and the more fluid and negotiated kinds of social accountability that consist of informal talk and collaborative meaning-making amongst more-or-less equals. Given the arguments made in the previous section of this chapter, for the 're-embedding' of formal accounts and accountability, it would be inconsistent to treat these concepts as a dichotomy of opposites. Instead, I use them here as a heuristic duality, useful for contrasting current conceptions of accountability with alternatives, and for contemplating their common roots.

Accountability can therefore be seen as an everyday, always occurring activity in which all social actors take part. Garfinkel (1967) described this everyday accountability as the way in which people iteratively create social order around them. Accountability is therefore not just limited to the macro, structural level, in large organisations, governments and the like, and not limited to relationships between entities at a distance. Accountability in fact happens all the time and informally, between people on the street, between families and friends and total strangers. When we think of the giving and receiving of accounts as a common and everyday occurrence, underlying much of our basic interaction, we might wonder then about how formal and informal accountabilities may be alike and also how they may differ. We could also ask about how they co-exist, how they might compete, and, in light of our previous discussion on the re-embedding of disembedded objects, we might ask how they might be interdependent in practice. In the next section, I briefly review the literature that addresses some of these questions.

Accountabilities in tension

To begin broadly, researchers have written about how the co-existence of multiple accountabilities in a context can lead to conflict. Degeling (2000) for example, highlighted the potential for dissonance between competing frames of accountability, and noted that when an existing framework is given primacy over others, “its version of what is important and significant in the provision of care will displace other formulations” (p. 9). He argued that this can be detrimental when the displaced frameworks are still held to be valid by actors in the setting, and gave an example familiar to our discussion, noting that an elevation of managerial accountability and resource control could “generate pressures for untoward standardization” (Degeling, 2000, p. 9).

> As noted earlier, standardization which has been determined solely by management runs the risk of requiring clinicians to make patients ‘fit’ the service categories authorized by management rather than devising treatments which ‘fit’ each of their patients' unique characteristics. (Degeling, 2000, p. 9)

This is of course a re-statement of the criticisms of inappropriate authority, homogeneity and perceived threats to professional autonomy of EBM and guidelines reviewed earlier. To extend his point however, Degeling (2000) then argued against the notion that clinicians’ or patients’ priorities should always be given precedence over managerial or technical accountabilities instead.

> An accountability system which is `patient centred', to the extent that the need for services is equated with demand as expressed by patients, runs the risk of denying the importance of opportunity cost considerations and questions about the appropriateness of the interventions being undertaken, particularly when substantial resources are utilised on interventions which are of marginal, if not doubtful, benefit to either individual patients or society. (Degeling, 2000, p. 9)

Degeling (2000) therefore pointed out that although conflict and dissonance can be present in health care organisations amongst competing accountabilities, the dominance of any one particular frame of accountability is undesirable when the other existing frames are still held to be valid.

Yakel (2001) too described the concept of multiple accountabilities, which she noted may “exist simultaneously, if uneasily, within one social system” (p. 233). Yakel (2001) also addressed the question of tensions between formal and informal accountabilities, finding that informal norms could “creep into” formal reporting structures (p. 239). She gave an example of ‘parsimonious reporting’ by radiologists in her study, who avoided describing in their reports “non-life-threatening features that [they] deemed irrelevant to the clinical questions” (p. 241). She noted that the radiologists did this in order to avoid follow-up questions from clinicians that the radiologists felt to be unnecessary and which would often result in lengthy interruptions to their work.

This view of competing multiple accountabilities is often mediated, however, by a recognition that there are also interdependencies between different accountabilities, especially between the formal and informal.

> It is argued that individuals often feel themselves torn between the competing demands of the formal and informal. These tensions however mask various interdependencies between the two realms. Socializing forms of accountability not only minimally humanize the experience of work but also do much to secure the routine interdependence of action within organizations. In this respect the formal depends on the informal, even whilst denying this dependence. Conversely, hierarchical forms of accountability offer some protection both to collective action and the individual from abuses and divisions within the informal. (Roberts, 1991, p. 356)

In this quote, we find many of the issues already covered in this and the previous chapter, of the tensions and perceived trade-offs between formal accountabilities and local understandings and practices. Lindkvist and Llewellyn (2003) extended this interdependence further, when they argued that the concepts of formal and informal accountabilities may have been “too sharply dichotomized” (p. 252) by Roberts (1991). They pointed out, for example, that formal accountability could have the potential to promote ‘communal’ responsibility in organisational members. This is somewhat akin to Sharpe’s (2003) recommended re-framing of accountability away from its retrospective and retributive reputation, towards a more ‘prospective’, ‘forward-looking' accountability, focused on learning and improvement. Sharpe (2003) argued that when errors occur in health care, accountability should be harnessed in a way that avoids the debilitating post-hoc blaming and shaming that it has traditionally been associated with. Instead, it should be re-focused on clinicians' responsibility for improving safety, through "deliberative and practical processes involved in setting and meeting goals" (p. S4).

These arguments remind us that accountability is a flexible concept, amenable to being reframed in multiple ways, and for multiple purposes. At the basis of this 'flexibility' is also a kind of simplicity – when we examine accountability in practice, it can appear to be 'simply' a matter of the exchange of accounts, as noted above. Giddens (1984) noted however that to be "accountable" for our activities is both "to explicate the reasons for them and to supply the normative grounds whereby they may be justified" (p. 30). Different sources of justification therefore come from different rationalities (or sets of normative standards) such as those proposed by Gray and Jenkins (1993) above – technical, legal, economic, social and political – or those mentioned by Degeling (2000) – clinical, managerial and technical – in health care settings. Where there are multiple rationalities in a context, there are multiple accountabilities to represent, reinforce and reproduce them.

When we come to the differences between formal and informal accountabilities however, we may be articulating instead a difference not so much in the rationalities they reflect or reproduce, but rather, a difference in the way formal and informal accounts are created and distributed; that is, a difference in what *form* they take. A study by Sinclair (1995) demonstrated that a distinction between the different *forms* of accountability can be seen *across* discourses that dealt with different rationalities. She interviewed Chief Executive Officers (CEOs) of Australian public sector organisations, and determined that there were five domains of accountability that they identified (political, managerial, public, professional and personal), corresponding with the notion of different rationalities.

Across these domains, however, Sinclair (1995) found that their statements about these accountabilities could also be differentiated into what she called *structural* and *personal* discourses. In the structural discourse, accountability was spoken of in technical, abstract and rational terms, as unproblematic and uncontested, "able to be 'delivered', demarcated or exacted, independently of personalities, politics, or fate" (p. 224). In contrast, in the personal discourse of CEOs, "accountability is ambiguous, with the potential to be something that is feared or uplifting. Accountability here is about exposure and vulnerability and is very close to the CEO's sense of who she or he is" (p. 224).

In these descriptions, we see a resemblance between the structural discourse and the disembeddedness attributed to formal accountability, and between the personal discourse and the more emotive, immediate and embodied experiences of informal accountability theorised by Roberts (1991). The multiple *forms* of accountabilities, therefore, may be seen as different to the multiple *rationalities* that underlie their enactment. Although they remain intertwined, there are (at least) two levels of multiplicity to contend with here.

3.5 Summary

> You can't see the forest for the trees.
>
> (An old saying)
>
> In losing the forest, we win knowledge of it.
>
> (Latour, 1999, p. 38)

In this chapter, I reframed the focus on accountability and safety, away from the interactions *between formal accountability and local practice*, to the interactions *between multiple accountabilities in practice*. In doing this, I am proposing that the controversies discussed previously are not about contrasting 'accountability' against 'practices *lacking* in accountability', but rather about tensions between the multiple accountabilities that are enacted in practice. With this shift in focus, I am also aligning with the aims stated early in chapter 2 (p.14), to attend not only to the 'gaps' and the formal and visible technologies of safety, but also to the informal and less visible everyday practices that also produce safety. As such, I argue that the accountability that is increasingly associated with safety is not only found in formal distance-spanning systems, but also in the informal and local. Furthermore, by comparing formal accountability with informal accountability and by situating them both as practices, my intention is to 'level the playing field', by dealing with concepts that are ascribed a common basis, rather than comparing formal accountability with the rather more amorphous notions of local culture or context[14], for example. My research aim therefore is to better understand how patient safety is produced, and could potentially be improved, by observing how multiple accountabilities are currently enacted in clinicians' practices of safety.

In this thesis, I explore two levels of multiplicity in accountability – the multiplicity of *forms* of accountability, and the multiplicity of the *rationalities* and meanings that are enacted and (re)produced through them. In the following chapters, I describe and discuss various rationalities, but my analyses focus particularly on the *forms* of accountability in practice, not only because they have received the least empirical attention, but also because they allow me to re-frame, re-assess and potentially go beyond the problems that we associate with large-scale patient safety initiatives.

In the following chapters, I explore how multiple accountabilities are enacted in clinicians' practices of safety, guided by the following concepts derived from the literatures reviewed above. I take accountability to be a practical and on-going accomplishment, enacted through the creation, exchange and use of accounts that can be representative of practice, as well as explanations or justifications of practice. I also analyse accounts by their *stability, mobility, combinability* and *visibility*, and the movement of these accounts by their *distance*, *directionality* and *dis/embeddedness*.

> In our daily language we often refer to accountability as something that must be achieved, rather than as something that is done informally yet continuously. The difference here is between viewing accountability as a thing represented by an artifact, such as a record, and thinking about accountability as a process in which people and records must interact to achieve accountability. (Yakel, 2001, p. 234)

Finally, there are methodological implications in dealing with the conceptualisation of multiple accountabilities that I have outlined here, and I will elaborate on those implications in the following chapter outlining my methodology (chapter 4).

On the potential implications for patient safety (to foreshadow my findings), we find three messages from the literature. Firstly, if we accept the validity of multiple rationalities underlying accountability relationships in health care, then we should be

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[14] See Kaplan et al. (2010) for one such attempt at disambiguating the influence of contextual factors on quality improvement.

wary of asserting the dominance or supra-validity of any particular stance or model (Degeling, 2000; Emanuel & Emanuel, 1996). Secondly, we should be careful not "to confuse the different models of accountability that operate in different facets of the health care system", for example by encouraging a belief in the professional model whilst actually operating with an economic model (Emanuel & Emanuel, 1996, p. 238). Finally and most importantly, it may be timely to consider how we should best be managing or negotiating these multiple rationalities, through the various forms in which accountability can be enacted.

To achieve this, we may need new ideas about how we create and exchange accounts in complex organisations like hospitals, perhaps by balancing visibilities and spanning distances more closely than before. It may be time to re-conceptualise accountability less as a rigid and pre-defined system, but more as a dynamic patterning of relationships and communication within and across boundaries. As Iedema (2003) noted, “the challenge is to create a dialectic between ways of doing the work and ways of informating the work, such that their mutual relevance is kept in check” (pp. 175-176). I leave the reader with these thoughts, to be revisited in the discussion chapter of this thesis.

Chapter 4

Methodology

4.1 Introduction

In the previous two chapters, I reviewed the research literature on patient safety and accountability, which included a discussion of the utility and appropriateness of the different methodological approaches that have been taken in researching these topics. The discussion is continued in the first section of this chapter, to explain, justify and support the ethnographic methodology employed in this study. The second section will describe the methodology employed in this study in reflexive detail, beginning with a discussion of the relevant theoretical perspectives, which I link to my use of ethnography. A description of how this study was conducted then follows, to explain how data was collected and how it was analysed. In the third section, I tie together some of the methodological and theoretical issues outlined in the first two sections, and relate them to the broader aims of this study. I conclude with a discussion of ethics and accountability in the field, a consideration of the limitations of ethnography, and a discussion about validity and reliability in the context of this thesis.

4.2 Methods of researching patient safety

In Chapters 2 and 3, I presented a critical analysis of the scientific methodologies that deliver the kind of ‘gold standard’ evidence that is currently valued in evidence-based medicine (EBM). When such evidence is used to develop guidelines, we find that it can be lacking, misleading, and often inadequate. When applied to the study of patient safety and organisational behaviour and change, these ‘gold standard’ research methods fall further short. There are two issues at the heart of this mismatch; Firstly, the mismatch between the methodology and the subject of interest, and secondly, the mismatch between the outcomes of such research and the subjects they are expected to inform.

Patient safety, organisational behaviour and organisational change are complex, multi-faceted, ‘messy’ and dynamic topics of study, characteristics which render them difficult, if not impossible, to define, measure and control (Shojania et al., 2001). This contrasts with the requirements of experimental methods such as randomised controlled trials (RCTs) which require problems to be “well-structured” (Star, 1983, p. 207), with variables and outcomes to be fixable, definable, measurable and controllable (Denzin, 2009).

In addition, experimental methodologies are lauded for controlling context and thus “minimising or eliminating its effect on what is being studied" (Batalden & Davidoff, 2007, p.2). This becomes a liability when we deal with issues that we perceive to be contextually-embedded. In Chapter 3 for example, we saw that the use of guidelines may be particularly context-dependent, such that the most successful guidelines are those that are compatible with pre-existing practices, and/or are contextually-embedded themselves by explicitly engaging local judgement and collaboration in their use (Berg et al., 2000; Bosk et al., 2009; Grol et al., 1998; Timmermans & Berg, 1997; Timmermans & Mauck, 2005). These latter studies reached their findings by paying particular attention to the use of guidelines *in practice*, and by using qualitative methods including observation and interviews, normally given little or no credence in the hierarchy of ‘gold standard’ research methods. These methods however allowed the researchers to attend to clinical behaviour as practices *within their contexts*, an approach that counterbalances the limitations of more experimental methodologies.

In this study, my aim was to explore safety *in practice*. For this purpose, I used a qualitative, ethnographic approach, employing methods including field observation, field interviews, feedback sessions and documentary analysis.

Why ethnography?

Ethnography as a research methodology has been described, conceptualised and practiced in multiple and varied ways over time, from its beginnings in cultural anthropology to more recent incarnations, including ethnonursing and critical ethnography (Berg, 2009). Atkinson et al. (2001a) noted that ethnography has become pervasive in social science and yet “escapes ready summary definitions” (p. 1). Within this diversity however, it is perhaps not too controversial to state that “the practice places researchers in the midst of whatever it is they study” (Berg, 2009, p. 191), and that it is “grounded in a commitment to the first-hand experience and exploration of a particular social or cultural setting on the basis of (though not exclusively by) participant observation” (Atkinson et al., 2001a, p. 4). Dixon-Woods (2003) argued for the use of ethnography in patient safety research, noting that:

> Ethnography is especially good at probing into areas where measurement is not easy, where the issues are sensitive and multifaceted, and where it is important to get at the tacit, not the already evident. It can capture the winks, sighs, head shaking, and gossip that may be exceptionally powerful in explaining why mistakes happen, but which more formal methods will miss. (Dixon-Woods, 2003, p. 327)

As Law (2004) noted, “ethnography lets us see the relative messiness of practice” (p. 19), which is crucial, given the ‘messiness’ of clinical practices:

> Although much work follows routinized paths, the complexity of health care organizations and the never fully predictable nature of patients' reactions to interventions result in an ongoing stream of sudden events. These have to be dealt with on the spot, by whomever happens to be present, and with whatever resources happen to be at hand. (Berg, 1999, pp. 90-91)

Finn & Waring (2006) too argued for the use of ethnographic methods in patient safety, noting that they are particularly suitable for examining organisational ‘culture’, a factor often identified as crucial in the patient safety literature. They described culture as something that “guides collective social action in specific contexts and situations in everyday work and cannot be divorced from that” (p. 163), and argued therefore that culture cannot be satisfyingly captured by surveys that obtain a kind of post-hoc measure of ‘climate’ removed from context and practice. Instead, the study of culture requires “getting close to the everyday working practices of healthcare professionals by participation in natural settings, an approach at the heart of the ethnographic perspective" (Finn & Waring, 2006, p. 163). Basically, ethnography "promises to reach parts of the social world other methods cannot reach" (Finn & Waring, 2006, p. 170).

What kind of ethnography?

Ethnography offers a perspective on patient safety that is potentially very useful yet relatively rarely utilised. Only a handful of studies have looked explicitly at patient safety through an ethnographic lens, and even amongst these few studies, perspectives and methods have differed to varying extents. To take two studies on medical error as examples, we have Charles Bosk's (2003) classic and oft-cited book "Forgive and Remember" on surgical error, first published in 1979. The other, by Taxis and Barber (2003a, 2003b) is a more recent ethnographic study of intravenous medication errors, published as two short journal articles in a medical journal and a patient safety journal.

Both studies relied on observation for their data, and both dealt broadly with the issue of error in the healthcare context. However, these are almost the only two similarities between the two studies. In terms of method, Bosk (2003) spent 18 months in one hospital, observing two surgical teams by following surgeons through their daily activities and systematically varying the ways he interacted with them. He took field notes "in as narrative or straightforward fashion as possible" (p.14), and within 24 hours of events observed. He also followed an iterative process of being intensely involved with fieldwork for two to 4 weeks, followed by a roughly similar period of analysis outside the field before going back in. He left the field only when he was "convinced that [his] observations had reached the point of diminishing marginal utility" (p. 15). Bosk also conducted interviews with participants and reviewed staff personnel folders. In contrast, in Taxis and Barber's (2003a, 2003b) study, Katja Taxis accompanied nurses during intravenous drug administration rounds for 6 to 10 consecutive days per ward in 10 wards in 2 hospitals, over a period of 6 months. She recorded the preparation and administration of each drug on a standard form, and her observations were "guided to record information on the chain of events that led to the error and the actions of those involved". In addition to observation, Taxis obtained information by "talking informally to staff" (Taxis & Barber, 2003b, p. 344).

Underlying their different approaches to method, these studies had different theoretical frameworks and goals. Taxis and Barber (2003b), for example, seem to have gone into the field with strictly limited, pre-defined and highly-structured expectations for what they wished to observe. For instance, the ‘context’ in their field sites was only explored when an error occurred, and in so far as, “many of the conditions which contribute to errors, as outlined by human error theory, [could] then be identified in this context” (p. 344). Bosk (2003) however, had broader, less strictly-defined goals, one of which was to produce a kind of “social portraiture” of a professional group’s “occupational morals” (p. 230), and the second was to “inform policy by grounding it in a firm understanding of how participants construct their social worlds” (p. 230). His approach may perhaps be closer to this statement about field work by Cassell (2005):

> Rather than seeking to measure and predict, the fieldworker's primary aim is to understand. It is open ended; you enter “the field” to examine what is occurring, rather than clearly defining and delimiting exactly what will be investigated ahead of time. (Cassell, 2005, p. 179)

This statement is perhaps overly generous, for Bosk as well as Taxis and Barber did define and delimit what they sought to investigate ahead of time, albeit to different extents. They both also anticipated what they would find, based on their different theoretical frameworks, with specific consequences for their findings. Taxis and Barber (2003) undertook their study within the frame of human error theory (e.g., Leape et al., 1995), looking only at the administration of pharmacological medications, and therefore anticipated and found characteristics solely within this limited context that corresponded to their adopted theory. Bosk (2003) followed the principles of grounded theory (Glaser & Strauss, 1967) and adopted a social constructionist approach with a much broader range of observations over a much longer period of time. As a result, he published a text that provided a broader and richer description and explanation, ‘from the ground up’, of how surgeons construct moral order within their social and professional worlds.

In illustrating these differences, it becomes apparent that the term ‘ethnography’ in current usage encompasses a multiplicity of approaches that can differ in both practical and theoretical ways, a point already stated earlier (Berg, 2009). As such, I do not assume in this thesis that there is only one way of doing ethnography. Also, rather than making judgements about the relative authenticity of different approaches in this thesis (see Forsythe, 1999, for such an argument), I see instead the importance of carefully reflecting on my own use of the term, and accounting for it in not only practical and theoretical terms, but also personally.

A reflexive account of a reflexive approach

> The reflexive ethnographer does not merely report findings as facts but actively constructs interpretations of experiences in the field and then questions how these interpretations actually arose. The ideal result from this process is reflexive knowledge: information that provides insights into the workings of the world and insights on how that knowledge came to be.
>
> (Berg, 2009, p. 198)

> Tiffany's Second Thoughts said: Hang on, was that a First Thought?
> And Tiffany thought: No, that was a Third Thought. I'm thinking about how I think about what I'm thinking. At least, I think so.
> Her second thoughts said: Let's all calm down, please, because this is quite a small head.
>
> (Terry Pratchett, ‘The Wee Free Men’, p. 202)

In the following sections, I will account for the theoretical and practical perspectives and issues that best describe my use of ethnography. In describing how these factors relate to the study, I will also interweave the ‘personal’ with the theoretical and practical, undertaking the “self-socio-analysis” that Bourdieu (2003) described as beneficial, and which I find to be crucial in accounting for a research process in which I was, in a sense, “the research instrument” (Forsythe, 1999, p. 129).

> Maintaining the facade of neutrality prevents a researcher from ever examining his or her own cultural assumptions or personal experiences. Subjective disclosures by researchers allow the reader to better understand why a research area has been selected, how it was studied, and by whom. (Berg, 2009, p. 202)

Included in this account of the personal, I also take the rarer step, as Gilbert (2001) suggested, of identifying the crucial role of emotion in directly guiding my behaviour in the field, and the data I collected. Gilbert argued that:

> [For qualitative researchers] to know the phenomenon about which they write and to be fully honest about how they came to their interpretation, one can argue that it is dishonest not to draw on their own emotional experience and incorporate those emotions into the final telling of their “research tale.” (Gilbert, 2001, p. 11)

I undertake her advice, especially in the later sections of this chapter. In the next section, I present a reflexive account of the theoretical perspectives that have informed my research.

4.3 Theoretical perspectives

> Intellectual history isn't like a single tree with endlessly subdividing branches. Instead, there are overlaps, resonances, shared topics, and crossovers between traditions that are quite alien to each other in other respects.
>
> (Mol, 2002, p. 66)

In this section, I outline the theoretical perspectives that are important to this thesis, in particular those which underlie the literature that I have cited so far to justify this study and my perspective. These perspectives are not presented as an account of how I planned and carried out my study, but rather, as a kind of post-hoc assemblage.

To explain, my study was a part of a larger ethnographic project already set up in four sites and two hospitals, with research having already commenced on three out of four of those sites by a senior researcher on the project. As such, I was launched immediately into determining my methods, beginning fieldwork only seven weeks after I had joined the project and commenced my doctoral candidature. My theoretical perspective and epistemology therefore developed mainly *whilst* I was in the field, and were 'worked out' from a combination of a study of methodological texts, reviews of the literature and, importantly, what I was 'finding' in the field as I carried out my fieldwork. As such, the post-hoc theoretical framework presented here does not fit neatly into one particular philosophy, but is instead composed of elements drawn from multiple but related perspectives.

Using Crotty's (1998) 'order' of methodological elements, I begin at the most elemental level, at the epistemological stance of this thesis, my theory of 'how we know what we know'. This thesis is constructionist. That is to say, it is written from the perspective that the meanings described therein are not discovered, but rather emerge through human engagement with the world, and moreover, that "no object can be adequately described in isolation from the conscious being experiencing it, nor can any experience be adequately described in isolation from its object" (Crotty, 1998, p. 45). Furthermore, it is 'social constructionist', which locates these processes of meaning-construction always within social contexts (Crotty, 1998). As such, this thesis and all my findings and arguments have been constructed via my engagement with my field site and participants, my participants' engagement with each other and their environments, and my engagement with my research colleagues and the research literature, to name but a few sources and contexts of engagement[15]. This perspective rejects the objectivist stance that there are objective truths 'out there' waiting to be discovered, a perspective that underlies much of the 'gold standard' research methodology criticised earlier in the literature review.

Moving on to the next 'level' of theoretical perspectives (Crotty, 1998), I present a number of theoretical arguments that are pertinent to my use of ethnography, and the perspectives from which they have been drawn. In presenting my theoretical framework thus as post-hoc assemblage, I also draw from my espoused constructionist epistemology. That is, I explicitly acknowledge the way I have *constructed* this account with the available tools of my given methodology and the pre-existing theoretical literatures, rather than adopting a perspective as a whole and complete way of thinking from the available literature. In fact, I would argue that such a latter claim could be disputed, since one of the things that becomes apparent when researching a variety of theoretical perspectives is that theoretical perspectives themselves are mutable, diasporic (Law, 1999) and plural in their meaning and usage (Crotty, 1998), like ethnography as described above.

In this section, therefore, I identify several key points that link the main theoretical perspectives underlying the empirical literature that I have used to justify this study, and by which I might articulate the links between this thesis and the wider theoretical literature (Willis et al., 2007). The theoretical perspectives that I draw on are: practice theory (Schatzki, Cetina & von Sevigny, 2001), actor-network theory (ANT) (Latour, 1996, 2005; Law, 2004), ethnomethodology (Garfinkel, 1967; Maynard & Clayman, 1991; Rawls, 2002; Ten Have, 2004), negotiated-order theory/symbolic interactionism (Strauss, 1978; Strauss et al., 1963; Strauss et al., 1985) and grounded theory (Charmaz & Mitchell, 2001; Glaser & Strauss, 1967).

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[15] It may be pertinent to mention that prior to undertaking this research, I had been schooled solely in what might best be described as a post-positivistic (objectivist) theoretical perspective (Crotty, 1998) in my undergraduate and masters-level research training in behavioural and educational psychology. As such, although the method of ethnography was decided for me, the constructionist perspective that I present in this thesis was not so pre-determined, although it was perhaps difficult to avoid, given my prior dissatisfaction with the limits of objectivist methods of social research.

In the previous two chapters, I drew on a variety of literatures to argue that we should be thinking about patient safety and accountability as practices, a perspective that has been broadly described by *practice theory* (Schatzki et al., 2001). In describing practice theory, Schatzki (2001) reinforced my earlier point by noting that there is a "multiplicity of impulses, issues and oppositions" and therefore "no unified practice approach" (p. 2). Instead, he described the practice approach broadly as "all analyses that (1) develop an account of practices, either the field of practices or some subdomain thereof (e.g., science), or (2) treat the field of practices as the place to study the nature and transformation of their subject matter" (p. 2). I undertook both approaches in this thesis, developing an account of accountability practices as 'the place' to study the 'nature' and enactment of safe practice.

Next, in identifying and describing formal mechanisms and tools of safety and accountability, I am indebted to the insights of Munro (1996) and Timmermans and Berg (2003) who undertake an *actor network theory* (ANT) perspective, describing nonhuman objects such as guidelines or computerised systems as "exerting agency in a particular situation with other agents: people and machines" (Timmermans & Berg, 2003, p. 22). This corresponds comfortably with Crotty's (1998) description of constructionism in acknowledging the particular importance of the objects of which we make meaning, not simply as passive recipients of our subjective gaze, but as crucial elements of the interaction through which we make meaning. In this thesis, I attend also to how formal 'objects' of clinical practice may play an 'active' role in how clinicians create safety in clinical practice.

Another aspect of ANT which links it with practice theory is Latour's (1996) description of a "background/foreground reversal" (p. 370), which emphasises local practices and contingencies over universal laws, similar to Schatzki's (2001) comment on the practice approach having a "forceful opposition to representational accounts" (p. 12):

> Instead of starting from universal laws – social or natural – and taking local contingencies as so many queer particularities that should be either eliminated or protected, [ANT] starts from irreducible, incommensurable, unconnected localities which then, at a great price, sometimes end into provisionally commensurable connections. (Latour, 1996, p. 370)

> Meaning and language, arising from and tied to continuous activity, cannot be telescoped into representations or mental contents, which themselves acquire the property of being about something by virtue of how people use and react to them. (Schatzki, 2001, p. 12)

This tension between local activity and representational accounts is central too to *ethnomethodology*, which, notwithstanding its own diversity (Maynard & Clayman, 1991), also focuses centrally on practice. In the very first sentence of his foundational text, Studies in Ethnomethodology, Garfinkel (1967) wrote:

> The following studies seek to treat practical activities, practical circumstances, and practical sociological reasoning as topics of empirical studies, and by paying to the most commonplace activities of daily life the attention usually accorded extraordinary events, seek to learn about them as phenomena in their own right. (Garfinkel, 1967, p.1)

Ethnomethodology too goes against the notion that rules and rule following can explain human conduct or social order (Maynard & Clayman, 1991; Rawls, 2002). Maynard and Clayman (1991) argued that ethnomethodological studies using ethnography have demonstrated the incompleteness of formal rules and procedures for capturing the detail of work that is done, a statement supported by the research literature reviewed in the previous two chapters. Garfinkel's thinking however, actually extends Shatzki's (2001) portrayal of practice theory's "forceful opposition to representational accounts" (p. 12) and the theoretical oppositions of 'local vs. universal' and 'practice vs. representation', by locating these very tensions *in everyday practice*.

> The philosophical problem of the gulf between the abstract and general on the one hand and the concrete and situational on the other, can, for ethnomethodological purposes, be respecified as a problem that members of society solve as a matter of course in their everyday activities. (Ten Have, 2004, p. 21)

Garfinkel pointed out that all accounts are representational to some extent, and he called them 'indexical', which Ten Have (2004) explained as expressions "whose sense depends on the local circumstances in which they are uttered and/or those to which they apply" (Ten Have, 2004, p. 21). Furthermore, Garfinkel suggested that the uses of and reactions to indexical accounts are in fact central to how people 'construct' meaning through everyday practices. Ethnomethodology, as such, is the study of the methods people use for producing recognizable social orders (Rawls, 2002, p. 6). Ethnomethodology thus extends the epistemological standpoint of social constructionism by studying *how* it is that meanings are constructed by individuals (Lemert, 2002).

> The activities whereby members produce and manage settings of organized everyday affairs are identical with members' procedures for making those settings 'account-able.' The 'reflexive,' or 'incarnate' character of accounting practices and accounts makes up the crux of that recommendation. (Garfinkel, 1967, p. 1)

To be "account-able" in Garfinkel's terms is to be intelligible or explicable, "in the sense that actors are supposed to design their actions in such a way that their sense is clear right away or at least explicable on demand" (Ten Have, 2004, pp. 19-20). In other words, people are constantly behaving in representational ways to account for their behaviour with one another, and in turn, are always interpreting others' representational accounts. As Ten Have (2004) phrased it,

> The always awaiting task, the 'contingent ongoing accomplishment of organized artful practices of everyday life', is to connect the [abstract and the concrete], by giving accounts, by 'hearing' what was 'meant' rather than what was 'said', etc. (Ten Have, 2004, p. 22)

So far, the theoretical perspectives that I have cited have been linked by their attention to the primacy of practice, and a focus on local, contingent and continuous activity in contrast to preferencing rules and other static representational accounts as explanations for behaviour. In describing Garfinkel's ethnomethodological approach, we find that this oppositional tension can be located in everyday practice, in which people behave accountably, that is, by producing actions in recognizable forms (Rawls, 2002).

From Garfinkel (1967) therefore, I not only derive a broader description of accountability as discussed in Chapter 3 – going beyond its more visible formal manifestations to include more informal everyday accountability – but also the view that safety may be iteratively and contingently 'produced' through this everyday accountability. Relating back to my aim in this study, the question then arises as to how formal accountability comes into play in clinicians' production of safety.

Maynard and Clayman (1991) argued that despite the incompleteness of formal rules and procedures and the need for “judgemental work” to be done in order to implement rules (p. 405), these rules and procedures are still relevant to understanding practices:

> Actors use them to make sense of their circumstances and invoke them as rhetorical and accounting devices in dealing with others and getting their jobs done. By these means, actors may provide themselves and others with a sense, after all is said and done, that organizations and institutions are “rational” concerns. (Maynard & Clayman, 1991, p. 405)

Strauss et al. (1963) articulated a similar point, but coming from a *symbolic interactionist* perspective:

> The rules that govern the actions of various professionals, as they perform their tasks, are far from extensive, or clearly stated or clearly binding. This fact leads to necessary and continual negotiation. (p. 151)

In these statements, we find the suggestion of work that is undertaken in order to implement inevitably incomplete rules, to use rules when “dealing with others” and to justify and portray “rationality”. These would be akin to the concepts of “articulation work” and “negotiative work” put forward by Strauss et al. (1985), who made use of Strauss’ (1978) negotiated-order approach, exemplified also in Strauss et al. (1963) and Wiener (2000). In this approach, negotiation is seen as “the essence of hospital work” (Wiener, 2000, p. 6), ever present in “how work is defined, as well as how to do it, how much of it to do, who is to do it, how to evaluate it, how and when to reassess it and so on" (Strauss, et al., 1985, p. 267). This negotiated-order approach comes from the theoretical perspective of *symbolic interactionism*, which also emphasises a focus on situated and emerging practices, but in contrast, shifts the focus of attention to the perspective of individual actors experiencing and interpreting these practices.

> People (…) make sense of the world by attempting to interpret themselves and others as they are revealed through emerging, situated acts on the social scene. They are obliged to try to decipher the meanings and boundaries of gestures, selves and situations that are in continual interaction with one another. (Rock, 2001, p. 29)

What the negotiated-order approach offers therefore, is perhaps a kind of ‘meta’ language, going beyond observable practices, to talk about how people might potentially manage different versions of accountability, or rather, how they might negotiate the multiple rationalities that determine what Garfinkel called ‘praxeological validity’ in clinical settings.

> According to Garfinkel, institutional orders work not through rules and rule following, but rather by imposing accountability constraints on action. Instructed action is accountable action. But instructed action is also carefully oriented over its course. It is reflexive action. It is action prospectively constructed to meet constraints of praxeological validity. That is, it must work and must be seen to work by others. (Rawls, 2002, p. 41)

In this study, I focused on the interactions between my participants as the loci of accountabilities enacted, and therefore write mainly about what goes on between them rather than within them individually. As such I do not quite use a symbolic interactionist perspective in analysing or describing my findings in this study. Reflexively speaking however, it is an apt perspective, as well as a useful set of terms, to apply to my own efforts at describing and deciphering their practices.

In summary, I have outlined the main theoretical perspectives that inform this thesis, showing how they are relevant to the aims and methods of this study[16]. Together, these theories describe a perspective on patient safety as located in practice, and constructed through clinicians’ enactments of multiple accountabilities. These accountabilities can be informal, contingent and local, as well as the formal rules, guidelines and processes more commonly identified. I also take into consideration the ‘active’ role of nonhuman ‘objects’, such as documents, equipment and computerised systems, in constructing this safety, and heed the work that is involved in this construction – in articulating rules with practice, and negotiating between the different versions of praxeological validity that may arise through different accountabilities.

Within this assemblage, I have loosely drawn together the different perspectives as if they are entirely complementary. To some extent they certainly are, as identified above. They are, for instance, linked by a common concern with local activity in contrast with

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[16] I will discuss grounded theory later in this chapter, in the section on data analysis.

rules and other instructional accounts. They are also compatible with ethnography which, in turn, “has always contained within it a variety of perspectives” (Atkinson et al., 2001a, p. 4). Furthermore, Latour (2005), for instance, has suggested that “it would be fairly accurate to describe ANT as being half Garfinkel” (p. 55). Looking more closely however, we find tensions between ethnomethodology and symbolic interactionism, and assertions of incompatibility and misunderstanding between their proponents (Dingwall & Strong, 1985). Maynard and Clayman (1991), for example, placed ethnomethodology squarely in contrast to symbolic interactionism:

> The focus in ethnomethodology on what are called, interchangeably, "procedures," "methods," and "practices" runs contrary to a cognitive-interpretive solution to the problem of order, wherein actors produce patterned courses of action because they share internalized frames of reference and value systems that enable common definitions of situations. (Maynard & Clayman, 1991, pp. 387-388)

This thesis, however, is not an ethnomethodological study. Instead, it is better described as indebted to Garfinkel’s ideas about accountability. Neither is this thesis symbolic interactionist although it is similarly inspired by ideas so identified. This thesis instead is a cross-disciplinary and cross-theoretical exploration, reflecting how I have drawn (and continue to draw) inspiration and insight from a range of literatures. This approach has engendered a kind of freedom as well as a certain non-coherence that can be crippling when faced with expectations of methodological certainty (Talburt, 2004). I argue, however, that this uncertainty better reflects the ‘empirical mess’ of the complicated problem of patient safety and the realisation that “that things are at least sometimes vague and can only be known vaguely” (Law, 2003).

> Realities are not flat. They are not consistent, coherent and definite. Our research methods necessarily fail. Aporias are ubiquitous. But it is time to move on from the long rearguard action which insists that reality is definite and singular. (…) We need new philosophies new disciplines of research. We need to understand that our methods are always more or less unruly assemblages. (Law, 2003, p.11)

My methodology therefore reflects the multiplicity that I describe later in my findings, presented through a conceptual framework drawn from the range of studies and perspectives discussed here and previously in Chapters 2 and 3. This analytical framework is introduced in the next section.

In the following sections, I move from the theoretical to the more practical, and describe the quotidian details of this study in a self-reflexive account of my methods in the field.

4.4 This study

Background

This study was funded by an Australian Research Council (ARC) Discovery Projects Grant, and was part of a 3-year ARC Discovery project entitled “Anchoring preventive health care to positive learning: a multi-method, multi-authorial exploration of ‘learning in and as practice’ to achieve clinical practice improvement, quality of care, and patient safety”. The project aimed to explore how clinicians learn as part of their practice, linking this learning to patient safety and quality of care.

The project was set up to do research with four sites in two hospitals in Sydney. Research in three sites was undertaken by a senior researcher, and the last was allocated to me for my doctoral research. My field ‘site’ was not so much a bounded location within the hospital but rather a group of clinicians and staff, who were either part of a multidisciplinary specialty team, or were working in an associated ward. The senior staff in the team and ward had volunteered to take part in this study following negotiations with the chief investigators and discussions with the senior researcher on the broader project. Furthermore, formal ethics approval from the human research ethics committees of the local area health authority and two universities had already been applied for and granted. As such, I found myself in the enviable position of being granted a ready field site with a number of consenting participants and an agreed-upon methodology. My task as such was to begin with urgency.

Within the auspices of the broader project, I was able to develop my own aims, research questions and methods for my doctoral study, which changed over the time I spent in the field, and only stabilised mid-way through field work, after I had spent about 6 months in the field.

Research aims and research questions

In line with the exploratory aims of this study and the grounded approach taken to analysis (Glaser & Strauss, 1967), my research questions were necessarily vague at the beginning of field work and became more focused near the end.

> In doing ethnography, initial research questions are carefully refined and pursued as fieldwork develops. When field anthropologists discover that they have been asking the wrong questions, they adjust their research formulation in the course of a study. (Forsythe, 1999, p.131)

At the start, my aims were in line with the project, to observe how clinicians interacted and communicated with one another, in order to learn from mistakes or safety incidents that had occurred. After a little time in the field, however, it seemed to me that this was not what I was observing, or rather, not what I was able to observe, and my aims thus quickly changed to a focus instead on how clinicians were working together to deliver safe care. Not only did this align much better with what I was able to observe in the field, it also addressed a perspective quite different from the patient safety literature I had reviewed at the time, which seemed to focus solely on the production of errors and adverse events. Framing this study as a focus on how safety was created and maintained was therefore novel and interesting. It was also an attractive aim to communicate to participants, and helped me avoid, to some extent, the double-bind of researchers who face the ethical problem of portraying their subjects in unfavourable light (Anspach & Mizrachi, 2006). My next research question therefore was: how do clinicians act and interact with one another, to enact patient safety?[17]

After about six months of field work, my focus had sharpened towards considering issues of formal and informal acts of safety, the possibilities of informal accountabilities, and the importance of talking about less visible kinds of work. If anyone asked, I would elaborate on these points. Later, it turned out that I was in fact able to observe and interview participants regarding occasions of ‘learning’ after safety incidents, but this prior aim became subsumed within the new focus of interest. As such, about half a year into my field work, I arrived finally at the research question addressed

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[17] It may be worth noting that no matter what I called my study, the nurses on the ward consistently referred to it as “the communication project”.

in this thesis, which was to investigate how clinicians enact and negotiate multiple accountabilities in their practices of safety.

A conceptual framework for analysis

To guide my analysis around this research question, I developed a conceptual framework of terms from my review of the literature to describe the forms of accountabilities in practice. I take accountability to be a practical and on-going accomplishment (Garfinkel, 1967), enacted through the creation, exchange and use of accounts that can be representative of practice (Latour, 1987), as well as explanations or justifications of practice (Giddens, 1984; Munro, 1996). I also analyse accounts by a set of descriptors derived from my analysis of the literatures reviewed in Chapters 2 and 3, as well as early iterative testing of my data. These are descriptors of accounts themselves – their *stability, mobility, combinability* (Latour, 1987; Robson, 1992) and *visibility* (Suchman, 1995; Star & Strauss, 1999), which are in turn attributes that are interdependent and interrelated with those that describe the movement of these accounts, namely *distance* (Latour, 1987; Robson, 1992)*, dis/embeddedness* (Giddens, 1990; Tsoukas, 1997) and *directionality*, which is my own term. In the following chapters (Chapters 5 to 7), I use these descriptors as a guide towards understanding how multiple forms of accountability intersect in clinicians' practices of safety.

The researcher

I am female and of East Asian descent, and was in my mid to late twenties during the course of this study. I have no clinical background, and presented myself to participants and other people in the field as a PhD student in the social sciences, studying organisational learning, organisational communication, communication, clinical interaction, or similar permutations, depending on who I was talking to and what we had been talking about. When asked, I explained that I had a background in psychology and education.

I had no experience in ethnographic research prior to this research, and prepared for fieldwork by consultation with an experienced anthropologist employed by my supervisor on another project, as well as by immersing myself in literature on 'doing ethnography' and hospital ethnography (Atkinson, et al., 2001b; Bourdieu, 2003; Cassell, 2005; Clifford, 1986; Geertz, 1973; Geest & Finkler, 2004; Pratt, 1986;

Spradley, 1980). I also spoke in depth and regularly with fellow research students who were also carrying out hospital ethnography in similar settings. The timing of this project was such that I went into the field only seven weeks after I had commenced my research degree, and went into it alone. As such, this account of my field work, particularly the first phase, is also an account of learning how to do fieldwork whilst doing fieldwork; that is, mainly by trial and error, iterative discussions with fellow researchers, and constant and intense reflexivity and self-scrutiny. It is also an account shaped by much personal discomfort, which may be common in ethnographic research, for novices or otherwise (Dixon-Woods, 2003).

Forsythe (1999) raises a number of concerns with regards to inexperienced ethnographers, mainly pertaining to what she sees as an inadequate understanding of the principles of ‘proper ethnography’, and researchers not taking ethnography seriously. She summarises her concerns here:

> These include the understanding that doing ethnography requires expertise; that analyzing a social situation entails much more than just having “inside” familiarity with that situation; that ethnographic research involves the application of conscious method that – while unobtrusive – is systematic and theory-based; that people’s self-reports about their own and each other’s actions are not taken at face value by anthropologists, but rather are systematically tested against other self-reports and against observable behavior; that seasoned fieldworkers carry out a good deal of observation and amass considerable data before producing generalizations about social patterns; and that good social analysis is the product of careful selection and thoughtful interpretation. (Forsythe, 1999, p. 133)

As someone who began fieldwork as an avowed novice, I sympathise with her arguments. Doing field work was not easy, and doing it ‘properly’ involved a great deal of study into what ‘proper ethnography’ means (which, as we have seen, can vary); a taxingly critical approach to my assumptions and those of my participants; and constant worry and concern about acquiring ‘enough’ data. These concerns are especially absorbing for a novice ethnographer although they may perhaps be present even for more experienced ethnographers. Furthermore, Davis (2001) makes a point about how researchers can be academically trained to prepare for the technical aspects of ethnography, but not so much the emotional consequences, which significantly shaped the kind of the ethnography I eventually carried out.

A second consideration for my role as the ‘research instrument’ is that prior to this study, I had very little, indeed negligible, experience of hospitals and hospital work. As such, a significant part of my field work was dedicated to learning about the hospital and the work that was carried out within it. At no point did I ever feel that I really knew for sure what was going on in the hospital, nor did I ever feel that I could fully understand the events that I observed. As such, I was, on balance, much more often an ‘outsider’ in what Spradley (1980) calls the insider/outside experience of participant ethnography. Inadvertently perhaps, this outlined for me quite clearly the position of Strauss et al. (1963), who suggested that “no one knows what the hospital ‘is’ on any given day unless he has a comprehensive grasp of what combination of rules and policies, along with agreements, understandings, pacts, contracts, and other working arrangements, currently obtains” (p. 165).

With this view, my data are not presented as a complete account of the goings-on that were observed (Hammersley, 2008), but rather as accounts of the practices I experienced in the hospital; situated in the spaces, events and interactions described below.

The field site: Locations

The field site for this study was a metropolitan tertiary children’s hospital in New South Wales, Australia. The hospital encompassed an acute care facility as well as associated outreach and community based services. My field work was mainly conducted within a particular ward, a series of hospital meeting rooms, in a set of outpatient clinic rooms, along corridors, up and down stairs and elevators and through other wards as my participants moved around the hospital. Less frequently, I also observed participants in their offices, the junior doctors’ room, a nearby cafe and two hospital cafeterias.

In the ward, I spent most of my time at two workstations, the medication room, and the doctor’s room[18]. The workstations were long desks near the entrance to the ward, set

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[18] Excerpt from field notes (31 July 2006):

> I discuss the study with [the ward clerk], and ask her where I should sit. She says “not there”, indicating the chairs facing the doors, because I won’t see anything. She suggests either the doctor’s room or the workstations.

perpendicularly to each other, with computers, telephones, and shelves for patient folders (ring binders containing records for all admitted patients), forms and other reference documents. Apart from the ward clerk, other staff including nurses, doctors and allied health clinicians would use these workstations temporarily but constantly, and it was an area that patients and their families would occasionally approach but not spend much time at. As such, it was an ideal location for me to sit at if a chair was available, and observe my participants' activities.

Nurses used the computers primarily to look up information on the hospital intranet (e.g., policies and guidelines, information about disease), to complete online incident reports, and to produce documents for their work (such as nursing handover sheets or to print notices to be put up on the ward). Nurses also sat at the workstations to use the phone, to read or write notes in patients' folders, and to conduct verbal handovers between shifts. Junior doctors used the computers mainly to look up test results for their patients, to type up patient notes and produce documents such as discharge summaries. Doctors also read and wrote clinical notes at the workstation, and filled out drug orders and other forms. Teams of doctors would also congregate at the workstations during their ward rounds, to check test results and discuss their patients. Allied health staff also used workstations to read and write clinical notes, although they were less likely to use the computers. All in all, the workstations on the ward were the main location where the greatest variety of professional conversations and activities took place, especially across professional boundaries. Two other locations that were important on the ward were the medication room, and the 'doctor's room'.

The medication room was a room with two entrances bounded by the workstations, within which nurses prepared medications for delivery to patients. In this room, nurses prepared to administer medications by reading and checking drug orders, calculating and measuring out doses, double-checking calculations and measurements with each other, washing their hands, creating a sterile trolley, and so forth. In this room, I was able to observe and talk to them about practices relating to the administration of medications and drugs and medication safety, an issue common to patient safety concerns (Miller et al., 2007).

The other important location in the ward was the doctor's room, which seemed to me a misnomer since it was used by nurses far more frequently than doctors. This was an enclosed room with nurses' lockers along one wall, a desk in the corner with a telephone and a light-box for viewing x-rays next to it. On one wall was two corkboards, one of which always had a constantly updated staff directory pinned to it, in the form of a list of the current staff on the different medical and surgical teams and their pager numbers. On another wall was the patient board – a large whiteboard with a grid of information about patients who were in the ward, organised by the bed number, including information such as their name, their admitting doctor, age, expected discharge date, formula/diet, acuity, and so on. Information was not always filled-out or neatly written within the columns and categories of the grid, and all manner of notes about patients and staff were also written on this grid in empty space or in empty columns. This board was constantly referred to by all clinicians who came to the ward, and the information on it was constantly changing. Information was written down with different coloured erasable marker pens by the nurse team leader for the shift and/or the nursing unit manager (NUM), and they also erased information as necessary.

The doctor's room also acted as a kind of storage facility, with boxes of toys and old clinical notes stacked up on the lockers. In this room, meetings were also held, such as the nursing handover meetings that began each shift, between the incoming nurses and the current shift's nursing team leader, or between the team leader and the NUM, or between the NUM and the bed managers of the hospital. Staff also used the room sometimes as a quiet retreat to write notes or have conversations in relative privacy, although they were still often interrupted. In this room, I was able to observe how clinicians managed the organisation of the ward, including the categorisation and movement of patients and the allocation of staff. The doctor's room was also sometimes a quiet retreat for me, where I could collect my thoughts and write my notes and sit without having to constantly attend to my surroundings and account for my presence. I was also able to use the room to conduct field interviews on occasion, as it was relatively quiet when unused, although interviews would often be interrupted as the patient board, staff directory or my interviewee were consulted by other staff.

The other locations in the hospital are, in a sense, less important to describe here because I tended to move quickly through them whilst following doctors or nurses rather than lingering. As such, after the initial stage of identifying and mapping these locations, their main features spoke to me primarily of the peripatetic nature of participants' (especially the doctors') movements throughout their work day.

Participants

Participants for this study were recruited from a multidisciplinary medical team and the staff on the aforementioned ward. Senior members of the team and ward staff had volunteered to participate in the project before I joined. Recruitment thus began before fieldwork commenced, and continued throughout, with new or rotating junior, casual, and pool staff invited to participate. Whenever a new staff member arrived (whether in the team or on the ward), I would wait for an appropriate situation to introduce myself. Along with the formal participant information sheet (see Appendix A), I had prepared a brief information sheet (see Appendix B) outlining my study in straightforward language. Participants were invited to participate, and it was always made clear that they were not at all obliged to do so. Most people approached did in fact agree to participate and returned signed consent forms to me. A few declined, or agreed to and then failed to return their consent forms. After asking once, I assumed that these people may have been passively declining to participate and did not pursue the matter further.

Over both phases of field work, a total of 72 clinicians and staff members consented to participate in this research, representing the professions listed below in Table 1.

Table 1
Number of participants by profession (or position)

Number of participants	Profession / position
1	Nurse Unit Manager (NUM)
1	Clinical Nurse Consultant (CNC)
1	Clinical Nurse Specialist
2	Clinical Nurse Educator (CNE)
1	Specialist Nurse
33	Registered Nurse (RN)
5	Dietician
1	Speech Therapist
1	Play Therapist
2	Social Worker
1	Clinical Psychologist
1	Pathologist
5	Medical Consultant

3	Fellow
4	Registrar
4	Resident
1	Patient service attendant (PSA)
1	Ward Clerk
1	Secretary
3	Biomedical Researcher

In the first phase of my fieldwork, the multidisciplinary team consisted of 8 doctors, (including 4 consultants, 2 fellows, 1 registrar and 1 resident), a clinical nurse consultant, a specialist nurse, 2 dieticians, a social worker, clinical psychologist, speech therapist, and 3 medical researchers. In the second phase of my fieldwork, there had been a change in the structure of the team. There was a change in senior medical staff, with one consultant retiring and another taking his place. Both fellows had also left and been replaced by another, with the junior doctors now consisting at any one time of a fellow, two registrars (one junior and one senior) and a resident. Both dieticians had left, and were replaced by 3 dieticians working part-time; the social worker had also left and been replaced, and the clinical psychologist was no longer part of the team due to funding cuts. The specialist nurse had also left and in turn, another clinical nurse specialist had joined the team. In the second phase, I was also able to meet the team's secretary, as well as a play therapist who had just begun to join team meetings. Throughout the research, the pathologist who met with the team to discuss pathology results once a week was also recruited to the study.

On the ward, registered nurses were the majority of my participants, including senior nurses such as the nursing unit manager (NUM) and a clinical nurse educator, who left and was replaced during the first phase of my fieldwork. Apart from the nurses, the ward clerk and a patient service attendant also participated in this study.

It is crucial here to note that due to the formal ethics agreement and the boundaries of the project, I was not allowed to recruit any patients, and indeed was not to focus on them at all. In the field, ignoring their presence proved to be unfeasible, and instead I compromised by avoiding the patient areas in the ward, especially if parents or carers were around, and, when following doctors on their rounds or in clinic, the doctors either introduced me as a student researcher studying the team, or else I tried to be less visible by blending in with the rotating cast of medical students, who were generally passive observers like myself. At this point, it is important to mention that the patients in the ward were very young, from babies to toddlers, and as such I responded to them with smiles and funny faces, but I would not generally initiate any contact with them unless asked to by a parent/carer or a staff member. In my notes, I de-identified them, and tried to minimise writing any observations of them, focusing instead on what my participants were doing. Nevertheless, this was a particularly artificial exclusion, as patients and their carers were in fact obviously crucial to the work that my participants were engaging in. In Chapter 7 for example, I mention the role of patients and their carers in creating safety, through data consisting of clinicians' talk about patients and their carers, rather than recorded observations of patients themselves.

The field work schedule

I conducted field work in two phases. The first phase began in July 2006 and finished in early March 2007, with a 3 week break in January. The second phase began in May 2008 and finished in July 2008. The fieldwork covered a total of 10 months, and involved approximately 300 hours of written observations. I describe the two phases in more detail below, in the section on data analysis.

I observed participants during their work day, across a variety of activities. Fieldwork was mostly carried out during the week, at varying intervals, but primarily between the hours of 7.00am and 9.30pm, corresponding with a normal shift for the multidisciplinary team, and the morning and afternoon shifts for nurses on the ward. For doctors, the day usually began at 8.30am and was scheduled to finish around 5.30pm, although they often stayed later, and came in earlier for fortnightly meetings scheduled at 7.00am. For nurses, I observed them during the morning (7.15am to 3.30pm) and afternoon shifts (1.15am to 9.30pm). I did not come in on the weekends or during night shift, as this was a condition nominated earlier by the nurses before consenting to the project. Another condition was that I did not enter the tea room during breaks, and so I did so rarely, only when invited, such as during the Christmas lunch and quiet evenings by participants who were particularly friendly or who had become quite comfortable with me.

In the ward, apart from what I broadly classified as "general ward activity", I was also able to observe nursing handover meetings in the doctor's room, and ward rounds when the team arrived to do their rounds with patients admitted to the ward. Outside of the ward, I attended two sets of weekly meetings with the multidisciplinary team: one involving discussions of patients, which were called “team meetings” (the team also called them “the Monday meetings”), and the other known as “academic meetings” which were occasions for team members to give presentations to the rest of the team as teaching moments. I also attended their weekly pathology rounds and less frequent business meetings and mortality and morbidity (M&M) meetings. These meetings were particularly important for me to observe as they usually involved discussion amongst most if not all the team members.

The weekly team meetings in particular were important to me as they involved the team going through their patients one by one, reporting one how they were going, what had been done, and discussing what they might do next. During these meetings, I was able to observe how participants talked about their patients, and negotiated with each other, across professional boundaries, what actions to take next. The few M&M meetings I observed were also particularly important, as occasions during which the team would go through a list of recent incident reports involving their patients, with a view to understanding what had gone wrong, and how they might prevent similar incidents in the future. These meetings were crucial in developing my understanding of incident reporting as a safety initiative.

Apart from these regular meetings, I also regularly followed doctors on their daily ward rounds, and during their outpatient clinics. More generally, I also attended hospital grand rounds and clinico-pathological conferences, which helped me understand the wider context of the hospital and paediatric acute care services in general.

4.5 Data creation[19]

Observations

Ethnographic observation is generally described as ‘participant observation’, although the degree of participation varies. My level of participation was somewhere between ‘passive’ and ‘moderate’ as identified by Spradley (1980). That is to say, I was never really a participant in the clinical work carried out by my participants, but as I spent

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[19] Here, I have referred to what is usually called ‘data collection’ as ‘data creation’, to use a term that better describes the (co-)constructed nature of my data.

more time in the field, I began to participate in some kinds of activity on the ward and in the hospital, such as answering the phones and taking messages, helping out with creating documents on the computer, running errands to buy food and drinks, answering questions about where people were, and helping to entertain or supervise children when asked to by nurses or their carers.

Motivated by the acute feelings of discomfort arising from feeling “marginal” to the ward (Davis, 2001), I found that these efforts at participation helped normalise my presence in the field to some extent, and gave me some small measure of ‘insider’ experience that also helped in identifying emerging themes for analysis. For example, after some time in the field, I was often able to answer questions about the whereabouts and identity of my participants (e.g., by identifying members of my participating team, or by knowing that a nurse had gone down to the pharmacy) because I had been carefully observing what was going on. Not only did this help me feel more useful (and therefore less uncomfortable), but it also drew my attention to the constant informal verbal communication that was undertaken to coordinate clinical activities. For example, people were much more likely to ask another person which nurse was looking after a patient rather than checking the whiteboard where these details were listed. There were a number of reasons for this, but this phenomenon certainly became more obvious to me when I started answering these questions myself. Furthermore, my efforts at participating helped develop my relationships with participants in the field. A particularly proud moment for me was when a nurse (who had previously been openly suspicious of my presence) gave me a silver star sticker on my ID badge for helping her entertain a child with crayons and pictures whilst the child’s parents were in a meeting with their medical team.

I wrote down my observations as field notes in a series of 13cm by 20cm spiral-bound notebooks that I carried around at all times. These consisted of observations of activity, snippets of conversation and quotes, descriptions of places and people, as well as drawn maps and copies of documents and signs displayed in the environment. Alongside my observations, I also recorded a personal reflexive account of my daily experiences in the field, more general thoughts about my observations, and questions that would arise in my mind. I undertook to transcribe these notes and scribblings into electronic documents as soon as possible, usually within two weeks or a month at the most. I also collected data using a small digital voice recorder, and transcribed those recordings myself. When recording meetings, the recorder was sometimes put on the table, and during interviews, the interviewees sometimes held the recorder, to give them control of it. Otherwise, at most other times, it was visibly located in a pocket attached to my notebook. A small red light would come on at the top of the recorder when it was recording, that was visible to all.

In the first phase of fieldwork, my initial activity centred around familiarising myself with the environment of the hospital and the ward in which I was located. This involved techniques such as mapping, and very detailed notes describing the setting and people in the setting that I could use later on (Spradley, 1980). This initial activity also involved familiarising my participants with myself as a researcher and my note-taking activity. I did not introduce audio recording to my participants until September 2006, roughly a month after I had begun fieldwork.

I began audio recording during the meetings of the multidisciplinary team, being occasions where most if not all of the clinicians present would have consented. It took much longer before I was comfortable introducing the recorder with the nurses and staff on the ward, as many of them seemed wary of it. I began recording in the ward during handover meetings, but generally I used my recorder much less whilst doing field work in the ward. Upon reflection between the two phases of field work, I decided that my hesitation to use the recorder in general was possibly due more to my own discomfort in introducing this unappealing device to my participants than to any particular discomfort they may have had with it. As a result, I made it much more of a feature of my field work in the second phase, asking for permission more often to record conversations, interviews and so forth. This was preceded however by two 45-minute presentations that I conducted to re-acquaint the staff with my research, during which I carefully explained the process of recording data – that I was the only one who would listen to the recordings, that they would be transcribed only by me, and that the transcripts would be totally de-identified. I also carefully outlined how any data (not just the recordings) would or could be used in future publications, and the steps I would take to protect their identities.

Field interviews

Interviews in this study were primarily unstructured, informal and ad hoc, and sometimes on-going over several days when following a certain event over time (Heyl, 2001). I asked questions of my participants for a range of reasons, such as asking them to clarify what they were doing, to clarify earlier remarks they had made, and to help me fill in holes in my understanding about events, professional roles, people and procedures. Later in my field work, especially nearing the end of the first phase and during the second phase, I spent more time discussing events or issues in detail with participants, often with pre-prepared topics or questions relating to emerging themes. With these in mind, I would take every opportunity to talk to participants who seemed to be interested or had some spare time. I conducted these later interviews whenever I could, in the spaces before and after meetings, and often when they were waiting for something – either for the phone to ring following a page[20], or for another (usually more senior) clinician to arrive. As such, they were characteristically brief and interrupted.

Nevertheless, these questions and their answers were crucial in helping me understand a great deal about the hospital environment, and made me appreciate just how much of the 'goings on' in the hospital could be invisible to an outsider like myself, not just things that went on in closed offices and were hence 'out of sight', but also things that were right in front of me, such as the extra scribbles on the patient board (including mysterious acronyms), the multitude of beeping pieces of equipment, and how clinicians reacted differently to what sounded like the same urgent alarms coming from this multitude of beeping equipment.[21] As noted above, when I began to answer questions myself about some of the workings of the ward, it became obvious to me then that the goings-on could be invisible to an insider as well, necessitating a great deal of verbal and informal communication and accounting in order to make one's way around the hospital.

Feedback sessions

Following the first phase of fieldwork, I conducted three feedback sessions with my participants – two with the nurses on the ward and one with the multidisciplinary team.

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[20] Nurses and other doctors could contact junior doctors (residents, registars and fellows) by paging them on hospital phones. The junior doctors would then receive a number on their pagers, which they were then expected to call as soon as possible.

[21] Excerpt from field notes (1 August 2006):

> I ask [a nurse] what the loud beeping noise is, and she tells me it's the "oxymeter", which measures heart rate and oxygen levels in the blood. I say something like 'so when it goes off, a nurse goes in to check?'. She says yes, but sometimes it's only a "trace" and so "we don't always run". She also says that if they're concerned about the child then they will hurry, but otherwise there is no rush to get there.

These sessions were written into my project, intended to encourage a kind of participatory sense-making between the researcher and participants, explicitly reinforcing the co-constructed nature of my findings. To facilitate this, I prepared presentations for each feedback session that consisted of a brief summary of the project and where it was up to, followed by the presentation of a few emerging themes and selections of de-identified data, mainly located around the idea of informal and formal accountabilities. I prepared different presentations for the ward and the team, focusing in each presentation on themes and data that were particularly relevant to them, although these also overlapped. Following the roughly 15 minute presentation, I then asked them what they thought, and encouraged them to discuss the issues with me and amongst themselves.

These sessions were also a form of accountability, where I was held accountable to my participants for my involvement in their work environment for the previous six months or so. As such, I conceived my presentation also in terms of justifying my presence in the field, as well as justifying all the help that participants had given me and the permissions they had granted to me. As a result, I felt that I had to present their work in a positive light, although this was not so much a problem, given the explicitly positive focus of this study as described above.

Nevertheless, participants still took the opportunity to challenge some of my ideas, with one session of nurses, for example, pointing out to me that the examples that I had used to talk about a ‘personal’ form of accountability were really seen by them as more a matter of professional accountability. For example, going to patients’ funerals was seen by nurses as a professional rather than personal duty, which led us to discuss that for nurses, it might be that the personal was very much a part of their professional identity.

On other issues, the feedback sessions were also an opportunity for the participants to discuss and talk through issues with each other. For example, participants at all feedback sessions were interested in talking about the incident reporting system which I mentioned in each presentation as an example of a formal process of safety. I recorded these conversations in my field notes (with the nurses) and on my recorder (with the team), and later transcribed them and used them as part of my data.

Data analysis: A grounded approach

In this thesis, I used a grounded approach to analyse my data, by which I mean that I had a purposeful approach towards my analysis, using many of the principles outlined in Glaser and Strauss' (1967) grounded theory. More specifically, and in line with my epistemological stance, I took a constructionist view of this process. Charmaz and Mitchell (2001) contrasted a 'constructivist' view of grounded theory with its more objectivist origins, noting for example that in terms of the task of finding out 'what is happening', Glaser and Strauss (1967) seemed to imply that "what is happening is obvious; suitable data are there for the taking, and categories inhere in them" (p. 164). Charmaz and Mitchell (2001) argued instead that "processes, data and categories reflect the mutual production of experience, including interaction, by the observer and observed" (p. 164).

To guide my account, I reproduce here a useful summary provided by Charmaz and Mitchell (2001) of the defining characteristics of grounded theory (p. 162):

1. Simultaneous involvement in data collection and analysis;
2. analytic codes and categories developed from data, not from preconceived logically deduced hypotheses;
3. theory development during each step of data collection and analysis;
4. memo-making, an intermediate bridge between coding data and writing first drafts;
5. theoretical sampling aimed toward theory construction not for population representativeness; and
6. a literature review conducted after developing an independent analysis.

In this study, I was 'simultaneously' involved in data creation and analysis as well as theory development throughout the process of field work, primarily through having to report weekly to the senior researcher on my project, monthly to my supervisor, and in 3 monthly periods to the chief investigators on the larger project. I began writing these reports about a month into field work. In each of these reports, I would describe my activities in the field for the relevant time period, outline goals for the next time period, and identify emerging themes, what I called "lines of inquiry" early on and "emerging themes" later, with vignettes of data accompanying these proposed themes. This was my version of memo-making. In preparing these reports early in my field work, I had to do a kind of 'quick and dirty' coding of my data early on in order to have something to report. Later on however, themes that I had identified earlier either persisted as I collected more data to support them, or were put aside as my focus shifted, and additional themes were included. As such, I engaged in a systematic and regular process of comparative analysis (Glaser & Strauss, 1967), by comparing new data with previously identified themes, and adjusting the analyses I presented to the various parties accordingly.

Apart from analysis of the data, reports to my supervisor also included a growing list of the literature I had read and was reading. This list was fairly short and only updated in small increments, due to the time and energy-consuming nature of field work. As such, the literature review could not be said to be conducted after analysis, although most of the relevant literature pertaining to the subsequent themes of interest was in fact reviewed after the first phase of field work, when I left the field for a year to focus on developing the first draft of my findings. During this time between phases, I was able to refine early versions of my findings by presenting them to my participants through the feedback sessions described above. Outside of the field, I presented a version of my findings at an overseas conference (Hor, 2007) and through a local university seminar series, thus receiving valuable feedback from other health researchers (see Appendix D). I also 'tested' another version of my theory by preparing and submitting several papers for publication (Hor et al., 2010). Even with unsuccessful manuscripts, the feedback I received from the anonymous reviewers helped very much to identify unsupported assumptions and flaws in my argument. As a result, my findings were not only 'grounded' and refined during data creation in the field, but also tested for their fit with a wider academic audience and are therefore also 'grounded' within the wider academic literature and audience.

Following this period of data analysis and theory-building, I went back into the field for two months, to collect data that was now guided much more by my 'emerging theory' (Glaser & Strauss, 1967). Charmaz and Mitchell (2001) describe this process thus:

> Theoretical sampling means going back to the field to gather specific data to fill gaps within categories, to elaborate the analysis of these categories, and to discover

> variation within and between them. This sampling is aimed to develop a theoretical analysis or to fill out ethnographers' accounts or stories, not to approximate any statistical representation of the population parameters. By this stage in the analytic process, the researcher has already defined relevant issues and allowed significant data to emerge. (Charmaz & Mitchell, 2001, p. 169)

During this second phase of field work, I focused on the same multidisciplinary team and ward, but many of the staff had changed, particularly junior staff, although a few senior doctors and nurses had also left and been replaced. As such I was able to compare previous data to a relatively new sample population, so to speak. I was also able to speak to a number of new participants from different professions, such as the doctors' secretary and a play therapist. Also, I varied my interactions and observations with the doctors, spending much more time with them in their outpatient clinics and during breaks. In this period, therefore, I sought primarily to 'saturate' my themes and test for relevant ideas that I might have missed out on in the first phase. I also sought to collect more data relating specifically to the themes I was interested in, and so conducted more field interviews with participants, and asked more questions during more focused observations.

Ethics and accountability in practice

In this section, I comment on how I negotiated ethical issues in this study. In line with my theoretical perspectives, my view of ethical research is not located solely in the acquisition of and compliance to the conditions of formal ethics approval. Instead, I argue that ethical research depends more on ethical practice within (as well as outside) the field, that arise from attention to the informal, nebulous and contingent accountabilities between researchers and participants.

Murphy and Dingwall (2001) for example, highlighted criticisms of "the mechanical application to ethnographic research of codes and regulatory systems, including human subjects review, devised for biomedical and/or quantitative research" (p. 340).

> First, ethical codes that are not method-sensitive may constrain research unnecessarily and inappropriately. Secondly, and just as importantly, the ritualistic observation of these codes may not give real protection to research participants but

> actually increase the risk of harm by blunting ethnographers' sensitivities to the method-specific issues which do arise. (Murphy & Dingwall, 2001, p. 340)

In this section I address their second concern, using participant consent as an example, to argue that formal codes of ethics are important but insufficient in and of themselves, requiring articulation work and negotiation with participants that is enabled by attending to the shifting accountabilities that arise in field work.

As I mentioned above, I was able to go into the field with formal ethics approval already granted from the human research ethics committees of the hospital's local area health authority as well as two universities. As such, I had clear permissions outlined as to what I could do and where I could go, and also a number of participant consents. This conferred a certain legitimacy to my early presence in the field while I acclimatised and developed my own relationships with the participants in the field, many of whom were new to the team and ward, and therefore also new to the research study. The formal ethics approval process seemed to act as a kind of short-cut for clinicians on the ground in initially granting me legitimacy. Similarly, consent to participate from many clinicians was granted following the knowledge that their supervisors had consented to participate. For a few, this knowledge was sufficient, and they were not interested in the details (although they were all given a copy of the summary sheet and information sheet). For others however, it may have been the case that they felt compelled to consent because the rest of the team had, or because their supervisors had.

For these participants, the formal process of consent was insufficient for me to properly ascertain whether or not they wished to participate. Instead, I had to be sensitive to participants who would not engage me in conversation for example, beyond everyday pleasantries, or who would avoid eye contact. I had to be particularly sensitive to these cues in order to guess at my participants' silently-expressed wishes, and not only those few who were disengaged from the start, but also the other participants, whose enthusiasm for being observed or answering questions could vary from day to day and moment to moment. Furthermore, this process of contingently guessing at their consent from moment to moment was felt by me to be crucial in order to avoid antagonising anyone, as I felt distinctly accountable for my participants' comfort with my presence at all times. Although permissions were often negotiated verbally (such as by asking nurses if I could 'shadow' them for the next hour), they were more often negotiated nonverbally. This acute sensitivity to all sorts of cues took up a lot of time and energy during field work, such that it was often a relief to escape to a place where I would not have to observe anyone or be observed myself.

My point here is that the ethnographer is not only observing his/her participants, he/she is also observed, and is constantly accountable, and accounting, to participants for his/her actions (Carroll, 2009a). Although formal ethics procedures are relevant and important, they also result in crystallised codes of ethics that are clearly insufficient for dealing with the fluidity required in the shifting contexts of field work. As Bosk (2001) suggested, “what matters is not what is said once and formally, but what is done repeatedly and spontaneously” (p.203).

4.6 On limitations and questions of validity and reliability

> To say that something has been 'constructed' along the way is not to deny that it is real.
>
> (Law, 2004, p. 39)

> There are more things in heaven and earth, Horatio,
> Than are dreamt of in your philosophy.
>
> (William Shakespeare, Hamlet, Act 1 Scene 5)[22]

On the question of limitations, ethnography faces the same limitations as any other study in that it delivers a necessarily incomplete representational account, much like the other representational accounts that have been criticised for their inadequacy in the literature review and in the theoretical section above. As Maynard and Clayman (1991) suggested, “there are always ‘more and other’ aspects to the phenomena of everyday life, aspects that, in abstract dialectics cannot be argued, imagined, or hypothesized to exist, or even reduced to ‘practices’ and ‘methods’ of whatever sort” (p. 412).

The problem therefore, is not that ethnography delivers an incomplete representational account, but rather the assumption that this method should be judged by criteria that is based on striving towards ‘more accurate’ and generalisable representations of practice.

> The problem is not about the attempt to know. There are many reasons for trying to know in one way or another. Rather it lies in the failure (or refusal) to understand the logic, the character and the politics of the project of knowing. The failure to

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[22] This quotation was brought to my attention in Law (2003, p.11)

> think through what is implied by the fact that knowing is constitutively incomplete. (Law, 2003, p.7)

In justifying the validity of my methods therefore, I turn away from positivist notions of approximating an objective truth or reality, to Garfinkel's conception of praxeological validity, which Rawls (2002) defined as consisting of coherence, recognisability and mutual intelligibility to others. During the feedback sessions and throughout field work, I tested the validity of my assumptions with my participants, during which we negotiated our understandings of what was 'going on'. Similarly, in presenting early accounts of my findings to academic audiences through conference presentations and journal articles, I was able to test the validity of my accounts as a member in another field of practices, the (vast and diverse) field of social science research in health. This dual negotiation of validities means that the account of practices that I present in this thesis is not only constructed as an account of a clinical field, but also located in, and prepared as an account to an academic audience (Anspach & Mizrachi, 2006).

On questions of reliability in qualitative research, Silverman (2005) suggested that reliability relates to how consistently we categorise our data, including, for example, whether different observers would categorise it the same way. In line with this, he suggested the use of 'low-inference descriptors' when presenting data. In other words, presenting 'minimally adulterated' data that reflect minimal inferences from the researcher in order for the reader to best assess the reliability of subsequent interpretations (Silverman, 2005). Atkinson et al. (2001a) however, noted how Clifford and Marcus' (1986) edited book, "Writing Culture", questioned a realist and uncritical approach to 'data collection' and led to "a crisis of legitimation and representation" (Atkinson, 2001a, p.3) in ethnography.

> We come to understand that fieldnotes are not a closed, completed, final text: rather they are indeterminate, subject to reading, rereading, coding, recording, interpreting, reinterpreting. (Atkinson et al., 2001a, p.3)

In the following findings chapters, I present my data in a number of ways, incorporating excerpts from my field notes and quotes from allegedly 'low-inference' transcripts within and alongside explicitly constructed vignettes and narratives of events. In presenting my vignettes and narratives as "composites that encapsulate what the researcher finds through the fieldwork” (Ely, Vinz, Downing & Anzul, 1997, p. 70), I present them as ‘trustworthy’ accounts, not because the reader can tell whether or not I have consistently categorised my data, but because vignettes do not pretend to be un-mediated, or low-inference accounts of data.

> [Vignettes] reveal the writer, researcher, and interpreter behind the writing and emphasize the fact that in putting together the account, selection and interpretation have taken place and particular values have been brought to bear. In this way vignettes actively encourage the reader to doubt. Paradoxically, this constant reminder of their potential untrustworthiness can make vignettes trustworthy. (Spalding & Phillips, 2007, p. 961)

As Munro (1996) noted, “we are always in accounts” (p. 6), and that “any access to ‘viewing’ action is always mediated by accounts” (p. 6). The accounts of my data and my field work are therefore made honest by my explicit presentation and acknowledgement of them as constructions rather than objects I have ‘collected’, even though I have also constructed them to be persuasive accounts. Furthermore, this thesis is itself indexical (Garfinkel, 1967), and its arguments are situated in the practices in which I engaged in this study and in writing this thesis (Gherardi, 2008).

The thesis may be, by necessity, a formalised account of practices designed to cross distances between my engagement with the field site and the reader. Within this formal account however, I make no assertions of validity and reliability that this text might somehow carry independently of the contexts in which readers might engage with it. The challenge then becomes one of achieving the ‘coherence, recognisability and mutual intelligibility to others’ that determine praxeological validity, whilst challenging the status quo sufficiently to be an original, novel, and unique piece of work (Talburt, 2004).

In this chapter, I foregrounded the messiness, incompleteness and contingent coherence of practices in the field as well as my methodological approach, and I used the former to justify the latter. In foregrounding this uncertainty and transience, however, I also take heed of Timmermans and Berg’s (2003) point, that “simply deconstructing problems (…) does not make them go away” (p. 240). As such, I treat my account as only one of the multitudes of accounts that are created in making sense of patient safety and accountability, but nevertheless argue for its unique value and potential utility in its engagement with mess and multiplicity (Carroll, 2009b).

In this thesis, I try to go beyond simply deconstructing the problem of patient safety and a simple critique of formal accountability. Rather than imposing a false kind of coherence onto the field, I make an effort to enact a useful account of “non-coherence” (Law, 2003, p. 11), to “unravel tensions, articulate them, and cast them in the words that allow them to travel – so that they may be more widely reflected on” (Mol, 2006, p. 412). As such, I hope that my arguments and findings will be assessed for their validity and utility not only within this thesis, but that they will continue to be assessed in other contexts, other hospitals, organisations and countries, for other interested parties to construct for themselves useful meanings from these accounts.

Chapter 5

Finding Safety and Accountability in the Field

5.1 Introduction

In this chapter, I introduce the practices of safety and accountability that I was able to observe in the field. Using selected examples from my data presented in various forms – in excerpts of transcripts, field notes and composed vignettes – I describe how practices *of safety* can be described as practices *of accountability* that differ by form and rationality. These accountabilities are enacted through the creation, exchange and use of accounts, and these accounts can be representative of practice, as well as explanations or justifications of practice. Furthermore, I show how accountability is characterised by the *movement* of these accounts – by their exchange between people.

My analysis of accountabilities in practice is also guided by a conceptual framework outlined in Chapter 4, addressing the forms of accountability. These concepts are descriptors of accounts themselves – their stability, mobility, combinability and visibility – which are in turn attributes that are interdependent and interrelated with those that describe the movement of these accounts, namely distance, dis/embeddedness and directionality. In this chapter, I ground these concepts with examples from my data, and elaborate on their interrelation in the discussion section.

In this chapter, I set the scene by introducing the reader to my participants and ‘the field’ as much as I introduce the arguments that I will elaborate in the following chapters. I also briefly outline the main argument of this thesis, which is that safety is best supported by a multiplicity of accountabilities that remain embedded in multiple contexts.

5.2 The ubiquity of safety

In this study, the field was a children's hospital. More specifically however, what I studied was 'the field of practices' of medical, nursing, allied health and administrative staff in a children's hospital. In 'looking for safety' amongst this field of practices and taking patient safety as the avoidance of avoidable harm to patients, it soon became apparent that most, if not *all*, practices could be conceived of in safety terms. In line with the systems view of error, hospital work is so intertwined and complex that almost any clinical practice can be seen as posing a risk, directly or indirectly, to patient safety. As such, conversely, any clinical practice can also be conceived of as being potentially, or ideally, safety work. Outside of this environment where safety is necessarily ubiquitous, it is still made most explicit and visible through the formal rules, procedures and policies designed to govern and guide practice. When inside the hospital and observing the day-to-day practices of hospital staff, it soon became apparent to me that these visible policies and procedures are only one part of the picture. In this chapter, I describe several examples of safety practices in the ward, with which I illustrate the non-straightforward roles of these formal rules and policies, and the co-enactment of other forms of accountability.

In the first vignette below (Vignette 5a), I describe an occasion when a nurse became uncertain about which sized syringe she should be using to flush the central line[23] of a patient when a more senior nurse corrected her initial choice of syringe. As I followed her conversations with other nurses and her thoughts over the following days, the significance of hospital policy came into play, but this was complicated by differing policies, past practices, and an apparent misunderstanding of the 'evidence' behind the policy recommendations. Other nurses also shared their thoughts on dealing with these discrepancies, in deciding what kind of syringe was 'safe' to use in this procedure. This

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[23] A 'central line' is a central venous catheter, a thin and flexible tube inserted through the skin into a large vein near the heart, used to deliver medicine, fluids, nutrients, or blood products over several weeks or more. Such lines need to be flushed daily with heparin or a saline solution to keep it clear of blood and to prevent clotting. (This information was obtained from the Kaiser Permanente Health Encyclopedia website at: https://members.kaiserpermanente.org/kpweb/healthency.do?hwid=ug3596)

vignette was constructed from and composed of field notes and transcripts of field interviews over a period of 7 days in October 2008.

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Vignette 5a – Syringe sizes for line flushing

Sally[24] is an experienced nurse from the UK. However, she has only recently been back in a hospital again after a year away as a community nurse, and is still learning about how nursing is done in this country and in this particular hospital.

> Researcher: You're not new at nursing obviously.
> Sally: No. (…) I think that's partly why, because I am older, and I am [not] new at nursing (…) I mean I have all that certain experience but… you know, I've been on the community for awhile so, and that's why, y'know, trying to concentrate on doing up all those lines just um… you know, just taken me a bit of time to get my head around it. I'll be all right in six months, but um, at the moment, I'm just a newbie.
>
> (Excerpt from recorded field interview with Sally, 24 June 2008)[25]

For the past few shifts, Sally has been looking after a girl, Julie, who is quite ill, and has a large number of medications that are to be given intravenously. Sally had decided to stagger Julie's medications so that she does not vomit from receiving them all at once, and this has worked out well. Over the course of a few days, I observe her constantly checking her practices with other nurses. For example, she asks another nurse about the correct number of syringes to be used in flushing different intravenous lines, and on another occasion, checks with another nurse about whether it was all right to put a drug into a line that it had gone through before. Julie is a complicated patient not only because she is very unwell but also because of the care required for her central line(s). Sally describes her as needing "full time" care, but only at certain times. It is also apparent that Sally is learning about how to care for Julie as she does so, by often checking what she is doing with the other nurses on the ward and adjusting her practices accordingly.

One afternoon, I find Sally in the medication room again, preparing to flush Julie's lines. She has prepared a 10ml syringe for the purpose. As she is setting up the medication trolley, Emily, a senior nurse, questions her about the size of the syringe she has chosen, saying that it should be a 5ml syringe instead. Emily goes on to explain that a smaller

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[24] All participant or patient names used in this thesis are pseudonyms.

[25] In all excerpts or quotes drawn directly from field notes or transcripts, I have used parantheses with three ellipsis points (…) to indicate sections of talk that I missed or did not hear clearly, and [square brackets] to indicate where I have changed the excerpts for clarity, or to de-identify my participants.

sized syringe is preferable because it puts less pressure into the line, and so is less likely to cause damage when used. Sally asks her, “Is that what the policy said, the hospital policy?” Emily responds “Well I don’t know if it’s changed lately, but… that’s, as far as I know.”

They continue to discuss the sizes of the syringes that they would use for different central line procedures, and Emily consults with some nurses (Nurse 1 and Nurse 2) outside the medication room.

> Emily: [To nurses outside the medication room] You might know. If you’re going straight into a hub, you only use five, not ten. On a central line.
> Nurse 1: Hmm. I don’t know.
> Nurse 2: You’re going straight in?
> Emily: Yeah. So you don’t need as much fluid.
> Nurse 2: No.
> Emily: No, that’s right.
> Nurse 2: You’re talking about flushing?
> Emily: Yeah.
> Nurse 2: Five.
> Emily: Yeah.
> Nurse 2: Yeah.
> Emily: Thank you.
> Nurse 2: That’s all right.
>
> (Excerpt from recorded conversation between nurses, 18 June 2008)

Emily then leaves the room and I ask Sally about what just happened.

> Um… I just, I got out ten ml syringes to, to do this procedure, um… and Emily said that you, we use five ones here. It’s just that where I come from in England… I questioned it because that’s what I’ve always done. But the policy obviously here, is to use five ml syringes so, she just checked with a couple of people, just to check that she was right in saying that. But I questioned it because that’s been my practice, you know, before I came here.
>
> (Excerpt from recorded field interview with Sally, 18 June 2008)

When I ask her if the reason Emily gave made sense to her, Sally does not really answer, repeating instead the differences between the policy here and her own previous practice.

> Um, [there are] certain sort of things that I've found since I've been here that, you know, I'm not used to doing, but sort of obviously when something's a hospital policy, you have to… follow, d'you know what I mean? You have to follow… what the hospital does. Hmm. Think I might have a little read of the policy when I'm finished.
>
> (Excerpt from recorded field interview with Sally, 18 June 2008)

Emily comes back into the room, and they discuss the issue further, prompted by questions I ask them both to try and understand what the issue is. For example, I ask Emily what the difference is between using 5ml and 10 ml syringes, and she starts explaining to me, but the conversation quickly turns back to Emily and Sally debating again appropriate syringe sizes for different procedures. At one point, they discuss that the crucial factor was the amount of fluid given rather than the size of the syringe:

> Sally: But you can put five, you can, you can put five mls in a ten ml syringe, it's not to do with the size of the syringe, is it just to do with giving five mls or ten mls?
>
> Emily: Yeah. It's just the fluid. It's not the difference in the syringe. It's just the fluid.
>
> Researcher: So you've got less area to flush out, is that what you mean?
>
> Emily: Yeah, yeah.
>
> (Excerpt from recorded conversation between the researcher, Emily and Sally, 18 June 2008)

Following that, Sally agrees, but goes on to say, "we always used ten mls, a size ten ml… and it was to do with the pressure." At this point, Emily recounts the opinion of a gastroenterologist regarding another procedure and another kind of line (naso-gastric tubing) to support her point, but addressing the issue of pressure. She then relates her personal experience of seeing "UK nurses" using syringes "up to fifty" and having drawn blood. Sally then defends the use of 50ml syringes by citing the manufacturer's policy. The excerpt below depicts this exchange.

> Emily: Yeah well see, we used to have a gastroenterologist, going on pressure, just going on pressure… And so the gastroenterologist who used to reckon that… if you use anything, this is just on gastrostomies… If you use anything above ten, you're in danger of, not N-J[26] tubes, you know, in danger of going to the side of the wall, and… pulling it out.

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[26] Naso-jejunal

Sally: Above ten?

Emily: Like drawing, drawing blood out. But, the UK nurses I've been noticing have been like up to fifty and I go… shit. 'Cos I had,

Sally: Yeah… Oh you see, no you see, that's…

Emily: I have seen people draw out blood and I go… whoa.

Sally: But that's… my, my reasoning, my reasoning for that…

Emily: I use five or five or one.

Sally: For naso-gastric tubes?

Emily: Five, I always use five. I always use five.

Sally: For the silastic ones? Well, it was the manufacturer's policy and that's why we used fifty ml syringes and we weren't allowed to use anything less than that, and that's to do with, when you suck it out, you're basically sort of, you know like sucking up the tube so that it's not working, but that was, it wasn't, that was… the policy that we were, we were to follow.

Emily: Well see the gas- the gastroenterologist's reasoning, I thought was so much better.

(Excerpt from recorded conversation between Emily and Sally, 18 June 2008)

Sally then emphasises once more that she was simply following policy and Emily states once more her view that a larger sized syringe would be using too much pressure.

Emily: …you're pulling back on fifty, you're going to draw something out that you don't want.

(Excerpt from recorded conversation between Emily and Sally, 18 June 2008)

They then go on to discuss other differences in practices surrounding sterile procedures. Sally alludes to some discomfort during this discussion.

Sally: You don't want to be the person that comes in and says, well we did it like this, we did it like that. But it's… I don't know.

(Excerpt from recorded conversation between Emily and Sally, 18 June 2008)

After this incident, I am keen to understand what they were talking about and I look up the practice manual for central line access on the workstation computers. It states that intravenous 'push' or 'flush' medications are to be administered with a syringe of greater than or equal to 5ml capacity. This is interesting, as it means that Emily's use of 5ml syringes and Sally's intended use of 10ml syringes would have both been 'correct' within the practice guidelines. I look further into line access guidelines internationally on the internet, and find that the general trend is that the larger the size of syringe, the better. The explanation is based on a counter-intuitive but well-accepted ‘rule’ of physics, where the larger the diameter of the syringe, the lower the pressure that is produced for a given amount of force on the plunger. Hence, there would actually be less pressure produced in the line for a larger syringe. After carefully reviewing my transcript of the conversation, it became apparent to me that the senior nurse, Emily, had (perhaps understandably) mistaken the relationship between the size of the syringe and pressure.

A few days later, I speak to another new nurse who was from Canada and ask her to explain the process of central line flushing to me. She explains that a small amount of Heparin, an anti-coagulant, is put into the central line to prevent clotting, after which they flush the line with saline to make sure that it is still working. I ask her what size of syringe she would use, and she explains that she has always used a 10ml syringe.

> I always used ten. I always was taught if you’re ever pushing anything in, it always has to be a ten. You can pull back with a smaller size but you can’t push in.
>
> (Excerpt from recorded field interview with nurse, 23 June 2008)

When I ask if she is familiar with how it was done here, she explains her quandary:

> I know they push here with fives as well. (…) I don’t know if I personally would. It’s, y’know, when you’ve been taught one way and they give you all the rationale behind it and I have like pages and pages of paperwork? So that it just… you know, it’s difficult for me to all of a sudden be like, let’s just completely change it, unless I have all the details explaining why I can do that?
>
> (Excerpt from recorded field interview with nurse, 23 June 2008)

When I ask about the difference between a 5ml and 10ml syringe, she explains that “It’s to do with the pressure. Smaller you go the more pressure it is that you’re pushing in.”

That day, I find Sally in the ward again, and ask her what size of syringe she would use now when flushing lines. The recorder fails on this occasion, so I write down our conversation in my field notes after we speak.

> [Sally] said that she’d use a 5ml syringe, because she’d asked others, including [the Clinical Nurse Educator], and they told her it was hospital policy, and, because it’s based on evidence, she’ll follow it. When I mention that I spoke to a nurse who was used to using 10ml syringes and who said that she would probably continue to do so, [another nurse] interrupts and guesses at the nurse I spoke to and says, “because that’s

> the policy in Canada – we used 10ml syringes there”. Sally states that you can use a 10ml syringe, just that she feels it’s okay to use a 5ml syringe since it’s sanctioned by hospital policy.
>
> (Excerpt from field notes, 23 June 2008)

A day later, I catch Sally on the way to the cafeteria for dinner. As we walk there she tells me that she has changed her mind, that she would use a 10ml syringe instead, “because it’s safe practice. I suppose because that’s what I’m used to, y’know, using 10 ml syringes.” She also talks about why she would follow policy:

> At the end of the day, anything we do is about safe practice and what’s safe for patients. And the other thing is, if you follow the hospital policy, you know that um, y’know, should anything go wrong, that’s your… that’s your um… y’know, that’s where the buck stops really isn’t it.
>
> (Excerpt from recorded field interview with Sally, 24 June 2008)

I then mention that I was under the impression that Emily, the senior nurse, had said the other day that she was not supposed to use a 10ml syringe, and Sally responds.

> Yes, she did. But that’s, yeah that’s… she obviously doesn’t realise that you can use the… um… y’know, we don’t read the policies everyday. You don’t always remember everything that’s in the policy and obviously you are to… You know you are to follow the policy but maybe, you know, I can’t speak for her, I can’t speak for why she said that. But having, you know, followed it up since, I know that… it’s safe practice.
>
> (Excerpt from recorded field interview with Sally, 24 June 2008)

Sally elaborates further, noting that she would also use a 5ml syringe if she had to, giving an example of medications that are given pre-prepared in smaller syringe sizes.

> Well sometimes drugs are actually drawn up, they’re pre-drawn up sort of… sterile-ly, and you, like for example the… we wouldn’t normally use anything smaller than that, like a 2 ml syringe, but [Julie] was having these things called these ethanol locks, and they were actually in 2ml syringes? So, y’know, in that instance, you are allowed to use them and certainly that’s, that’s practice we’ve had previously. I’ve worked in the community and we had certain drugs, like we had cytotoxic drugs, that were drawn up with smaller syringes. And in that instance, it is… acceptable to use smaller syringes.
>
> (Excerpt from recorded field interview with Sally, 24 June 2008)

With this vignette, I show that the impact of formal policy on clinical practice is not always straightforward, and that the content of individual policies themselves may not be sufficient to guide clinicians, even as they are talked about as such and given great credence in that role. Instead, in this instance, nurses used a number of justifications apart from the current hospital policy in negotiating what is considered safe practice. Furthermore, in this negotiation, they were also offering other explanations in *accounting for* their practices and opinions. Although they did use policy to account for their actions, it did not seem to suffice, especially when policies and established practices (across different countries and contexts) seemed to contradict one another.

In this example, Sally and Emily were negotiating the correct size of syringe to use for flushing a patient's central line. Emily asked for agreement from other nurses, relayed a gastroenterologist's opinion and offered her own reasoning (albeit flawed) to back up her recommended use of 5 ml syringes. A Canadian nurse cited the extensive paperwork and training behind her practice of using 10ml syringes in Canada, and Sally used her past experience (of policy and practice) in the UK to support the use of 10 ml syringes, the manufacturer's policy to justify the use of 50ml syringes in another context, and later, the current hospital policy, as well as the sanctioned use of pre-prepared 2ml syringes, as support for the safety of 5ml syringes.

In this example, nurses took the policy for line flushing seriously, and it played an important role in determining the validity of practice, because it was 'evidence-based' and "that's where the buck stops" should something go wrong. At the same time however, previous and established practices, the opinions of peers and important others (such as the gastroenterologist), contradictory preparations, and policies taught and followed in previous experience also came into play, mediating the nurses' adoption of the current policy. The Canadian nurse, for example, noted that she would need to have the reasons explained to her before changing her practice, and Sally explained that although hospital policy allowed for the use of smaller syringes, she would personally feel more comfortable using a 10ml syringe because it is "safer" and it is what she is "used to".

Finally, the 'evidence' that underlies these policy recommendations was incorrectly interpreted by Emily in the initial conversation, and was only passingly mentioned afterwards when prompted by my questioning. Other confounding issues, such as whether it was the size of the syringe or the quantity of liquid, further muddied the waters.

In this first vignette, informal communication and checking between nurses were demonstrated through the conversations between Emily, Sally, and the other nurses who were consulted. In the next section, I describe how this informal communication was in fact a common feature of clinicians' activity in the ward, and present several examples from my data to support this description. Again, I juxtapose these informal practices with more formal processes of documentation, such as the writing of clinical notes or updating the patient board, and describe their interrelatedness.

5.3 Informal checking

In the previous vignette, Sally was a 'new' nurse with a complicated patient, and was constantly checking what she was doing with other nurses. This informal verbal checking was in fact common practice for all staff in the ward. Checking was also formalised as a procedure in the preparation of medications. When preparing medications for administration, nurses are required to ask another nurse to "do a check", which means that the second nurse reads the drug order and makes her own calculations, and then checks what the first nurse has written down and drawn up before signing off on the delivery. Apart from this formal procedure however, nurses of all levels of experience often asked one another for help with preparing medications for complicated patients with non-standard treatments, and with other things such as deciphering doctors' handwriting on drug order forms. They also asked for help, following their preparations, in administering the medications to patients.

Apart from medication administration, staff were also informally asking each other for all kinds of information, such as which nurse was looking after a patient, who to contact in particular situations, what form to use, which doctor or team was in charge of a patient, and so forth. In many cases, this information was usually documented elsewhere on the ward, such as on the white board in the doctor's room (I will refer to this as the 'patient board' from now on), or in the patient's folder. The following two excerpts from my field notes (Excerpts 5b and 5c) illustrate two instances in one evening where I found myself involved in this informal verbal checking, which had the effect of making these practices all the more salient to me. These excerpts illustrate instances where informal interpersonal checking was initiated and carried out by nurses, but their queries were eventually resolved by checking elsewhere where the desired information was documented.

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Excerpt 5b – Has the team seen the patient?

5.37pm

In the doctors' room, Jenna comes in and asks if I'm [part of the medical team]. I say I'm with them but I'm not a doctor so probably can't help. I say I think they've gone home. She asks if [the fellow] is still here. I say maybe. She looks at the directory and pages him. While she's waiting, I introduce myself as a research student studying how the ward and [the medical team] work together.

[…]

[Several minutes later,] [the fellow] hasn't returned the page so she tries [the resident], who doesn't answer either. She wonders out loud if she should call [the evening registrar], saying he's probably still on rounds. She pages him.

[…]

I ask why she wants to reach [the medical team] and she tells me that it's for [a patient] – mum's just taken off his dressing and wants to know if [the medical team] wants a look at it because they haven't seen him all day. She then notes that they could have been in when mum was out.

I say I think they would have seen him this morning and Jenna says she hasn't checked the notes. She goes out and gets [the patient's] red folder and reads the notes and tells me that [the medical team] came in and saw him at 3pm and that if [the evening registrar] calls back, to tell him never mind.

A few minutes later, [the evening registrar] calls back and I tell him what happened. He says he didn't particularly want to see [the patient] and thanks me for telling him. I thank him too and put the phone down.

(Excerpts from field notes, 6 February 2007)

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Excerpt 5c – Is the patient High Acuity?

6.00pm

Annette [the afternoon shift team leader] asks a nurse at workstation 2 if the [medical team] registrar told her anything about [a patient] being on HA[27]. The nurse says something and Annette notes that when she spoke to [the registrar], [the registrar] had said that [the patient] looked fine.

I volunteer that [the registrar] had called [the consultant] again and when she put the phone down, she told me that [the patient] was HA.

Annette says [the evening registrar] said he'd have a look at her anyway. She then goes into the doctors' room and looks at the patient board and exclaims that someone's already changed it (i.e., re-wrote [the patient's] name in red). She says that she must've not noticed or forgotten, when she was in the doctors' room earlier with the evening team.

(Excerpt from field notes, 6 February 2007)

In highlighting these two particular incidents from my field work, I am not suggesting that the nurses should necessarily have checked the patients' notes or the patient board before asking someone. In fact, it seemed to me that there were often good reasons to ask a colleague instead of, or before, checking if the information was documented. For example, the documentation of information could be delayed or neglected, such as when the patient board was not updated in a timely fashion.

The work of documentation was also a source of tension for nurses, as it was not seen as 'nursing work' and therefore was sometimes delayed by nurses in preference for their work in directly caring for patients. Also, forms of documentation such as patients' notes were used by all clinicians and were constantly moved around the ward. Clinicians often had to spend time searching for them. I commonly observed nurses, allied health staff and doctors alike looking for specific patients' folders (in which patients' notes are filed) around the ward. On a few rare occasions, patients' folders

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[27] HA refers to High Acuity, which is a subset of High Dependency (HD) patients who are determined by doctors to be acutely unwell. HA patients require increased nursing care and are to be seen by a medical team at least once every shift. HA patients are identified on the patient board with their names written in red ink.

went missing for hours at a time before being found on other wards. During one of these episodes, a senior nurse jokingly made a point of it, saying, “See, we spend half our lives looking for notes, it’s true.” (Excerpt from field notes, 17 November 2006).

Apart from missing or incomplete documentation, information requested could not always be available in documentation. One example was if allied health staff or doctors were looking for the nurse who was caring for a particular patient. Even if the nurse’s name had been updated on the patient board next to the patient’s name (and this did not always happen), they might not have known the nurse in question, especially as there was a regular turnover in the hospital and wards of junior nurses, doctors-in-training and casual staff. This held true too for nurses and allied health staff trying to identify doctors. As such, clinicians often needed to ask one another to identify other staff members.

In pointing out this constant informal verbal checking and questioning, I suggest that clinicians, particularly nurses, are constantly accountable and accounting to one another, informally and verbally, not only to justify or explain their practices, but also to communicate their professional knowledge, opinions and knowledge of their work environment. Here, I am describing accounts as *representation,* and accounts as *justification/explanation*, both described in the vignette above. I argue that both kinds of accounts are part of accountability, taken as a practice. Accountability is not only enacted through people *accounting for* themselves and their practices with explanations and justifications, it also involves people giving *accounts of* themselves and their practices.

5.4 Accountabilities in contrast

In characterising how the nurses and other staff were asking for and giving accounts of their knowledge and behaviour as informal practices, I again juxtapose this informal accountability with the more formal practices of accounting such as the structured (but limited) process of double-checking and double-signing off on medication preparations, the writing of permanent (but highly mobile) clinical notes and the highly visible (if provisional) updating of current ward information on the patient board. The practices of informal checking and communication described above have the advantages of potentially providing clinicians with more timely and current representations of their practices, knowledge and the ward environment. However, they can also be problematic. For example, one consequence of this constant checking was the constant interruption experienced by nurses as a result. I present a series of excerpts from my field notes below (Excerpt 5d), detailing a period of 35 minutes on an afternoon during which a nurse, Anna, was trying to write her "nurses' notes" for the patients that she had cared for that shift. She had been extremely busy during the shift, and had not had a lunch break, having just left briefly to buy a sandwich to eat back in the ward. She was trying to finish writing her notes before the end of her shift at 3.30pm, and was using the doctor's room for privacy. I sat in the doctor's room with her, and recorded my observations of the ensuing events.

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Excerpt 5d – Anna in the doctor's room

2.46pm

Anna comes into the ward, back from lunch. I don't think she had much time, having left not long ago. She says she bought some lunch. [The Clinical Nurse Educator (CNE)] offers to let her use her office to eat undisturbed. Anna politely declines.

Anna's writing notes in a few patient folders. [The CNE] asks if Anna is working tomorrow and discusses how [a patient's] been difficult, saying that Anna's been doing really well, as have the other nurses.

[Two nurses] come in. One of them asks Anna if she's had her lunch break. Anna says yes, sort of, and the other nurse says no, she's just had a minute. [One of the nurses] asks if Anna wants her to close the door. Anna says it's okay.

[The CNE] comes back in, tells Anna that [a patient] is fine, and that Anna should just do her notes then go. Anna says she's fine, don't worry. [The CNE] says, at least use her office so she won't be interrupted. Anna says she won't let anyone interrupt her. [The CNE] tells me jokingly that I'm to make sure no one interrupts Anna. I agree.

[A nurse] comes in and offers to help Anna, saying all her patients are fine, or leaving/waiting to leave. She also says something about how we (nurses) need to take breaks, and that "nobody expects us to do more than…" Anna says it's okay, she's not expecting to do much later anyway.

[A nurse] comes in and discusses with Anna [a patient] who'll be here another 6 weeks. [The nurse] says she's cried about it. They discuss how it's been upsetting, because it's his central line that's causing him trouble, but [the doctors] don't want to take it out because of his nutrition. [The nurse] doesn't seem to think it's a good enough reason. They discuss how, if he was an adult patient, he could refuse treatment, but as a child he can't. [The nurse] mentions how adult cancer patients have become sick of surgery and refused further surgery.

[Another nurse] comes in and tells Anna about a doctor coming to give [a patient] [something]. Anna says that she'll go and check when she's done.

Two nurses come in and get bags from lockers.

A doctor comes in and looks at Anna's pile of folders. Anna asks who he's looking for (indicating the patient folders). He says [name of patient]. Anna gives him a blue folder.

[A nurse] comes in and pats Anna on the head. She gets her bag out of her locker and says she feels like a meat pie at that moment.

Anna looks into the box of Cadbury Favourites on the desk and notes that there's no chocolate left. I offer her my chocolate with marzipan and she says she's had too much already. I say there's no such thing as too much chocolate and she tells me what she's had already – 3 little packets of M&Ms, etc… I say that's okay, she's got to keep her energy up.

3.00pm

Anna has finished her lunch while writing notes. She's still writing notes. There is a brief respite now from interruptions.

3.05pm

Anna gets up and leaves the room.

[…]

3.11pm

Anna comes back in to the doctor's room, coming from the room that [her patient] is in. She gets back to her notes.

[A dietician] comes into the room, mentions having to chase down patient files all day for a study, which concludes today or tomorrow. She asks who's team leader today. I answer [the afternoon team leader]. Anna says, at this very moment, it's [the CNE] from the morning shift.

[The ward clerk] comes in and asks Anna if we have a (something) tube because another ward wants to borrow one. I tell her (jokingly) she's not supposed to interrupt Anna and

> she says that no one else is available, she's been looking, and the person has been on the phone nearly 5 minutes. Anna says it's okay and goes off with the ward clerk. She returns in a minute or two.
>
> [Another dietician] comes in and thanks Anna for telling her something. They discuss [a patient] and how [the dietician] will be away tomorrow and to tell [another dietician] something. [The dietician] leaves after a minute.
>
> 3.17pm
>
> A doctor comes in and asks Anna if she has [a patient's] file. She tells him she doesn't have it.
>
> 3.19pm
>
> [A nurse] comes in and writes something on the board. The pen squeaks as she writes. She says it's very annoying isn't it. Anna jokes that it's calming.
>
> 3.20pm
>
> [A nurse] comes in with a radiology folder and puts it back in the wooden thing on the floor.
>
> 3.21pm
>
> Anna packs up her folders and leaves the room.
>
> (Excerpts from field notes, 21 Sept 06)

Through this excerpt, we get an idea of how often Anna was interrupted whilst eating her lunch and writing her notes in the relative privacy of the doctor's room (compared to the open workstations). Counting only the times she was actually spoken to, she was interrupted on average about once every 2 and a half minutes. Anna however was uncomplaining throughout, constantly reassuring others that she was fine. Interestingly, the comments from others in communicating concern for Anna's interrupted work not only highlighted the perceived problem, but also demonstrated it. In this excerpt, we see the utility, urgency and ubiquity of constant interpersonal communication at the same time as its potential drawbacks. The excerpt also allows me to demonstrate how formal and informal practices of accountability are concurrently enacted. Apart from the problem of Anna not having a lunch break, the constant informal interruptions described above are characterised as such against the backdrop of Anna trying to complete a task of formal accounting in writing her notes. Furthermore, the exchange of and search for patient notes also became interruptions, complicating and entangling our understanding of formal and informal practices of accountability. With this example, we also see how multiple accountabilities might be problematic in practice, with potential conflicts between different accountabilities.

In the next vignette (Vignette 5e), I describe a situation where the different forms of accountability enacted by clinicians were more clearly problematic and in tension. In this vignette, an apparent miscommunication led to the possibility of nurse-patient ratios being breached, with the ward anticipating more (and sicker) patients than it was officially able to care for with the number of nurses available during that shift. In negotiating patient categories to fit rules about nurse-patient ratios, doctors were able to formally render the situation ‘safe’ according to the rules, while nurses still anticipated and carried out the additional work created, in a situation that they themselves deemed to be unsafe. I use this vignette illustrate and ground the concepts outlined in the conceptual framework outlined in Chapter 4, with which I analyse the following vignette, and the data that I present in the following two chapters. I suggest that these concepts are useful to understanding how multiple forms of accountability intersect in practice.

Vignette 5e is constructed from, and composed of, field notes and transcripts of observations and field interviews over a period of 30 days from October to November 2006.

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Vignette 5e – High dependency nurse-patient ratios

It is just before 3pm in the afternoon and I am in the ward sitting at a workstation, waiting with a registrar from our team for the consultant to come in for the afternoon ward round. The nurse team leader for the morning shift, Maura, asks a nurse in the medication room if Sam (a patient) was going to surgery. The nurse says no, it’s a mistake. Maura then says that “surgeons told anaesthetists there was a HDU bed”. Another nurse adds that “the anaesthetists wouldn’t take a patient if there wasn’t a HD bed”[28].

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[28] HD stands for High Dependency. A HD (or HDU) ‘bed’ is a term used to refer to an availability in the ward to care for a highly dependent patient, whether because they are acutely unwell, or require increased nursing care for other reasons. Since they require increased nursing care, this has implications for the

Gina, a senior nurse, tells me that this was a major mistake and that I would be interested in what happened. I ask her if she can explain it to me and she offers to talk to me in the doctors' room. As she explains the situation to me, we are interrupted by Maura who is talking out loud while consulting the patient board for a way to resolve this situation. Gina eventually stops our brief interview to talk to Maura about finding a HD bed for Sam.

Gina: Okay. This child was waiting to go to theatre for a pyloromyotomy, which is um, repair of pyloric stenosis. Um. Doctors were aware that he was only um…

Maura: Anyone HD?

Gina: …a neonate, so under a month old …

Maura: No…

Gina: … and he needed to be HDU post-up which is um, it increases our nursing workload so we're only allowed to have 4 HDU patients, um… for 18 beds. Okay?

Researcher: You've got four already.

Gina: So we've got four already, and it was between him and another patient to go to theatre. Without consulting anybody they rung for him from theatre, um, that he was to go. So, it's basically the doctors need, um, didn't consult with us whether we had a HDU bed for the child to come back to it. And it's…

Maura: There's no one even who can come off, can they? [A patient] can't. She should be… [another patient] needs to be…

Gina: … a bit of a mess now. So, that's it.

(Excerpt from recorded field interview with Gina, 18/10/06)

The problem stems from a patient having been sent to surgery, despite a lack of staff in the ward to look after him post-surgery when he would return as a HD patient. The ward already has four HD patients, including a patient, Max, who was previously sent to surgery instead of Sam for the last available HD bed. The rules about nurse-patient ratios in this hospital state that nurses can look after 4 'normal' patients per shift, but if they are allocated a HD patient, they can only be allocated a maximum of 2 other patients. Before Sam went to surgery, there were 4 HD patients and 14 normal patients (including Sam)

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staffing level on the ward, with more nurses required to look after these patients than non-HD patients. As such, if the nurses on shift are at their limit in terms of the number of patients they can look after, the ward is understood to not have a HD bed, even if actual physical beds are available.

for 5 nurses and a team leader[29] on afternoon shift, and now there would be 5 HD patients and 13 normal patients, needing an additional nurse to account for the increased workload.

Gina suggests that it was the doctors' fault for not consulting with the nurses, otherwise they would have been told that no HD bed was available. She says that now, the doctors can either send Sam to ICU, or find an extra nurse to allow them to look after five HD patients. A few minutes later, Maura speaks to a surgeon on the phone, and tells us that they have decided that Max can be taken off high dependency so that Sam can come in as a HD patient. She checks with the Recovery ward and they are also "happy" with this decision. Maura, however, is not entirely happy with this decision. She explains that "officially" the situation was resolved, and "all the colours looked right"[30], but it made no difference to the increased nursing workload, because the nurses believed that Max should have remained a HD patient, and would continue to care for him accordingly.

Maura also describes the situation as a "major f—k-up" and suggests that it was a "breakdown in communication" within the surgical team because she had informed the surgical resident this morning that there were no more HD beds, and yet their registrar, whom she had just spoken to, had not known about it. Later, I overhear Maura saying that Sam was taken to surgery with an afternoon shift nurse who was unaware of the situation, whilst the morning shift nurses, including herself and Gina, were on their lunch break.

When I ask if this was primarily an organisational rather than medical issue, Maura explains that the surgeons had originally sought an intensive care unit (ICU) bed for Max, which suggests to her that they must have been worried about him. Instead, they decided that he would be a HD patient, for which a *previous* HD patient had to be taken off high-dependency care, in order for Max to have his HD bed. Now, Max has had his HD status reallocated to Sam instead. This meant that there were actually now two patients who might have remained HD patients if there were enough nurses, and who might still require extra nursing care. This could therefore be seen as increasing medical risk.

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[29] The nursing team leaders on afternoon shifts are not supposed to take any patients, as their duties are to manage the ward after the nurse unit manager has gone home, to supervise junior nurses, and also to help the other nurses with procedures and to cover for them when they go on breaks. Despite that, I often observed team leaders taking one or two patients to relieve the load on other nurses when the ward was full.

[30] HD patients are differentiated on the patient whiteboard by the colour of the whiteboard marker pens used to write their names. Their names are written in either red or green, while the other patients' names are written in black.

Seeing this now as an incident related to safety, I ask Maura if she is going to make an incident report[31].

> She says no, because the surgeons and anaesthetists are happy with the situation. I say, but can't the nurses just write a report anyway? She says oh yes, but she doesn't think it would be particularly helpful. She explains that by speaking to [the surgical registrar] and letting him know that [the surgical resident] was told in the morning about the lack of HDU beds, that would be more effective in dealing with the problems because the surgical team were made directly aware.
>
> (Excerpt from field notes, 18/10/06)

Two days later, I talk to the nursing unit manager (NUM) of the ward, Jane, about this incident and she tells me that Gina reported to the surgical team the next morning about the incident, and that she herself had met with the head of surgery. She tells me that there is the "assumption" that if the team is informed, they will "act on it". When I ask if the surgical team have offered any explanation, she says no, and that she would follow up the incident with the head of surgery later. She also mentions that Max had turned out to require even more nursing care (in terms of observations and vigilance) than Sam because he was more acutely unwell and that he should have kept his HD status. She also alludes to problematic communication between doctors and nurses.

> Jane says sometimes doctors "don't take heed of what we say" if they don't find it convenient. I ask her if she means that they don't mean to do so intentionally and she tells me that she means that they *do* do so intentionally. I say that's not very nice of them. She notes it depends on their situation, what kind of pressures they're under, and so forth.
>
> (Excerpt from field notes, 20/10/06)

About a month later, I speak to Jane about this incident again and she suggests that nurses were treated disrespectfully, and implies again that their opinions were not taken into account.

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[31] An incident reporting system, the Incident Information Management System (IIMS), was recently implemented in NSW across all public hospitals (from 2004 to 2005). The NSW Incident Management Policy requires all staff to report all safety incidents that they are aware of into the IIMS (NSW Health, 2007). In the next two chapters, I describe this system in more detail in examining how clinicians manage incidents and learn from them.

In this vignette, to begin with, we see that there are about five different accounts expressed by the nurses to describe or explain the apparent miscommunication that led to this incident:

1) the surgeons gave a false account of the bed availability in the ward to the anaesthetists (who would otherwise not have accepted the patient for surgery);
2) the surgeons did not “consult with” the nurses to obtain a more current account of bed availability before operating on the patient;
3) a nurse had given an account of the limited HD beds to the surgical resident, who did not communicate that to the registrar;
4) the surgeon(s) had received, but disregarded, the nurse’s account of limited HD bed availability; and
5) the nurses who were aware of the situation were at lunch when the patient was sent to surgery, under the care of the afternoon shift nurses who were unaware.

In this example, we find that the communication of accounts is key, and that problematic communication points also to problematic accountability. If the nurse did give an account of the bed availability to at least one junior doctor, this account was then either not communicated to the other members of the surgical team, or was disregarded by them. As such, we find that the isolated movement of accounts in only *one exchange* and in only *one direction* only goes so far in enacting safety. Here I introduce the term *dis/embeddedness*, which I suggest may be key to delivering safety through accountability. Dis/embeddedness emphasises the need to observe not only the presence and/or absence of account-giving but how interconnected these communications are. For example, to attend to the *directionality* of accounts given – who is accounting to whom, and also their *mobility*, and *stability* – whether or not they are exchanged, and how well their meanings are communicated. These aspects of account-giving address *how* accounts are communicated – how they ‘move across *distances’* in the clinical environment.

This vignette also helps to demonstrate how different accountabilities can produce different behaviours in relation to safety, evidenced in the way doctors managed the situation. From the nurses’ perspectives, the doctors in this situation behaved ‘accountably’ according to the formal rules about nurse-patient ratios, but did not behave as accountably to the nurses on the ward. That is, while they negotiated to deliver a ‘safe’ account of the situation by aligning with the formal requirements of HD nurse-patient ratios, there was concurrently a distinct lack of action on their part to align with the nurses’ accounts of an ‘unsafe’ situation, which was that both Max and Sam were HD patients and they were hence understaffed to care for them. Following the incident, I asked several nurses involved to find out if there was any explanation given by the surgical team for what had happened. The most telling perhaps was the response of the NUM, who answered my question by indicating that the nurses, including her, had spoken to the team, and given their account of the situation to them. There was no mention of whether the team had in turn given any explanation to the nurses.

From this vignette therefore, we see evidence of what we might call a lack of accountability in the absence of doctors accounting to the nurses, both before and after the incident. This lack is linked directly to a problematic situation, problematic both in its ‘creation’ and eventual ‘solution’. Furthermore, unlike in the previous examples where I would argue that informal accountabilities were foregrounded in comparison to the formal, we find that the events in this vignette seem to foreground the formal accountability over the informal, with negatively-felt consequences for the nurses in the ward.

There is irony in this situation, in that the formal rules about nurse-patient ratios would have been designed to protect against nurses being over-loaded with work, and against patients receiving insufficient care. However, when just such a situation threatened, the action taken by doctors to adhere to the rules by taking Max off HD care, so that “the colours looked right”, did not actually remove the perceived threat. Here, we have a clear example of another term, namely the *combinability* associated with formal accounts. At their discretion, the doctors were able to produce a formal account of ‘safety’ by *combining* a number of patients variously assessed to be medically at risk, with other patients otherwise considered ‘normal’, so that the numbers added up. In the end, the doctors may have been “happy” with this account, but it was nevertheless still at odds with the nurses’ view, which was that the situation was still medically risky and unsafe.

This difference in opinion is also evidence of how multiple kinds of 'safety' can be produced, and that the meaning of a safety incident can be a fluid, contested and plural construction. In this case, the safety formally produced by doctors was incongruent with the safety later produced locally and informally by nurses. Furthermore, the extra work that nurses anticipated and subsequently undertook in order to render the situation 'safe' remained informal and *invisible*, whilst a formal account, aligned with the 'correct' ratio of HD patients and nurses was created and made *visible*.

In this vignette, I applied the following terms around accountability and practices of safety, describing the *mobility, stability, combinability* and *visibility* of accounts, as well as the concepts describing their movement, namely *distance*, *dis/embededdedness* and *directionality*. Later in the following section, I will elaborate further on what I mean by these terms.

5.5 Discussion

In this chapter, I introduced my participants and the field of their practices, and showed how my conceptual framework could be applied to, and found, in the practices I was able to observe. In this discussion section and each discussion section that follows in the next two chapters, I will bring together and elaborate on my findings from each chapter. In my discussion chapter (Chapter 8), I will link these findings back to the literature.

In this chapter I challenge the notion that safety is or can be straightforwardly achieved mainly through processes of formal accountability, exemplified by policies, procedures, rules and documentation. I show that practices of safety are more ubiquitous, and more complicated than the following of structured rules. Instead, clinicians are also negotiating safe practice by engaging in practices of accountability in less formal terms – by constantly accounting to each other, and holding each other to account, verbally and informally. In this thesis, I use 'formal' and 'informal' accountability as heuristic categories, and juxtapose the two in my examples as a way to introduce the less familiar informal accountability by way of contrast to the more familiar formal accountability. Although the formal and informal are differentiated conceptually here, I have also shown that they are intertwined and enacted together in practice.

Looking more closely at how these accountabilities are enacted *as* practices, I show that both formal and informal forms of accountability are essentially communicative practices, involving the creation, exchange and use of accounts. Accounts can be representations *of* practice as well as explanations or justifications *for* practice. Furthermore, I show that these accounts, formal and informal, are transformed into accountability through their ‘movement’ – by their exchange between people.

Informally, clinicians are asking each other questions all the time, requesting and giving accounts of what has been done, what should be done, and why (see Excerpts 5b, 5c and 5d). We also saw, as in the first vignette (Vignette 5a), an exchange of a variety of accounts to justify particular views on the right size of syringe. The formal hospital policy in this case was mentioned as significant but was not the only valid account given in this negotiation, nor in determining what some nurses later felt would be the safest option. Here, I would mention too that policy, rules, guidelines and other documents are not simply ‘tools’ of accountability; they are normative accounts given to clinicians, representations of the practices they are expected to perform, or standards by which they are expected to align their actions and accounts. In the last vignette (Vignette 5e) for example, doctors changed the HD status of their patients in order to create a formal account of ‘safety’ in accordance with the rules about nurse-patient ratios.

The conceptual framework: describing accountability as practice

With the last vignette above, I demonstrated how the terms identified in my conceptual framework could be applied to my data. I continue to use these terms in the next two chapters how to analyse how multiple accountabilities intersect in clinicians’ practices of safety. In this section, I elaborate further on these concepts and their interrelatedness in the field of my observations.

To begin with, these terms can be described in terms of one another. Mobility, for instance, describes movement across distances, and distance here is not necessarily geographical. Distance can also refer to differences in hierarchy or perceived power, for example, or other socially-enacted distances. Documented clinical notes in patient folders, policy documents and practice guidelines are clear examples of mobile accounts that cross boundaries and distances. These accounts are also characterised by stability, which refers to the ‘durability’ of accounts across distances and time, insofar as they are mobile. I suggest that this stability may, for the purposes of my analysis, be initially differentiated into stability of *form* – that is, the durability of the physical/tangible form of accounts – and stability of meaning, or rather, of *interpretation*. This distinction allows me to challenge the traditional assumption of stability in formal accounts, and also to re-imagine it by applying the notion of stability to informal accounts, which might otherwise be considered less durable and visible.

For example, informal and impromptu verbal exchanges are ‘visible’ only locally and, it seems, temporarily. However, this is may be matched and compensated by their timeliness and currency. Furthermore, they can also be ‘mobile’ over distances and time, such as when clinicians refer to and/or repeat accounts given by other clinicians. An example was when the nurse in Vignette 5a repeated an account given by a gastroenterologist to support her own account of safe syringe sizes. I describe this mobility later as *intercontextuality*, a concept which will be properly introduced and discussed in Chapter 7. Here, I make the argument that informal accounts exchanged in a timely manner can actually be more stable in their interpretation than information documented on the patient board or in clinical notes, which are accounts that are more stable in form, but become less stable in terms of their currency over time. The patient board, for example, fluctuates in stability and visibility – the ‘account’ of the ward it represents at any time is highly visible (within the ward) but also easily erasable. Furthermore, timely updates are dependent on the nurses in charge, who may prioritise patient care over these administrative tasks. As such, if the board is not believed to be up-to-date, it is less often consulted by clinicians, and less visible as a result. The stability or visibility of the form *and* the reliability of the accounts on the patient board therefore are themselves variable and changing descriptors.

Moving on, we find that combinability is woven into the mix, by describing what is made visible in accounts, in order to act upon multiple contexts across distances and time. Combinability is a kind of summary categorisation, allowing for the equation and comparison of different things. In Vignette 5e for example, the categorisation of patients as normal or Highly Dependent (HD) allowed doctors to combine them variously in order to represent a mix of patients that accorded with the number of nurses present on the ward. Combinability allows for accounts to be *paired* and *compared* across distances and time, at the risk of estrangement from more local, current and complex understandings and interpretations. This is another way in which stability of form and interpretation do not necessarily coincide. What is made visible in accounts, at a distance, can become estranged from local meanings which remain invisible.

This estrangement of practices made visible from other practices remaining invisible underlies my use of the term directionality, which grounds these theoretical descriptors to practice by bringing in the people involved in these practices of accountability. Directionality attunes us to consider for whom accounts are created, whose accounts are made visible, and the *reciprocity* of their exchange. In Vignette 5e for example, I describe what seems to be a lack of accountability from doctors to nurses, evinced by a lack of accounting in that direction, although there is plenty of accounting from the nurses to the doctors, and from the doctors to the bed managers and the Department of Health in terms of reporting appropriate nurse to patient ratios.

In attending to directionality in the other accounts described in this chapter, we find that informal interpersonal communication between clinicians can often be characterised as reciprocal or multidirectional interaction, depending on the kinds of conversations and the number of people engaged in them. This reciprocity and multidirectionality can also be applied in a less immediate and indirect sense to written accounts. For example, where nurses write clinical notes for other nurses as well as doctors and allied health staff, and the notes written by doctors and allied health staff are read by nurses as well as other doctors and allied health staff in turn. Similarly, the patient board is primarily updated by the NUM or the nurse team leader, but often with direct input from a range of other hospital staff, including the ward clerk, the bed managers, other nurses, doctors and allied health staff. In the other direction, the patient board is consulted by the range of hospital staff who come into the ward, as well as the nurses and ward clerk in the ward itself. Multidirectionality therefore describes a multiplicity of reciprocal interactions between people that are mediated by accounts.

Conversely, when we look at policy documents from the NSW Department of Health, for instance, a kind of unidirectionality becomes more apparent, with most policy decided away from the participants to which they apply.[32] To be fair, initial consultation with stakeholders as well as regular reviews of policy evince a kind of accounting of the policy-makers to the people they make policy for (Jorm, Banks & Twohill, 2008). If this

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[32] I wish to note here that policy is not always created at a distance, as clinicians are also creating similar guiding documents as part of their practice. In fact, two clinicians in my study, a fellow and a specialist nurse, created a departmental protocol for administering vaccinations to children who were undergoing immune system-suppressing treatments. In such a case, the sense of distance, unidirectionality and disembeddedness are ameliorated by the proximity and local presence of the protocol designers in the contexts of its use. This is a finding that I will describe later in Chapter 7.

is bi- or multidirectionality, however, its isolation and enactment over long intervals of time suggests that it is arguably much less embedded in clinical practice, which is the final characteristic I want to introduce here.

Dis/embeddedness and the multiplicity of safety

To explain my use of the term dis/embeddedness, I take the liberty of a short detour in order to contextualise the concept as it relates to a major argument in my thesis. I refer to my discussion of Vignette 5e where I suggested that accountability, in terms of *isolated* exchanges of accounts, does not go very far in determining ‘safety’, although it may in fact produce ‘accounts of safety’. I explain this contradictory statement by referring to the multiplicity of meanings of safety identified so far. Among others, there has been safety as defined by policy, rules and numbers; safety defined by previous experience; safety described as timely and informative informal interaction; and safety as work undertaken invisibly. The example of doctors producing a formal account of safety in contrast to the nurses’ account of the situation as unsafe, and nurses’ subsequent actions to deliver safe care to their patients perhaps best illustrates this contradiction. Clearly, it is not enough to take only one account of safety.

An argument I make in this thesis is that the kind of patient safety that we would wish for in our hospitals cannot be absolute or singular, and furthermore, should not be determined at too far a distance from clinicians’ interactions with patients. Instead, this multiplicity of safety is perhaps best supported and made visible by the ‘re-embedding’ of accountability – not only in specific local contexts such as a ward or a department, but also within the wider contexts of a hospital or health system. I will argue that distance, directionality, mobility, stability and visibility can describe accountability relationships that go beyond the categories of formal vs. informal, local vs. distal, and so forth. I intend to collapse these categories instead, to show how a diversity of accounts given and received between multiple stakeholders (including patients) embedded within and across different contexts will be more likely to support a diversity of accounts of safety, and therefore be a more germane form of accountability to support health care delivery. Furthermore, I suggest that accepting the multiplicity of safety will not mean chaos or lack of direction, but will instead be a welcome acknowledgement of the ambiguity of the concept, and afford iterative and productive re-negotiations of what it means.

In this chapter, I presented data describing nurses in the process of enacting safety before harm has occurred, working to prevent harm by choosing a ‘safe’ syringe size, asking each other for help and information, and giving additional care to an unofficially HD patient. In the next chapter, I describe what happens after threats to safety have been identified, when clinicians are working together to manage safety incidents that have occurred. In these following chapters, I elaborate on the enactment of multiple accountabilities by describing them as not only co-present or concurrently enacted, but also entangled in their enactment. In Chapter 6, I use the descriptors of accountability identified above to analyse the problematic enactment of multiple accountabilities at odds in clinicians’ practices of safety. In Chapter 7, I show how they can also go beyond the in/formal, to describe accountabilities in confluence.

Chapter 6

Multiple Accountabilities in Incident Reporting

6.1 Introduction

In the previous chapter, I introduced and described the co-enactment and intertwining of multiple accountabilities. This chapter follows on by taking a closer look at how multiple accountabilities can become conflicting in practice. I address here more directly my research question of how clinicians negotiate multiple accountabilities in their practices of safety, exploring in particular how their entanglement can be problematic for clinicians. Using a case study of a formalised incident reporting system, I describe how tensions can arise from the interplay of conflicting accountabilities in clinicians' incident management practices.

In this chapter, I introduce and focus on an incident reporting and management system recently implemented in New South Wales (NSW) and the accompanying incident management policy (NSW Health, 2007). Incident reporting is an initiative with strong support from the patient safety literature, and the incident reporting system and incident management policy in NSW are clear examples of formalised accountability which are particularly interesting in that not only are they *present* in everyday practices of safety, but they also explicitly *prescribe* the production of accounts of safety. In the first section below, I analyse the literature on incident reporting to highlight the entanglement of conflicting accountabilities behind the rhetoric that supports the implementation of these systems. This sets the context for the following sections in which I show how clinicians are negotiating their incident management practices by the conflicting accountabilities present in these contexts. I also describe here the multiple meanings ascribed to safety incidents, which further complicate, as well as reflect, the interplay of different accountabilities faced by clinicians. Finally, I bring these findings together using the conceptual framework elaborated in the previous chapter, focusing especially on the concepts describing the movement of accounts, namely their distance, dis/embeddedness and directionality.

6.2 Incident reporting systems

In the past decade, incident reporting systems have been widely recommended in the patient safety literature for the recording and monitoring of incidents where safety has been threatened or breached. One aim has been to enhance organisational self-knowledge by creating a database of errors that have, or could have occurred (Rulke, Zaheer & Anderson, 2000). Through such systems, data on safety incidents can be collated, aggregated and analysed for patterns and trends. The assumption is that this data then allows clinicians, hospitals and policy-makers to prevent future harm by making changes based on information about threats to safety that have already occurred (Kohn et al., 2000; NSW Health, 2007; Vincent, 2006). Incident reporting systems have also been recommended as a kind of scanning mechanism, engendering an increased awareness of the incidents that tend to occur within a specific system, and creating a focus on patient safety within organisations (MacIntosh-Murray, 2001). Incident reporting systems however are most often framed as systematic approaches designed to meet either or both purposes of *accountability* and *learning*, and further, accountability *for* learning (Dekker, 2007; Kohn et al., 2000; Runciman, 2002; Sharpe, 2003, 2004; Vincent, 2006). In the following section, I describe these conceptions of accountability and show how they can be both contradictory in principle and entangled in practice.

Multiple accountabilities in incident reporting

The seminal Institute of Medicine (IOM) report ‘To Err is Human’ (Kohn et al., 2000) outlined and proposed the two functions of incident reporting systems mentioned above. The first centred on holding health care organisations accountable for their safety performance by implementing mandatory reporting and investigation for serious incidents, penalties where relevant, and some degree of visibility to the public. The second purpose was a complementary process of voluntary and confidential reporting designed to provide protected information for learning and quality improvement (Kohn et al., 2000). In other words, “to gather the necessary information about where and why things are likely to go wrong rather than to identify the people involved” (Runciman et al., 2001, p. 298). This latter process of learning has been characterised as “no blame”, in line with the argument that focusing on individual culpability ignores the systems origins of most errors, and furthermore creates a culture of fear that is counterproductive to learning (Bates and Gawande, 2000; Leape, 1994; Leape & Berwick, 2000; Perrow, 1984/1999; Reason, 2000; Runciman, et al., 2001; Waring, 2005).

The two processes of ‘accountability for punishment’ and ‘accountability for learning’ are proposed to be complementary, and yet their goals (or rationalities[33]) are clearly in contradiction. Nevertheless, researchers have generally argued that they are both important and necessary (e.g., Bagian, 2005). This is a position taken especially by researchers who argue that a ‘just culture’ is necessary in order for clinicians to commit to incident reporting. A just culture is one in which clinicians feel assured that they will not be unduly penalised for mistakes, but neither will inappropriate behaviour be excused or protected in the pursuit of learning (Beyea, 2004; Dekker, 2007; Reason, 2000; Wachter & Pronovost, 2009; Weiner, Hobgood and Lewis, 2008). Incident reporting is therefore proposed to work best in a situation where *both* individual (and punitive) accountability and systems-focused learning processes play a role. The question that then follows is how these contradictory processes (and aims) are to be reconciled within incident reporting systems.

Mainly, it seems, the literature has suggested that this is to occur through separation, with separate processes designated for accountability and learning, and “explicit criteria” for deciding if an incident is to be dealt with through one process or the other (Runciman, 2002, p. 250). The IOM report for example, identified incident severity as a criterion for distinguishing between learning or accountability-bound actions (Kohn et al., 2000), and Bagian (2005) provided the Veteran Administration’s criteria, that blameworthy (as opposed to blameless) acts are “intentionally unsafe acts” (p.8), defined as any of the following: a criminal act, an act involving alcohol or substance abuse on the part of the care provider, or a purposely unsafe act.

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[33] The espoused evaluative norms by which meaning and significance are determined and action is evaluated (Degeling, 2000; Gray & Jenkins, 1993).

Alternately, in a move to address the anxiety associated with blame, some have suggested a re-framing of accountability. Bates and Gawande (2000) for example, reiterated the call to view error as located in systems rather than individuals, and suggested that this is achieved by transforming the traditional ethic of *personal* responsibility into a *collective* responsibility for reporting error and generating improvements. Likewise, Sharpe (2003, 2004) proposed a distinction between *retrospective* accountability, which is focused on outcomes and blame, and *prospective* accountability, which is about roles, obligations, and deliberate practices and processes involved in setting and meeting goals for improvement. Sharpe (2003, 2004) suggested too that this 'forward-looking' conception of accountability allows for the prescription of collective responsibility for safety improvement that is proactive and more attractive than the problematic notion of individual blame for safety failures.

Rather neatly, accountability here is reframed as accountability *for* learning and improvement, rather than accountability *or* learning. The rhetoric surrounding this prospective conception however, has focused on the communication of an account of behaviour that is *expected*, that is, learning and improvement, without adequately acknowledging the flip side of this expectation that involves retrospective calls for explanations and justification. For example, the question is left unanswered with regards to what would happen if clinicians were unable to satisfyingly communicate accounts of learning and improvement. Instead, blame has rhetorically been detached from responsibility (Jensen, 2008), begging the question of how this 'incomplete' notion of responsibility for improvement then manifests in practice.

Intertwining learning and punishment

In the empirical literature, we can see that the problematic juxtaposition of accountability for learning and punitive accountability is reflected in the multiple studies that have described under-reporting where incident reporting systems have been implemented (Barach & Small, 2000a; Cullen et al., 1995; Leape, 1999; Stanhope, Crowley-Murphy, Vincent, O'Connor, & Taylor-Adams, 1999; Taylor et al., 2004). Studies have also focused on the factors that inhibit incident reporting, including clinicians' fear of blame and perception of lack of support (Kingston, Evans, Smith & Berry, 2004; Vincent, Stanhope, & Crowley-Murphy, 1999), their perception that reporting is unnecessary for some reportable incidents (Vincent et al., 1999; Waring, 2005), time and workload constraints (Vincent et al., 1999; Waring, 2005), lack of feedback to reporters (Evans et al., 2006), worries about reporting as reprisal (Kingston et al., 2004), and worries about litigation (Kingston et al., 2004; Vincent et al., 1999).

Several of these studies have characterised these local factors as ‘barriers’ to be ‘overcome’ in order to increase reporting (Leape, 1999; Pfeiffer, Manser & Wehner, 2010; Waring, 2005). In this chapter, I have taken a different perspective, examining instead how formal incident reporting systems might be *intertwined* with these ‘local’ accountabilities, to articulate a less polarized view of the workplace environment that emerges following their implementation. The findings mentioned above suggest that multiple accountabilities are concurrently in play in incident reporting. My aim in this chapter is to show them in *interplay*.

For example, in addressing the disjuncture between responsibility and blame described above with ‘accountability for learning’, Davidoff (2002) identified the “shame” inherent in efforts toward improvement. He noted that “improvement means that, however good your performance has been, it is not as good as it could be” (Davidoff, 2002, p. 2). In other words, ‘accountability for learning’ is not necessarily all that different from ‘accountability for harm’, with both kinds of accountability potentially characterised in individual and punitive terms. Furthermore, more palatable rhetorical emphasis on systems and collective responsibility is not easily operationalised, with safety initiatives that often fail to address the complexity and range of the health care system. Instead they often focus selectively on frontline clinicians, who, crucial as they are, are still only part of a large and complex system which also includes managers, patients, system designers, policy makers, regulators and equipment manufacturers, to name several important others (Jensen, 2008).

Finally, the distinction between individual and system culpability for harm (or, conversely, responsibility for safety) is further blurred by the constructed and post-hoc nature of such judgements. Going back to the notion of ‘just culture’, Dekker (2007) argued that any criteria to distinguish between blameworthy or blameless actions should be transparently established and explicitly clarified, but he also challenged the straightforwardness of any such differentiating criteria. He explained that definitions of error are socially constructed, and that events always incur post-hoc and contextually-sensitive judgments about what happened (Dekker, 2007). Similarly, Bosk (2003), in his classic ethnography of surgical trainees, identified a typology of errors deployed in practice to make distinctions between blameless and blameworthy errors. In the preface to the second edition of his book, he pointed out that “errors that were classified one way on one occasion might just as easily be classified another way on another occasion depending upon a staggeringly wide range of contextual factors” (Bosk, 2003, p. xx).

Therefore, as we have seen with the notion of ‘safety’, the attribution of ‘blame’ may not be predeterminable or captured solely in formal policy, but may instead be constructed in hindsight, and heavily context-dependent. Furthermore, if individuals are invariably exposed to the possibility of blame before their reported actions are judged to be dealt with through one process or another, then the term ‘no blame’ may perhaps be better understood as a post-hoc judgement rather than an intrinsic characteristic of an incident reporting process. In this chapter, I show how the meanings of incidents are constructed post-hoc and variably, depending on the contexts of accountability faced by clinicians. In the following sections, I describe the incident reporting system and the incident management policy used in NSW, and present data to demonstrate that notions of accountability for learning and punitive accountability are closely intertwined, and emerge amidst the interplay of other accountabilities also present in clinicians’ practices of safety.

The NSW Health IIMS

The NSW Health Incident Information and Management System (IIMS) is an electronic incident reporting and management system implemented in NSW over 2004 and 2005 as part of the NSW Patient Safety and Clinical Quality Program. The IIMS collects incident reports through online notification forms that can be filled in by any staff member who logs on to the local intranet. Clinicians can report workplace safety issues as well as patient safety incidents. The patient safety notification forms ask for specific information through a series of prompting questions about the patient, the incident (including location, time and severity) and contributing factors.

Depending on an assessment of incident severity using the Severity Assessment Code (SAC) matrix[34], these reports are then relayed through the system to be investigated and addressed locally by line managers for less serious incidents, or more formally at executive levels of management for incidents resulting in serious and/or permanent harm. For example, sentinel incidents such as wrong site surgeries attract the most severe rating of SAC1, are automatically reported to the NSW Department of Health within 24 hours, and require Root Cause Analysis (RCA) investigations to determine the sequence of events leading up to the incidents and to develop recommendations to prevent similar incidents from occurring (Iedema, Jorm, Long, et al., 2006; NSW Health, 2007).

All incident reports accumulated through the IIMS are also aggregated by geographic regions (Area Health Service authorities) and communicated to the NSW Department of Health and the Clinical Excellence Commission (CEC), who collate and analyse this data for broader trends, reporting back with programs and recommendations for improving patient safety (Clinical Excellence Commission, 2006; NSW Department of Health & Clinical Excellence Commission, 2008, 2009).

In line with the goal of holding organisations accountable as well as the proactive goals of learning and preventing future errors, the incident management policy mandates that *all* staff are responsible for reporting and participating in the management and investigation of *all* incidents that had either resulted in or had the potential to result in harm in their workplace (NSW Health, 2007). This includes incidents classed as ‘near misses’ – that is, those incidents which could have resulted in harm under slightly different circumstances – that have been recommended to be particularly useful for learning (Barach & Small, 2000a). To further encourage reporting by staff, the IIMS also allows for anonymous reporting. Accountability for learning is inscribed in the system, with clinicians and managers ‘held accountable’ at various steps of the incident managing process for investigating and ‘signing off’ on incident reports, and engaging in action towards improvement.

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[34] The SAC score is a rating of severity that accompanies incident reports in the IIMS. Scores range from 1 to 4, by decreasing level of severity. The SAC score of an incident is assessed using a matrix (see Appendix C) that takes into account the seriousness of the consequences arising from the incident, and the likelihood of its reoccurrence (Clinical Excellence Commission, 2006; NSW Health, 2007).

The IIMS is promoted primarily as a system *for learning*. However, the statement of principles promulgated in the incident management policy reflects multiple goals, through a range of principles which include:

> "Openness about failures – errors are reported and acknowledged without fear of inappropriate blame"
>
> "Emphasis on learning – the system is oriented towards learning from mistakes and extensively employs improvement methods for this"
>
> "Obligation to act – the obligation to take action to remedy problems is clearly accepted and the allocation of this responsibility is unambiguous and explicit"
>
> "Accountability – the limits of individual accountability are clear, individuals understand when they may be held accountable for their actions"
>
> "Just culture – individuals are treated fairly"
>
> (Excerpts from NSW Health Incident Management Policy, 2007)

The IIMS therefore is not a 'no blame' system. Instead, it aims towards the creation of a 'just culture', where the emphasis is on accountability for learning, but leaving open the possibility of accountability for individual actions. It is clear then that the rationalities that have been associated with accountability in the incident reporting literature can likewise be found within the IIMS and the incident management policy.

In the following sections, I present data in the form of quotes from participants, and excerpts from field notes and interview transcripts, as well as short vignettes composed from these sources. Using primarily data involving near miss incidents, I address the issues highlighted above, and illustrate how multiple rationalities and forms of accountability are interwoven and in tension with one another in my participants' experiences and practices of incident reporting. I focus on near miss incidents for several reasons. Near misses occur far more frequently than adverse events, are recommended to be particularly useful for learning as they can be studied to find problems before harm has occurred, and are thought to be less fraught with fears of blame since adverse outcomes are avoided (Barach & Small, 2000a; Kessels-Habraken, Van der Schaaf, De Jonge & Rutte, 2010). Correspondingly, I have been able to collect far more data about near misses and comparatively very little about serious adverse events. At the same time however, there is evidence to suggest that ‘compliance’ with the IIMS is higher with serious adverse events, where policy directives are clearer, than with near miss incidents (Clinical Excellence Commission, 2008). This contradiction foreshadows the contentious ambiguity associated with near misses that I will later describe.

I have organised the following findings by the two main ways in which I have found tensions to arise in clinicians’ incident reporting practices. In the first section, I show how incident reporting can be conceived as punitive for both reporters and those reported, because of the ambiguity or changing understandings of a safety incident, and the impact of formal accounting on clinicians’ enactment of other accountabilities. We see in these cases how clinicians adapt their incident reporting behaviours to align with the interplay of accountabilities in their particular contexts. In the second section, I show how clinicians can also make use of the formal ‘distance’ afforded by the IIMS to bypass local talk and informal communication. In doing so, they also foreground and reinforce punitive conceptions of incident reporting, and disrupt local ecologies of communication and learning.

6.3 Accountabilities in tension: Reporting as learning and as blame

To begin with, the problematic confluence of contradictory aims described above is also reflected in clinicians’ views of the IIMS. Although they acknowledge that the IIMS is promoted primarily as a system for learning, both medical and nursing staff express that this is not an uncontested view of the system.

> I see IIMS as a learning thing, not as getting into trouble. Yeah. And trying to get that across, not only to the nursing staff on the ward, that seems to be what a lot of them are put in about, but… trying to get across that you’re not… going to punish them. It’s more of a learning thing. I think it’s going to take time.
>
> (Nurse, Feedback session, 10 April 2008)

> It is very much that they’re trying to encourage a no blame culture, but I think… you know, it’s… that’s what they say, but whether they can do it or not is another question.
>
> (Doctor, Feedback session, 10 April 2008)

In the following vignette (Vignette 6a), we see more closely how this might play out in practice. In this vignette, we follow a Nurse Unit Manager (NUM) over time as she decides whether or not to report an incident. Through her accounts, we see the factors of visibility and distance linked to a punitive characterisation of incident reporting, as well as the other considerations (other accountabilities) that come into play for the NUM in making her decision. Vignette 6a is constructed from, and composed of field interviews with a NUM over a period of nine weeks from November to December 2006.

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Vignette 6a – To report or not to report

I meet the NUM of the ward, Jane, to update her on the project. A senior researcher on the project has also come along to this meeting. During the meeting I bring up the topic of incident reporting and Jane starts to tell me about an incident that has happened the night before:

> Jane pauses and thinks, and mentions an incident that happened last night, of which she was informed this morning at handover. She notes that she's been thinking about whether or not to put in an IIMS report for that incident, and has decided (saying she's really only just decided in her mind) to do so. Jane explains that this was an incident which had "lots of occasion to go bad" and was not the first time it has happened, which seems to suggest that the person responsible might not have learnt from or acted upon it the first time it happened. With an IIMS report made, it becomes a formal process and the person will have to deal with it.
>
> Jane says that it will take a while to do the IIMS report because she needs to read the notes and to talk to everyone and find out all the information.
>
> [The senior researcher] notes that because it's such a labour intensive effort, it suggests that Jane is really taking the matter seriously.
>
> Jane agrees. She then mentions that she's going to talk to "the responsible person" [the NUM of the transferring ward] first, to tell her that she is going to file an IIMS report. Jane mentions that she's also doing it to support her nurses, because they knew that it was "a bad incident".
>
> (Excerpt from field notes of interview with Jane, 20/11/06)

About two weeks later, I mention this incident to Jane again, and ask her for more details. She explains that what had happened was that a patient was transferred to the ward from a more highly-intensive care ward despite not being well enough. When I ask if she has

> made an incident report, Jane says that she wants to speak to the NUM of the transferring ward first, and, depending on her response, would then decide whether or not to make an incident report. She says "I prefer communication" and notes that on reflection, she was angry at the time and feels that making an IIMS report would be punitive. She says she thought it would maybe be better to speak to the NUM first, and the "right response" from the NUM would be to agree to "look into it" and deal with it. Jane says she suspects, or sees the situation, as the other NUM "pushing kids out" to be looked after by other wards. When I ask how an IIMS report might be punitive, she replies that an IIMS report would require a response by the other NUM, and that all the hospital would be able to see it.
>
> About a month and a half later, I follow up this incident again with Jane, and she tells me that she has not put in an incident report. Instead, she spoke to the other NUM and together, they identified a particular staff member thought to be responsible. She says that they both agreed to keep an eye on this person and to "work together" on the problem if it occurred again in the future.

This vignette helps me illustrate two points. First, we see that clinicians' understandings and accounts of an incident can change over time. As such, the meanings ascribed to incidents by clinicians are not particularly static nor necessarily predetermined and can be iteratively re-constructed through further discussions between clinicians. Second, we also see a number of different rationalities reflected in the accounts expressed by Jane to either support or delay the reporting of the incident.

Jane initially gave these reasons to support the reporting of the incident: her assessment of repeated potential for harm, a desire to formalise the process to enforce a response by the other NUM, and a desire to support and validate the concerns of her team of nurses who had to deal with the unsafe situation. Later, other reasons included Jane's self-assessed feelings of anger at the situation and her suspicion of wrongdoing, as well as the hypothetical reluctance of the other nurse manager to cooperate and respond appropriately to her informally communicated concern. Alongside these, she also expressed reasons for her reluctance to report or to delay reporting, including the time and effort needed to 'gather information' to make the report, and her perception of the incident report as particularly visible and directive and hence a punitive action. Finally, she explains that she has decided not to make an incident report following her informal communication with the other NUM, who has given her a less blameworthy account of the incident and her promised cooperation.

According to the incident management policy, the incident discussed above remains suitable for reporting into the IIMS throughout the events in the vignette, as it was a near miss incident that had the potential to impact negatively on the safety of a patient. For Jane however, it is more complicated. Although Jane's assessment of the incident as a threat to safety did not change, her understanding of the 'causes' did. Furthermore, as her understanding of the incident changed, reporting became a less suitable action, when taking into consideration the punitive impact of the report on the other NUM by way of its visibility and formal requirement for a response. Jane therefore was faced with a *changing* interplay between multiple accountabilities – to her nurses, to her patients, and to her colleague, in adapting her use of the incident reporting system. In this case, she was able to satisfy these accountabilities locally and informally, through communicating directly with the other NUM. In fact, she foregrounded throughout her 'preference' for communication, by which she may have been compensating for the 'distance' that can come into play in formal incident reporting; this is a point that I will cover in more detail in the next section. Ultimately for Jane, the deciding factor in the end was that she saw an incident report as a punitive action that became unwarranted when she was satisfied that the other NUM was not only not at fault, but also shared her concerns and was willing to cooperate proactively to address the situation.

In Vignette 6a, I highlighted Jane's sensitivity to the punitive consequences for her colleague. Another consequence of this consideration may have been that she also avoided incurring punitive consequences for herself. For example, in the following excerpt from my transcript of a feedback session (Excerpt 6b), a senior nurse talks about some of the responses she has received after making an incident report.

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Excerpt 6b – Making trouble

Senior nurse: I know comments that were made to me through emails and telephone calls when you have put an IIMS in. And the manager rings you who obviously has to follow up and the comment is, are you causing trouble again for my staff? And you just think well… no, I'm not. But that's the attitude that they have out there when you do report an IIMS.

Researcher:	Do you find that that prevents you from making a report?
Senior nurse:	If it's a … silly thing or a missed [late] medication or… giving the wrong… say, rate of fluid, I don't even put an IIMS in about it any more. Because one, it takes a lot of time, and two, you get the comment, you making trouble for my staff again? So…

(Excerpt from feedback session with the team, 10 April 2008)

Apart from the description of incident reporting as 'trouble-making' for those reported, the senior nurse suggests that she now also sees incident reporting, particularly of minor incidents, as troublesome for herself in that it is time-consuming and not welcomed by her colleagues. In terms of its time-consuming nature, other nurses also told me about how they would usually be short of time during their shifts (especially in the morning and afternoon shifts) and would postpone the reporting of an incident to a following shift, stay back after their shift, or come in early in order to put in a report. On the few occasions during which I observed a nurse sitting down in front of a computer making an IIMS report, she could take anywhere from 15 to 30 minutes in total just to complete the form, depending on how complicated the incident was, how familiar she was with the system, and how often she was interrupted whilst making the report. On morning and afternoon shifts, especially if the ward was full, these 15 to 30 minutes could be difficult to spare.

The characterisation of incident reporting as unwelcome and troublesome was also a recurrent theme in my participants' talk about incident reporting, and complicated the ethos of reporting 'for learning', particularly with less serious incidents. The following two short vignettes (Vignettes 6c and 6d), depict instances of nurses talking about their experiences of grappling with blame and shame following the act of reporting. Vignette 6c is composed from field notes taken during and after a Morbidity and Mortality (M&M) meeting[35] and the transcript of a field interview with a nurse. Vignette 6d is

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[35] M&M meetings are occasional hour-long meetings of the multidisciplinary team, to review recent incident reports involving their patients in order to learn from them and prevent them from recurring. I describe these M&M meetings in more detail in the next chapter, as an example of how accountabilities can be in confluence.

composed from field notes taken during a feedback meeting with the nurses on the ward[36].

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Vignette 6c – Being blacklisted

A senior nurse, Gloria, mentions during a meeting that she has been “blacklisted” on a ward after making an incident report about a patient who was admitted for a diagnostic test. Apparently the test equipment attached to the patient had been dislodged overnight, and nurses had not noticed till the morning. A doctor later explains to me that the patient involved was not really harmed in any way, but would have been inconvenienced by having wasted this trip and having to return for the test another day. The doctor also mentions that this will take up an additional hospital bed, which is expensive. During the discussion, a doctor asks if nurses would normally be so vigilant in a ward with kids that were not so seriously ill. Gloria clarifies that she felt that nurses on the ward should have been more vigilant, at least checking once before the morning. Later, when I asked Gloria what she meant by being blacklisted, she explains that the staff on the other ward “weren’t very happy that I did… reported it”, and that they did not believe that the incident should have been reported. When asked about the ward NUM’s perspective, Gloria said, “She wasn’t very supportive, no. You look after your staff, which is fine.

(M&M meeting, 26 February 2007)

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Vignette 6d – Feeling guilty

During a feedback session, the topic turns to incident reporting. A nurse mentions that when she makes an incident report, it feels like she’s “dobbing on”[37] people, and another nurse responds by saying, “Well you are!” Another nurse mentions that she feels guilty when making an incident report, even when there is no obvious fault attributable to herself or anyone else, giving an example of an incident when a patient accidentally hurt himself in a minor way.

(Feedback session with nurses, 27 March 2007)

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[36] Nurses are predominantly represented in these vignettes, which also reflects their disproportionate representation as users of incident reporting systems (Kingston et al., 2004).

[37] To ‘dob on’ someone is a colloquialism meaning to ‘inform on’ or to ‘report’ someone who has something wrong.

From these vignettes, we see that the act of making a report can be perceived or felt to be an accusation of wrongdoing, which becomes particularly contentious with near misses where ‘harm’ to the patient is anticipated rather than established. In Vignette 6c, the final quote suggests that Gloria interpreted the NUM’s unsupportive stance toward her as support instead for the staff on her ward. Furthermore, by stating that it was “fine”, she seemed to acknowledge the validity of that position despite its consequences for her. In Vignette 6d, the nurses highlight the accusatory implications associated with incident reporting, and, in turn, the guilt associated with performing these perceived accusations.

With these examples, I highlight again the multiplicity of understandings about what constitutes safety (and hence a safety incident), made apparent by the ambiguity of near misses. The perceived ‘lack of vigilance’ of nurses with regard to a child who was not seriously ill and only admitted for a diagnostic test was a particularly clear example of an ambiguous threat to safety. I suggest that this multiplicity of meanings allows punitive associations and consequences to be foregrounded in peer reporting. This happens especially when the threat to safety is disputed, and the time and effort taken to make a report, along with the formality and visibility of the subsequent processes, do not reflect this dispute. In such cases, an incident report can be perceived more as a punitive and *unjustified* accusation of wrongdoing rather than an exercise in learning. As a result, clinicians are making fewer incident reports than they are required to by policy, and fewer reports about minor incidents and near misses especially.

The ambiguity of safety (or rather, the ambiguity of harm) in near miss incidents both *complicates* and *reflects* the interplay of multiple accountabilities, and we see this also in *how* clinicians report incidents. In the last vignette of this section (Vignette 6e), I describe a discussion amongst the multidisciplinary team around an incident (actually a series of minor incidents) that has occurred for one of their patients. In this discussion, there are two contrasting accounts given for how to classify the severity of the incident in the IIMS, which can be shown to reflect different *contexts* of accountability. Vignette 6e describes the way the incident is discussed during an M&M meeting with doctors and nurses from the team, and is composed from field notes taken during the meeting.

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Vignette 6e – Determining severity

A senior doctor says, “We failed [the patient] three times in one incident, at multiple levels.” He explains that these three separate instances of ‘failure’ are not considered to be significant incidents by themselves, but several members of the team agree that together, they constitute “a system issue”, and should therefore be reported with a high severity assessment score, namely a ‘SAC 2’, so that it will be brought to the attention of “management” who can then investigate and deal with the issues at a broader level. At this point, a junior doctor mentions that she has already reported the incident following a discussion with the pharmacy department and the respective NUM, and that she has entered it into the system as a ‘SAC 3’ incident, a lower level of severity. A senior nurse then notes that “nobody wants a 2”, pointing out that they are “not easy to deal with” and require greater effort to respond to, involving formal investigations from management. A senior doctor then suggests that management should still be told about it, “to get an investigation rolling”.

(M&M meeting, 22 October 2007)

In this vignette, we see that the meaning of an incident is again up for negotiation, to determine its level of severity. Clinicians on this occasion express different justifications to support different severity levels for the same incident (which itself consists of three minor but broadly-distributed incidents). First, clinicians suggest that they are unable to adequately manage this “multiple level” incident through local processes, wishing to allocate it a higher level of severity in order to escalate it to management, who would have broader reach and authority. In contrast, there is the second suggestion that reporting incidents at higher levels of severity is unattractive as it requires a more effortful response from those involved.

Interestingly, these justifications do not quite correspond with the SAC matrix (see Appendix C) that is meant to guide this allocation. As the clinicians suggest, the incident management policy lists stricter requirements for managing reported SAC 2 incidents compared to SAC 3 incidents, including more detailed investigations, with responsibility assigned to management at a higher level (NSW Health, 2007). The determination of an incident’s SAC rating is less clear cut, described by a matrix guide comparing the actual or potential consequences of the incident (in terms of harm to the patient) and its likelihood of reoccurrence. The matrix does not include however, the different parts of the system involved in an incident as an aspect of severity, nor does it suggest that a SAC score be avoided based on the impact of the subsequent investigation.

It seems instead that the justifications expressed by clinicians in this case were aligning not so much with the formal policy, but rather with the accountabilities faced by them in their local contexts. For the junior doctor, she had spoken with the pharmacist and nurse manager prior to making the report, and, in this informal and direct exchange of accounts, the consequences of her report mentioned by the senior nurse for those clinicians would have been germane, and could have been relevant to her decision to report a lower severity level. For the team of clinicians at the M&M meeting, they were tasked with examining incidents in order to learn from them and prevent similar incidents in the future. As such, the consequences of a formal investigation for their (currently distant) colleagues would have been much less pertinent than the consideration that they felt unable, for this incident, to enact any real learning or improvement, and as such wished to pass on this responsibility, as it were, to higher levels of management with more reach and authority.

In each case, clinicians were *embedded* in different contexts and facing different expectations, resulting in the production of different explanatory and representational accounts. In line with the previous examples described in this chapter, we see how the ‘meanings’ of safety incidents (in this case their severity) can be also multiple, and how clinicians are negotiating these meanings to align with the particular mix of accountabilities that are salient in their local contexts. The nurse’s suggestion that SAC 2 incidents are troublesome and unwelcome is similar to the examples above identifying incident reporting as time-consuming and effortful, and as a ‘trouble-making’ exercise for the clinicians involved. The doctor’s recommendation for SAC 2 in order to *escalate* an incident, however, is slightly different. Apart from illustrating the different contexts of accountability faced by different participants, it also allows me to speak to the issue of how formal processes of accountability can be used to enact distances in well-intentioned ways that may nevertheless be problematic. In the next section, I show how the IIMS allows clinicians to bypass local and informal communication when reporting incidents ‘at a distance’, with problematic consequences.

6.4 Accountabilities in tension: Incident reporting ‘at a distance’

In this chapter, we have seen that the processes of reporting and investigating incidents make *visible* the behaviour of teams and clinicians, and expose clinicians to consequences arising from this attention to their actions or areas of responsibility. In allowing for anonymous and de-identified reporting, policy makers have sought to address concerns about the visibility of individual actions (particularly for reporters and also for those reported). However, in enabling an anonymous reporting process, I argue that the IIMS actually reinforces these concerns, and allows clinicians to circumvent the difficult interpersonal communication that might otherwise occur when negotiating safety incidents in their work. The displacement of interpersonal communication is not an aim of the incident management policy, and I often observed clinicians communicating about incidents both during and before reporting those incidents (as in Vignette 6a). However, clinicians also expressed concerns about the impact of the IIMS on ‘talk’ and interpersonal communication, noting the effect of this distancing behaviour on their collegial relationships, as well as on the stated goals of managing and learning from incidents.

For example, in the following excerpt from a feedback meeting with the clinical team (Excerpt 6f), a senior researcher (on the project) suggests that a function of the IIMS is to allow people to raise alerts about errors anonymously without fear of retribution from superiors. Responding to this, a junior doctor argues that relying on anonymity in this way reinforces the ethos that it is not acceptable to admit to or discuss mistakes openly.

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Excerpt 6f – Talking about mistakes

Senior researcher: I suppose, you know, incident reporting came about to get people over the… the bump of, you know the problem of ah I daren’t really speak about this stuff because I might get knocked on the head by my superiors. You know, so that the incident reporting mechanism is a de-identified way of… putting something on the radar of people who might be able to do something about it.

Junior doctor: But that in itself would create, gives the message that it's bad to... it'd be something against actually just saying, oh look I've made a mistake. I think we should know this and stuff. [It's saying] it should be IIMS, should be de-identified, where it should actually be, I made a mistake, this is a common mistake that other people would make, let's talk about it.

(Excerpt from recorded feedback session with the team, 10 April 2008)

This contrasting of the formal reporting system with 'talk' is also reflected in nurses' comments about the incident reporting process. During a feedback session on the ward, nurses discussed how the use of the IIMS can create a kind of distance when it is not accompanied by interpersonal communication. The following vignette (Vignette 6g) is constructed from field notes taken during and after the feedback session.

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Vignette 6g – Bypassing personal communication

A nurse mentions that she thinks that the use of the IIMS has decreased interpersonal communication among nurses. She says responding to incidents takes more time with the IIMS, and therefore it can take more time to deal with immediate problems. Another nurse notes that she would rather, had she done something wrong, be corrected immediately or soon after, rather than be told much later that an IIMS report had been made about her actions. She points out that she could in the meantime commit the same mistake again. The nurses then agree that they prefer to be spoken to directly about their mistakes rather than hearing about them only as a result of someone filing an IIMS report.

The discussion then turns to anonymity being useful in certain cases. A senior nurse notes that the IIMS can be useful for "confronting" doctors and other people with whom they might not have day-to-day direct communication. A junior nurse suggests that more experienced nurses might feel more comfortable confronting other nurses about their work because they would be more sure of themselves and have a better understanding of the situation whereas junior nurses might find that difficult.

After the meeting, I chat in the ward to a small group of nurses who tell me a recent story of an occasion in the hospital when a nurse had made an anonymous incident report about a doctor. According to them, when the doctor found out about the report, he reacted angrily, searched out the nurse who had made the report and had an angry row with her on the ward. The nurses then reflect on this incident and suggest that it would have been better in that case for the nurse and the doctor to have spoken face-to-face about the incident before an incident report was made.

(Feedback session with nurses, 28 March 2007)

From the nurses' comments here, we see that reporting an incident without also dealing directly with those involved in the incident can delay feedback and learning, and can be frustrating to those whose behaviours are in question. However, this 'distance' is also seen as helpful for clinicians wishing to report incidents where pre-existing relationships between clinicians might be lacking, or where seniority or interprofessional boundaries might inhibit a staff member's confidence in addressing another staff member's behaviour.

These accounts reflect the tensions in practice created by the uneven conflation of multiple (and contradictory) goals in the incident reporting system and policy. In order to obtain more information for learning, anonymous reporting is enabled to ameliorate the punitive consequences of individual visibility. However, this practice can also be seen as reinforcing and legitimising the associations of blame and shame that inhibit reporting and learning. Similarly, the distance afforded by the IIMS allows for reporting across hierarchical boundaries and avoiding the personal discomfort of addressing a colleague's behaviour. Yet we find that those whose actions have been reported in this way can also experience discomfort, frustration and/or anger as a result, relationships are put at risk, and learning delayed as a consequence. These 'distanced' uses of the formal reporting system can therefore be problematic for clinicians, as practices of accountability disembedded from local contexts.

When we look at the system in terms of directionality, we see that the incident reporting system facilitates a kind of *indirect* unidirectionality. That is, clinicians are creating accounts for the reporting system, but not necessarily accounting to each other directly. Instead, their accounts of the incident are translated into a form (literally) that then travels a 'distance' through an electronic system to arrive with managers at various levels. Clinicians whose actions or areas of responsibility were reported may then be made aware of the report, and thus receive the account indirectly, if at all.

These reports then travel further still, beyond hospital boundaries, to be aggregated, collated and examined for trends and patterns by the Clinical Excellence Commission (CEC). The CEC then feeds back to the NSW health system recommendations and programs for safety improvement[38]. Apart from this generalised feedback however, the system itself does not automatically provide recourse to those who have been reported, to exchange their own accounts with incident reporters. This is particularly true of anonymous reports. Although this exchange can and does happen informally, it is initiated by clinicians rather than the incident reporting system itself. Finally, there is also little evidence of feedback given back to those clinicians who have reported incidents. In the following excerpt of a field interview with two junior doctors during a tea break (Excerpt 6h), we see this lack of feedback expressed when I ask one of them about what has happened following an incident report that she has recently made.

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Excerpt 6h – Lack of feedback

Doctor 1: … but nothing has happened.

Researcher: Nothing has happened that you know of?

Doctor 1: Not that I know of. I just stopped making adjustments to the other fluids. I don’t want… it’s just a waste of my time to chart things and tell the nurses to change things when it doesn’t happen. So, we’re just doing whatever we were doing before, um, but there was… no action taken as a result of it. I mean, I think the um… the people involved would’ve, were questioned about why they signed off and then … when it wasn’t actually carried out. But, as far as I, I mean I haven’t received any feedback.

Researcher: Okay, so nobody told you anything about it?

Doctor 1 No. Which is what usually happens with IIMS reports, I have to say. They don’t, they don’t necessarily… [To Doctor 2:] Do you ever hear anything back from when you do IIMS reports?

Doctor 2: Mmm. We never get feedback. [Looking through a magazine] Oh this is, go on, look at it, she’s got her mum’s lips, but that looks like her dad, doesn’t it?

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[38] Aggregated data on incident reports are also published in six-monthly reports that are publicly available on the CEC website: http://www.cec.health.nsw.gov.au/

(Excerpt from transcript of field interview with two junior doctors, 30/6/08)

This lack of direct feedback to reporters, along with the indirect and unidirectional path of reporting, further characterises the *isolated* use of the IIMS as a disembedded and problematic accounting process. In light of the plural and negotiated meanings of safety and safety incidents highlighted earlier, this disembedded approach disrupts local negotiations of meaning by displacing local and direct interpersonal 'talk' with indirect and impersonal formal accounting. It foregrounds the formal at the expense of the informal, and produces isolated accounts made visible in the absence of other relevant accounts left invisible, or unsolicited. As such, efforts at learning become suffused with issues of blame and shame, and a sense of futility. Learning 'at a distance' becomes enabled, almost, it seems, at the expense of local learning.

6.5 Discussion

In this chapter, I follow on from the previous chapter by describing how multiple accountabilities are not only co-present but are also intertwined in practice in ways that can be problematic for clinicians. I focused here on an incident reporting system and incident management policy as a case study of formalised accountability that has been designed to address patient safety. As we saw in the previous chapter, the formal policy does not, by itself, sufficiently guide nor explain clinicians' incident reporting behaviour. Instead, clinicians are adapting their use of the reporting system in alignment with the interplay of multiple accountabilities in their local contexts.

I began by showing how the policy and incident reporting system reflect the confusion of accountabilities expressed in the literature. In my analysis, I take apart (and re-entangle) the two main accountabilities identified in the literature, namely 'accountability for learning' and 'accountability for harm'. I argue that these two rhetorics of accountability may differ by espoused rationality (and palatability), but are in fact necessarily (and even desirably) co-present and intertwined, both in theory and in practice.

In practice, clinicians are acknowledging the problematic confluence of these seemingly disparate accountabilities, noting that although the incident reporting system is promoted for learning, it is still seen as a channel for blame. In my data, I showed that a punitive interpretation of incident reporting can be understood as a particular interaction of its formality amongst the other accountabilities salient in clinicians' contexts. As such, we see that the act of reporting and the experience of being reported can be evaluated negatively according to rationalities which govern the behaviour between colleagues. These norms may lead clinicians, for example, to avoid causing unnecessary 'trouble' for each other. That an incident report is seen as 'unnecessary' trouble, or unjustified, is related to the multiplicity of meanings attributable to incidents.

Like the multiplicity of 'safety' identified in the previous chapter, the meanings of safety *incidents* can also differ by clinician, and can change over time. In several of the examples above (Vignette 6a, Excerpt 6b, Vignette 6c, Vignette 6d), we see that the ambiguity of 'harm' or the threat to safety in near misses, juxtaposed with the costs in time and effort of making and responding to an incident report, means that a report can be interpreted as an unjustified accusation of wrongdoing instead of as an act of improvement or learning.

Furthermore, the interpretations of incidents are also associated with different contexts of accountability. In Vignette 6e, we saw how determining the severity of an incident could depend on how the subsequent levels of investigation would interact with the other accountabilities faced by clinicians. For the junior doctor and perhaps the nurse, their accountabilities to the clinicians involved in the incident were perhaps more salient, in a similar way to the previous examples. For several other team members however, the goals of learning and improvement were arguably more salient to them, being as they were in a meeting organised for that very purpose. As such, the impact of the subsequent investigation on their (currently distant) colleagues may have been less salient. Interestingly, the incident itself was a composite of minor incidents spread across different parts of the hospital. This additional level of complexity also made it possible for two different levels of severity to be justified by different rationalities.

Clinicians, therefore, are adapting their use of the incident reporting system to align with local accountability pressures. For example, they are choosing to communicate before reporting, avoiding reporting, and assigning severity levels to an incident according to the consequences of the assignation rather than assessing the incident itself. As a result, clinicians are making fewer incident reports than they are expected to, and in particular making fewer reports about minor incidents. This has implications for the aims of the incident reporting system in generating a sufficiency of safety incidents to enable learning. Furthermore, this negotiative, interpersonal and behind-the-scenes work carried out by clinicians in managing incidents remains relatively ‘invisible’ beyond the immediate and local context. As mentioned in the previous chapter, this invisibility raises issues about the recognition of this work, as well as the impact and durability of these informal activities beyond the short-term and the local context. These are questions that are relevant to the aims of generating ‘system-wide’ learning and improvements in a complex and multi-level health care system.

The cross-boundary nature of the incident alluded to in Vignette 6e, for example, was given as justification for the doctors to formalise the incident by escalating it to the notice of management. In this case, formality was elected for its distance-spanning attributes, despite its inconvenience. This distance spanning capability was also acknowledged by other clinicians, who talked about how incident reporting could be used ‘at a distance’ to bypass local talk and communication, circumventing local accountabilities, with problematic consequences (Vignette 6g). The displacement of local communication is not an aim of the incident management policy, and clinicians were often observed to be communicating about incidents both before, during, and after making a formal report (as in Vignette 6a). However, reporting ‘at a distance’ is undeniably a sanctioned use of the system, and was identified by clinicians as a source of tension.

Here, it is important to note that incident reporting does not necessarily *displace* local communication, since pre-existing local rationalities can themselves inhibit interpersonal and direct communication about incidents between clinicians, such as where unequal power relationships are involved, or where pre-existing channels of communication are entirely lacking. Nevertheless, when incident reports are made ‘at a distance’, whether anonymously or without accompanying direct communication, it is arguably the case that this lack of communication is in fact reinforced, and reproduced (Excerpt 6f). Where local communication about mistakes is normally enacted, as described in the previous chapter with the senior nurse ‘correcting’ another nurse about her choice of syringe (Vignette 5a), this ‘distanced’ use of the IIMS does not exactly circumvent the local exchange of accounts. Instead it transgresses it, generating discomfort, frustration and anger on the part of those who are reported, amplifying the punitive experience of incident reporting and compromising the timeliness and utility of direct feedback and learning.

Describing the movement of accounts in practice

In this chapter, I described the distanced use of incident reporting as an example of disembedded accountability – the exchange of accounts detached from the situated intermingling of other accountabilities present in the relevant contexts. Here, I elaborate further on the framework of concepts described in the previous chapter – on the stability (of form and interpretation), mobility, combinability and visibility of accounts, but focusing in particular on the terms that describe the movement of these accounts, namely distance, dis/embeddedness and directionality.

In describing disembeddedness as detachment, I am identifying it in contrast with interconnectedness and interdependence. In the previous chapter, for example, I identified isolation and unidirectionality as cues for disembedded practices of accountability. Here, I show that unidirectionality also describes the incident reporting system. Directionality attunes us to consider for whom accounts are created, whose accounts are made visible, and the reciprocity of their exchange.

The incident reporting system facilitates the creation of mobile and combinable accounts by clinicians, that ‘make visible’ their own activities or the activities of others in forms that are combinable and hence comparable (though the use of categorisations such severity codes). These processes of account creation can be carried out either in communication with the other clinicians involved, or ‘at a distance’. These accounts are then moved across organisational distances, to local and/or executive management, and the Department of Health and the CEC, but this communication of accounts is primarily in the one direction. If these accounts are communicated back to those whose actions have been reported, this happens only indirectly, especially for near misses. The lack of feedback to reporters, as described above, further adds to the detachment of the incident reporting process, and has already been identified as an issue in incident reporting outside of this case study (Evans et al., 2006).

This lack of reciprocity may not only discourage clinicians from producing these accounts, but may also lead to the production of accounts that may be stable in form, mobile and combinable (when aggregated and collated for example), but remain incomplete, if we take stability of interpretation into account. From the data and findings presented in this chapter, we see that the multiple and changing meanings attributable to incidents are likely to be poorly represented in the incident report itself. This has implications for the quality and indeed even the utility of such accounts created locally, made visible in reports and used at a distance, whether at the hospital-level or externally, when collated by the Department of Health and the CEC. This decontextualisation reflects well the problems of representation identified in Chapters 2 and 3. We are now also aware of how this disembeddedness manifests problematically in the experiences of clinicians whose actions are thus represented and made visible across distances, in ways dissociated with local understandings and associated with feelings of blame and shame.

To comment on the interactions of multiple accountabilities discussed in this chapter, we see that when a particular rationality is enacted and another is bypassed, the results can be problematic and not entirely satisfactory in the purview of facilitating change and improvement in patient safety *across* the health care system. For example, informal accountabilities can be more contingent, timely and sensitively embedded in local contexts, but their impact and benefits may also be restricted to these local boundaries. Conversely, formal accountabilities have the potential to reach broadly into the system at different levels, and to be more durable in form. However, they can also be incomplete, less effective and less sensitive in engaging with crucial sites of activity when practiced in isolation.

In this thesis, I argue that patient safety is best supported by the embedding of accountabilities not only within local contexts, but also within the broader contexts of a hospital or health care system. In this chapter, I have shown why this may be necessary; in the next chapter, I will describe how it might be accomplished.

Chapter 7

Multiple Accountabilities in Confluence

7.1 Introduction

In the previous two chapters, I demonstrated that there are multiple accountabilities co-present and intertwined in clinicians' practices of safety. I also showed that safety is a multifarious rather than singular notion, and as such, the meaning of events around threats to safety are also multiple. In the previous chapter, I showed how accountabilities can intersect in ways that are problematic for clinicians, in conjunction with the shifting meanings of safety incidents. In particular, the formality of incident reporting as a process of accountability can enable action across boundaries and across organisational distances, but at cost to local accountabilities. This is not necessarily the case however. In this chapter, I describe data that allows me to explain how distances can be bridged to re-embed the formal and distal with the local and informal, demonstrating accountabilities in confluence and concordance.

In this chapter, I draw on data of two kinds of meetings that I observed in my field work. The first set of meetings are the occasional Mortality and Morbidity (M&M) meetings mentioned in the previous chapter, and the second are the regular "team meetings" held weekly to discuss current patients. Both kinds of meetings involved members of the multidisciplinary team rather than the staff on the ward, although the Nurse Unit Manager (NUM) of the ward occasionally attended the team meetings. The first section of this chapter presents my analysis of the M&M meetings, firstly as an example of the confluence of informal and formal practices of accountability and their respective rationalities, and secondly to elaborate on the problem of 'incomplete' formal accounts alluded to in the previous chapter. I show that in these meetings, clinicians are enacting a local use of formal accounts, and in doing so, they highlight the incompleteness of these accounts whilst also demonstrating how this is compensated for by their discussion. At the end of this first section, I also describe the apparent *limits* of this local use of formal accounts, as alluded to in the previous chapter.

In the second section of this chapter, I finish the presentation of my findings on an optimistic note. I present data from the weekly team meetings to describe how multiple accountabilities, brought into the meetings by the multiple professions present, can coalesce and interact in such a fashion that they enact multiplicity, traverse distances and demonstrate the ‘intercontextuality’ of accounts created and exchanged informally. In the final section of this chapter, I bring together the terms in my conceptual framework, to show how a diversity of accounts given and received reciprocally between multiple stakeholders, embedded within and across different contexts, would be more likely to support the diversity of meanings of safety. I propose that this would also be a model of accountability more appropriate to supporting health care delivery.

7.2 M&M meetings: A local use of formal accounts

In this section, I discuss the M&M meetings, which are occasional hour-long meetings during which the team members discuss recent incident reports involving their patients as an opportunity for learning and improvement. All members of the multidisciplinary team are invited to attend, although only the nursing and medical staff attended the meetings I was able to observe. The M&M meetings began near the end of my first phase of field work, and are also interesting because they are not specifically mandated by policy, nor are they part of the formal structure of the incident reporting system. Instead, they were initiated by a senior doctor, with the aim of improving safety by looking at the circumstances of incidents that had occurred and discussing how things might be done differently.

These aims in fact reflect the learning aims behind the incident reporting system and policy, as described in the previous chapter. This describes an alignment of local practices with formal policy in a way that is much less contentious than the problematic intersections explored in the previous chapter. In the previous chapter, I described some examples of the kind of talk carried out in these M&M meetings (in Vignettes 6c and

6e). In this chapter, I present other examples of my data from these meetings. In Excerpt 7a below, I present an example of clinicians using the reports as an opportunity for learning. I did not audio record the meetings by request due to their sensitive content, and therefore the excerpts and vignettes that follow are drawn entirely from my field notes. The excerpt below (Excerpt 7a) for example, documents my observation of the discussion that followed from a report about a minor medication error, finishing with a senior doctor asking a junior doctor to do a literature search on the topic.

❖

Excerpt 7a – Managing a wrong drug administration

[A patient] was administered the wrong drug, reported with a SAC score of 4. This was picked up by Pharmacy.

[Consultant 1] describes what he would do in that case, and asks what the others think.

[Consultant 2] says he agrees, up to a certain point.

[Consultant 1] says, “I think it’s a very reasonable thing to say that if you have a patient with (…), you’re increasing your risk”, but it’s not a more effective treatment if (...)

[Consultant 1] asks what drugs we might be “shy of” using in that situation.

[Consultant 2] says “apart from (…), I don’t know.”

[Consultant 3] asks if it matters what form of the disease we’re treating.

[Consultant 1] says maybe it does.

They go further into the disease and [consultant 2] says to [consultant 3] that it was a good question.

[Consultant 1] notes that it would be interesting to look at paediatric vs. adult literature to see where the problem happens – maybe it is less of a problem with adults?

[Consultant 3] gets paged.

[Consultant 1] asks [the resident] to do “a pub med” and to find out “what drugs cause sludging” in the situation, and to look at children vs. adults.

[The fellow] notes that in adults, it’s difficult to know the etiology.

(Excerpt from field notes of M&M meeting, 26 February 2007)

There are two things in particular that I want to note about the discussion here. Firstly, it was arguably a discussion centred on learning, in terms of better understanding what to do when this particular drug is wrongly administered. The ‘learning’ here was manifest not only in the final direction to the junior doctor to do a literature review on the topic, but also within the discussion as they exchanged opinions, questioned one another and presented different facets to the problem. The importance of this discussion becomes more apparent in my next examples. Secondly, it is also interesting that this discussion did not centre on how to prevent the incident from re-occurring, but rather on how to deal with it if it re-occurred. In fact, their discussion centred very much on the medical aspect of the problem, and involved only the doctors on the team, limiting the discussion to their usual domains of responsibility. This is also an issue I will elaborate upon in my following examples. Here, I note that not only are clinicians aligning their discussions with the aims of the incident management policy and system, but their aims are also enabled and made possible (or at least easier) by the use of incident reports. This demonstrates a kind of reciprocity in their entanglement.

I move on now to demonstrate how the report summaries that are used in these meetings can be incomplete or even misleading, but become re-contextualised in clinicians’ discussions as they make sense of these formal accounts using their own recollections and experiences. In the following vignette (Vignette 7b), I describe the discussion around an incident in which a lack of timely communication about a test result led to a delay in organizing urgent surgery for a patient.

❖

Vignette 7b – Interdepartmental communication

An incident report summary is passed around at the meeting. I copy down the excerpt that is provided for the incident we are currently discussing:

> The result of a positive or negative [test] would have important implications for whether the patient went on to have surgical exploration of his [system] and a possible [procedure] done, and this was tentatively booked for 3 day’s time with the surgical team, depending on the results of the [scan].

(Excerpt from incident report summary, M&M meeting, 22 October, 2007)

I read the summary without understanding it. A senior doctor (a consultant) then begins describing the incident. Apparently what had happened was that a patient had gone for a certain diagnostic scan, and when a junior doctor on our team (a resident) called up a junior doctor (a registrar) from the department in charge of the scan for a preliminary report, the registrar gave him a preliminary report that the results were positive. However, when our resident later checked the results on the computer, they turned out to be negative. The following excerpt from my field notes shows my record of the subsequent discussion amongst the team.

> [Consultant 1] asks if [the other department] was informed about it.
>
> [Consultant 2] mentions that [our resident] was feeling guilty and worried that he'd heard wrong the first time and when he realised he hadn't, he was angry and told [the other department] about it.
>
> [Consultant 1] asks if it has been mentioned other than at "a junior doctor level". It seems it hasn't.
>
> [Consultant 1] then mentions, noting he's mentioning this again, that most people aren't doing [scans] anymore, suggesting that this incident might be an example of why that is the case. [Consultant 3] says something about how they do it at [another hospital], but I don't catch what he says.
>
> [Consultant 2] notes that [the registrar] said to [our resident] that they had seen [an indication of a positive result], but that the formal report was still incoming. He describes that as having been given "a caveat".
>
> [Consultant 1] points out that the problem was that the registrar "didn't have the foresight" to call us when the result changed, instead "quietly typing it into the computer" and not telling anyone. They discuss who's going to "speak to [the head of the other department]" and [consultant 3, who is the head of the team] offers to do so.

(Excerpt from field notes of M&M meeting, 22 October 2007)

The discussion then ends and moves on to another incident. After the meeting, I ask the head of the team to clarify what the problem was in that incident, and he explains that surgery for this patient was delayed when it needed to be done as soon as possible.

In this vignette, we see again issues that were brought up in previous chapters, such as the impetus for direct interpersonal communication alongside the incident reporting process – in this case, to be carried out between the heads of department, rather than only at “a junior doctor level”. We also see an expectation of the importance of informal communication, in this case between the junior doctors of the different departments. Again, the lack of informal communication is associated with the use of a formal reporting system (in this case the reporting of test results) in a way that is characterised as problematic and ‘unsafe’.

Apart from allowing us to revisit these findings however, I also chose this vignette to contrast the dynamic complexity of the discussion between the doctors, with the rather spare and passive text of the report summary. In doing so, I am not criticising the reporting skills of the junior doctor who made the report. Instead, I argue that an incident report can fail to capture ‘what happened’ during an incident in a way that is sufficient in and of itself to be understood by others outside of the event, especially when it has been summarised. In this case, the discussion between the senior doctors showed how this incident was made sense of, with an explanation of the incident by Consultant 1, and the elaboration by Consultant 2. That I had to ask the head of the team later to explain the safety issue behind the incident, further underscored to me how little may be apparent or obvious in the report itself, and the importance of being able to re-contextualise the formal account in order to make sense of it, and furthermore, to learn from it.

Earlier in that meeting for example, a senior doctor mentioned that a junior doctor had told him that a report made as a “wrong dose” of potassium was actually to do with how the patient should have been in the Intensive Care Unit, under more observation, if he was being given this amount of potassium, rather than a wrong dose per se. Apparently this report was made in accordance with hospital guidelines around the maximum doses of potassium to be given in a general ward. As such, the reports themselves and the way incidents are classified can not only be incomplete but also ‘misleading’, in the sense of allowing readings that are different to the understandings held by those who have made the report, or who have participated in the incident itself. In these meetings however, this disparity is ameliorated by the presence and participation of people who were also present at the incident or who had spoken to people who were. Nevertheless, we are again reminded of the multiple meanings that can constitute ‘an incident’.

In the next two excerpts (Excerpts 7c and 7d), we see again the points mentioned above, of learning through discussion, and the apparent insufficiency of the incident report summaries by themselves. These excerpts were also chosen to illustrate my next point, which is that local discussions can also be limited to local boundaries of jurisdiction.

❖

Excerpt 7c – Overworked staff

With [a patient], there was an incident with lipids running at an incorrect rate. They try to remember if it was faster or slower.

[The fellow] recalls the incident and makes a guess.

[Consultant 1] asks if there's any evidence that the rate of putting in lipids has any influence on anything, e.g., tolerance?

[Consultant 3] gives an opinion.

[Consultant 1] says "it sounds like we all agree that…"

[Consultant 2] mentions the possibility of insulin surge.

[Consultant 1] says he's not sure that would happen.

[The fellow] and [consultant 3] say they're not sure.

[Consultant 1] says to [the registrar], "there's a little job for you" – to find out how lipids are metabolised and if it affects insulin.

[Consultant 1] asks if there's any way to prevent this? Human error?

[Consultant 2] says it was an "underpaid overworked nursing sister" who worked a double shift because someone didn't come in…

[The clinical nurse consultant (CNC)] adds, "and no proper breaks".

(Excerpt from field notes of M&M meeting, 26 February 2007)

❖

Excerpt 7d – Not a team issue

The next patient had a potentially serious incident. It seems a nurse didn't trust that a "bag" had been put up, despite it being signed for. There was also an issue with clamps.

> [The CNC] mentions that there should have been a burette, but there wasn't one.
>
> [Consultant 1] asks if there's anything we can do? Has the nurse been counselled?
>
> [Consultant 1] asks [the CNC] if he can delegate a nurse to talk to the NUM and discuss if any steps can be taken.
>
> [Consultant 2] says he's not sure that's the role of this meeting, because that may be [another committee's] meeting issue.
>
> [Consultant 1] says "we don't want to go into them gung ho"…
>
> [The CNC] says that usually the NUM goes through the reports too.
>
> [Consultant 1] says also, it's not a [team] issue so maybe we should move on. He suggests that perhaps after these meetings, we can write a summary to bring up issues. He expresses regret at not asking someone to take minutes.
>
> [Consultant 2] suggests noting "not for action" to reflect incidences/issues that are not for the team to act on.
>
> [Consultant 1] says it's good that we discuss and know about these issues nonetheless.
>
> Everyone agrees.

(Excerpt from field notes of M&M meeting, 26 February 2007)

In these two excerpts, we begin to see certain kinds of boundaries that are enacted to limit these proactive discussions. In Excerpt 7c, clinicians allude, ruefully, to insufficient and overworked staff as the underlying cause of the incident, and the discussion goes no further. The lack of money, especially for hiring more staff, was another common limiting factor in other discussions I observed. In Excerpt 7d, the boundaries are more explicitly identified by clinicians who note that this incident may be under the jurisdiction of another committee, that the NUM would also be aware of the incident, and that they did not want to go "gung ho" into what seemed to be taken care of elsewhere and was considered to be, at the end, "not a team issue". As such, we find that these positive discussions can come to a halt when clinicians are faced with issues that seem to go beyond the team's local jurisdictions, such as staffing levels and incidents discussed by other committees, despite involving their own patients. At the end of Excerpt 7d, a consultant suggests that it is still useful to discuss these issues, and the team agrees. Despite this, the next incident which happens to be another medication error, is passed over for discussion.

Here, we see the local (the 'team') outlined as separate to 'the system'. We saw this before in the previous chapter (in Vignette 6e) when team members elected to escalate an incident they considered to be a 'system issue' to management. This dissociation of 'the team' from 'the system' may not be an unreasonable assumption by the team members, but it indicates a kind of estrangement between individuals or groups of people and the 'systems' in which they might be located. More practically, it also draws a line between local action and 'system' issues, closing up opportunities for local and informal talk to cross over and intermingle with other localities with which they are arguably already intermingled in practice.

In the previous chapter, I described the problems of distance and disembeddedness by focusing on the problematic intersection of the formal amongst the informal. Here, I show that the formal and informal can be enacted in alignment, with clinicians taking the learning aims of formal policy into their M&M meetings. Again, the formal (incident report) is painted as problematic when used in isolation. The report summaries can be read as insufficient, incomplete and misleading, but become useful when re-contextualised by clinicians close to, or otherwise cognisant of the incident. As such, these formal accounts are necessarily re-embedded in order to be made sense of, and then used for learning. This remains a productive intersection of the formal amongst the informal. Following that, however, I re-problematised this interplay of accountabilities, focusing this time on the limits of informality enacted locally. In the next section, I address this problem of disembedded informality – of informal accountability that is distanced from other contexts. I propose again that this not necessarily the case, using examples from another series of meetings involving the same multidisciplinary team.

7.3 Team meetings: Enacting multiplicity and intercontextuality

Here, I describe the weekly team meetings of the multidisciplinary team, which are focused primarily on discussing the patients currently under their care. These meetings are hour-long, held at the beginning of the week, and during lunch time. They are attended by ‘the team’, and in this setting ‘the team’ is composed of a core group of clinicians who attend most meetings – the doctors (consultants, fellows, registrars and residents), senior nurses (a CNC and specialist nurses), the dieticians, social worker, and psychologist (while she was still attached to the team). Other less frequent attendees included the NUM of a ward, the speech therapist, the play therapist, biomedical researchers, medical students and biomedical research students.

There is a kind of common ‘format’ with which I can describe these meetings, although they also varied from week to week. The format consists of a junior doctor, normally a registrar, reporting to the rest of the team on their current and recent patients, going through them one by one. As the registrar reports on each patient, s/he is often interrupted with questions or comments that can then evolve into discussions amongst the team, before they move on to the next patient. The other members of the team, the other doctors, the nurses and allied health clinicians, often volunteer or are asked to provide more information about the patient, especially if they were involved in their care.

Each patient is introduced in a similar manner, with the registrar describing their case history, diagnosis, weight, procedures done or planned, and so on. Occasionally other information is reported in this brief, such as the patient having a birthday, being particularly friendly or difficult, or having unusual family circumstances. The registrar usually begins with ‘discharges’, then moves on to ‘inpatients’, and finishes off with ‘planned admissions’ or ‘consults’, who are inpatients that the doctors on the team have been asked to see by other teams. The meetings are not so much a forum for finalising plans for action, but rather for the team to collectively discuss their patients – around possible diagnoses, treatments, raising problems and tossing around possible solutions. Apart from this ‘official’ business of the meetings, team members are also eating lunch and chatting to each other informally, before and after the meetings, about work and other things such as upcoming holiday plans.

These meetings illustrate well how multiplicity can be productively harnessed in practice. The multiplicity I refer to here is in the variety of disciplines that are present and that participate in the meetings. Local discussion is again the focus of interest here, and I argue that this multiplicity actually embeds the local exchange of accounts in other contexts. In this case, connecting the accountabilities enacted within the meetings with the accountabilities enacted between team members' and patients and their families.

For example, the registrar usually begins reporting on a patient by describing them in primarily medical terms. However, the discussion often quickly turns to encompass other facets of the patients and their families, including issues such as behavioural problems or the capacity of the parents to care for the child, family support, and so on. The following excerpt from my field notes (Excerpt 7e) details one such concern, expressed by the social worker, following a discussion between a doctor (a fellow) and a dietician about the patient's diet.

❖

Excerpt 7e – Reusing syringes

[The social worker] notes that this patient's mum is having trouble with syringes, especially with the cost of replacing syringes that she throws away. She seems to be indirectly asking if they can be re-used. [A nurse] states that they are labelled 'single use only'. Someone else notes that people are being told that they can be disinfected and reused. Someone else points out that the syringes are expensive. [The social worker] notes that the family is given some financial relief for purchasing syringes and things like that but it may not be enough, and she wants to know how else she may be able to help them as they're undergoing financial difficulty. The team discusses recommendations for re-using syringes. [A consultant] notes that they've been using the same syringe at home for paracetamol. [A nurse] says something about washing, drying and then keeping used syringes in the fridge to prevent contamination.

(Excerpt from field notes of team meeting, 7 August 2006)

In the next excerpt from the transcript of a recorded meeting (Excerpt 7f), we see again how the social worker introduces the family's concerns into a discussion that was, up to this point, primarily between doctors, regarding the patient's recent surgical procedure. The conversation then turns to discussing how to organise the family's request for a second opinion in the hospital, and possibly also from a doctor at another hospital.

❖

Excerpt 7f – Arranging an external consult

Consultant 4: … the secretion is low, but not enough to keep the wounds from doing this. So… potentially the next step is, is close him up and see what happens.

Social worker: They're still talking about their second opinion, that's the family (…)

Consultant 4: Yeah. Well, they're gonna get a, they asked for a second consult from here as well, or further opinion from here. So, I've asked [Consultant 3] to go and have a look at him. And then I've emailed [a consultant at another hospital] to tr-, 'cause he said, (…) two weeks, should transfer for consult with someone like… So I thought I'd talk with [the consultant] to see which is the best way. 'Cause even an outpatient one needs a nurse escort, he still has to run TPN[39]… um, you need, we do…

Consultant 1: Actually in the past, people at the other place have been willing to come here. We arrange to (…)

Consultant 4: Yeah… so I didn't know how he felt, and I haven't heard back so I'll tell…

Consultant 1: (…) too.

Consultant 4: And him and [another consultant] came out and did a consult so… In someone like him, it definitely will be better than a full transfer because a full transfer on somebody on TPN and Octreotide is a very expensive transfer. 'Cause they have to then organise the drugs, which are… they're both very expensive things to have.

Consultant 1: Small risks involved.

Consultant 4: Yeah. So I think it's better if… I think ideally, [the other consultant] can come across, that will be great, actually. But, I… I'm sure he's also

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[39] TPN refers to Total Parenteral Nutrition, which is a way of feeding patients intravenously who are unable to eat or digest food normally.

frantic so I wouldn't be surprised if it's too hard to fit in.

Consultant 1: What about [another consultant]?

Consultant 4: Yeah, he's, he's somebody who's may-… he, he lives in… Hunter's Hill? I think? So he may be bit closer than… Well, I guess Hunter's Hill and Lane Cove are really the same by the time they come across.

Social worker: The family, they're just getting more and more frustrated. But you know, starting to work together a bit better, there's more extended family support, so they're gonna come in, give them a break. I had a long talk with the aunties as well…

Consultant 4: And [the patient's mother] is definitely trying to take some time off just to help the older sibling to school... and all that. So I think, giving her the time to have a break, and they understand it a little bit more, not… the accusation of doing nothing is not (…) we try. [Laughs]

(Excerpt from recorded team meeting, 22 January 2007)

In these excerpts I highlight how the social worker brings in the family's concerns and situations into the discussion. In doing so, I do not mean to suggest that only allied health clinicians or nurses raise these issues. The doctors often raised these issues as well, intertwined with their discussions about treatments. In the following excerpt (Excerpt 7g), doctors are discussing a patient, a little girl, whose parents are widely perceived to be very anxious. Prior to this excerpt, the registrar has described her case history, beginning with how the patient 'presented', how she had been treated, and recent test results. This was followed by discussion between the doctors about their observations of the patient and other test results. The registrar then noted that "parents are still as anxious as ever". Two consultants then discussed what they thought would happen treatment-wise in the next few weeks, and mentioned a highly anticipated test result, about which the parents had anxiously been asking. Excerpt 7g details the rest of the discussion, around how the doctors had thought to alleviate some of the parents' anxieties.

◆

Excerpt 7g – Anxious parents

Consultant 4: … the parents ask each time we walk in, have you got the results? [Laughs] I said, look, it takes a while for [the results] to come back. I must say, they have calmed down a lot. I don’t get the same sense as what people describe, you know, that you can’t walk out for… I think they have calmed down.

Consultant 1: Ah no, it’s just that each doctor who’d walk in would be asked the same sort of questions…

Registrar: And inevitably you get a variability in answers. And I think that leads to further distrust and…

Consultant 4: Well actually [a surgical consultant] gave me a phone call yesterday where she made a very good point. ‘Cos she’s only here three days a week, she said we should probably do a joint round together this week and I said that’s a brilliant idea, purely to get rid of that sort of dividing and distrust so um, so I said we should try to round either Wednesday or Thursday together. So um, so we’re really together on the points.

Registrar: …where we’re going in terms of her treatment.

(Excerpt from transcript of team meeting, 6 November 2006)

It is perhaps unsurprising that the discussion of paediatric patients involved talk about their families and carers, who are crucial to any treatment or care given to the children. What I think is noteworthy however, is *how* the discussions reflected this understanding of the importance of patients’ family circumstances. I suggest that this was enabled by the presence and participation of clinicians who represent different facets of patient care. Clinicians were collaborating on each representation of ‘the patient’ or ‘the family’ during these discussions, and introduced multiplicity in these accounts by virtue of the diversity of their professional interests and responsibilities. Furthermore, although this was common, clinicians were not only offering accounts of patients and their families specific to their particular disciplines. Instead, I suggest that their co-presence and co-participation in the discussions created collective and more complete expectations of 'care', at least within the meetings, that traversed professional boundaries and were more representative of the complexities of care faced by their patients and their families.

Several clinicians also described this sense of seeing a more complete picture of patients and their families through these meetings. The following quotes (Excerpt 7h) were taken from the transcript of a feedback session with several members of the team.

❖

Excerpt 7h – A more complete picture

> If someone's away on holiday, maybe the social worker, [you] kinda feel that… this is not the full… picture you can get of a family and child.
>
> (Specialist nurse, 10 April, 2008)

> You know, we have a lot of patients and you only get to spend a certain amount of time with them and sometimes um… by having, you know, the interaction they have with lots of the other… allied health, it raises up a lot of issues which perhaps either you didn't have time to explore or… in the time that you had. And I guess it helps in terms of helping us to manage, just by identifying, you know, other issues which you might need to cover the next time you check with the patient.
>
> (Resident, 10 April, 2008)

The team meetings therefore were examples of multiplicity and intercontexutality enacted, in such a way that these local discussion were also tied to multiple other contexts. This extends the finding outlined in the previous chapter, where I suggested that local discussions in M&M meetings could be limited by local boundaries of jurisdiction, and remain disembedded, or disconnected, from other contexts as a result. In the weekly team meetings described here however, 'the team' crucially, is larger and more diverse. As such, they are 'connected' to more contexts beyond the meeting room, in particular the organisational, social and practical concerns of their patients and their carers. This allows the team to enact a more complete, and therefore potentially safer, ethic of care for their patients.

Finally, I elaborate further on this finding, by describing what I call the *intercontextuality* of accounts, and of accountabilities. By this, I am attempting to 'map' the way in which the re-embedding of the local is achieved in these meetings. There are three parts to this last argument; first, informal accounts can ‘travel’ out of the ‘original’ contexts of their production to be repeated and recreated in the meetings. Second, not only accounts but *accountabilities* too can travel across contexts, via the clinicians who are situated within and across these contexts. Third, I suggest that this travel of accounts and accountabilities can also occur reciprocally and multidirectionally, that is, that they can also travel back outside of these meetings and elsewhere. These three points correspond with the descriptions of embeddedness I have employed throughout this thesis.

In the following two excerpts (Excerpts 7i and 7j), I highlight examples of mothers’ questions and concerns, originally posed in the ward to clinicians, and repeated subsequently in these meetings. In Excerpt 7i, a senior nurse brings up a mother’s question about an albumin infusion, following which the doctors then debate the utility of this treatment.

❖

Excerpt 7i – Debating an albumin infusion

[The registrar] introduces a patient, and [fellow 1] asks [consultant 3] if he knew the patient had come in last Friday. Apparently the patient was re-admitted without notifying the team.

[A senior nurse] asks to talk about his mum’s question about an albumin infusion – to have one because of [the patient’s] low albumin.

[Consultants 2, 3 and 4] seem to agree.

[Consultant 1] questions the utility of giving an albumin infusion, stating his reasons and explaining his “philosophy” – that it’s not effective to help with healing or protein loss, but can be used to help with the side effects if there are any.

[Fellow 2] and [consultant 3] mention the patient’s history of side effects and suggest that it’s just to “support him”.

[Consultant 1] seems to agree eventually that it is justified.

(Excerpt from field notes of team meeting, 19 September 2006)

The next excerpt (Excerpt 7j) follows from discussion of a new and unpleasant diagnosis that Consultant 3 is considering for another patient. A clinical nurse consultant (CNC) mentions the mother's concern about something to do with the patient's central line, which prompts the junior doctors to elaborate on this concern, noting that the mother had also brought it up with them. The CNC then mentions another concern of the mother's about something seen on the x-ray, which prompts another discussion, primarily among the doctors, who discuss what it might be. The CNC pushes the question once more, asking if they should be concerned about it. The doctors briefly mention possibilities, then reiterate that it's very minor, and resolve to wait and see. A longer than usual excerpt is included here, to give the reader more of a sense of the kinds of discussion that take place in the meetings.

◆

Excerpt 7j – A mother's concerns

Consultant 1: He's not labelling it as [disease] currently. What he's saying is that this is an inflammatory condition that's in association with [disorder], so maybe it's something to do with stasis, with bacterial overgrowth, et cetera et cetera, rather than a traditional [disease]. But he thinks that maybe it would be worth using the same sort of medicines, like [drug]. Uh… and I think that's a very reasonable thing to do. But he's not saying that he's got [disease], but it's clearly… something…

Dietician: Inflammatory process.

Consultant 1: Well it may have something to do with his [disorder], his lack of motility, stasis.

Dietician: Which… I think [consultant 2] was saying, a few weeks back, when you were saying, why hasn't he grown, what's going on, what's, what is this underlying thing? Oh dear.

Resident: And this is a side issue, he's had a rash around his perianal area, since the […]. So… uh…

Consultant 1: Has it preceded the [drug]?

Resident: Yeah. Preceded, definitely preceded it.

Consultant 2: No he's not on [drug].

Consultant 1; [Names another drug.]

CNC: What's this thing with his line? Mum's going on about…

Resident: Mum's concerned that it's too uh what is it… [To the registrar] she talked to you, didn't she?

Registrar: Uh, she was concerned that there was some sort of discharge around… at the exit site on the skin she can see some sort of yellow discharge and she was querying, querying that I think.

CNC: I thought it was the cuff of the line, that's what it looked like to me. And they did an x-ray?

Registrar: And that looks exactly like, we compared that to the previous film, like it's in exactly the same spot. So… she has voiced that concern to us as well.

CNC: And she's talked to me about… some sort of fluid, noted, on the x-ray?

Registrar: Uh, yes. In… yeah. At the costophrenic angle on the, on the right hand side, it's just a little something that you can see, it's very small.

Dietician: Did you say costa frank, or?

Consultant 1: Costo… [someone laughs]

Registrar: Very funny. [others laugh]

Consultant 2: He's been in pulmonary oedema before of course. […] overloaded and so…

Registrar: So it's only on the right to the, the cost-, sorry. [others laugh]

CNC: [laughing] now she's gonna call it a costa-thingy now.

Registrar: [Jokingly]… in an exam. Anyway, that's okay. So there's some blunting of the angle, but it's only on the right, not on the left, and it's very micro. We can show you the x-ray.

Consultant 2: Mmm. (…) show [consultant 3] that his um…

CNC: Is there any con-, do we need to have any concern with it?

Consultant 2: … remember that his line is in his right atrium, so, you know, he could have… disruption to his thoracic duct and so him having something on one side isn't necessarily (…) straightaway.

CNC: Is there anything (…), did that, do you think?

Registrar: Possibly, possibly um. (…)

Consultant 1: Depends on how much it is, is it just that there's…

Registrar: It's very minor.

Consultant 1: Very minor.

Registrar: It's tiny.

Consultant 1: It's either a little bit of fluid there or some, maybe some thickening of the plural… Maybe just want to wait and watch, I think. Yup.

(Excerpt from transcript of team meeting, 26 February 2007)

In both excerpts above (Excerpts 7i and 7j), the senior nurse is not only communicating accounts from patients' parents, but also asking doctors to account for the issues. The *interprofessional* accountability enacted in these meetings also enacts *clinician-patient* accountability, and not only between the nurse and the patients, but also between the doctors and patients. This is what I mean by the intercontextuality of accountabilities.

In the next and final excerpt (Excerpt 7k), the clinical psychologist asks about a patient, in relation to a time frame for surgery, and about his prognosis, noting that she "wanted to know just in case they asked her".

❖

Excerpt 7k – Multidirectional accountability

[The clinical psychologist] asks about [a patient]'s prognosis, noting that mum told her about something – something surgical happening in a certain time frame – and that both parents believe this.

[The fellow] and [consultant 4] discuss this possibility.

Someone notes it's [consultant 2]'s patient and we have to ask him.

They discuss [another patient] who is starting solids and is alternately excited and anxious. [Consultant 2] returns to the room.

> [The clinical psychologist] talks about the parents [of this other patient] and how interesting they are.
>
> [Consultant 2] agrees and mentions that the whole family is interesting. He mentions that they give him a loaf of Lebanese bread every time he comes through, saying that he's told them to stop, and that there's a loaf going mouldy on his floor.
>
> [Consultant 4] asks [consultant 2] about the kid that [the clinical psychologist] asked about earlier – what's happening?
>
> [Consultant 2] mentions what [a surgeon] told the family, about how it wasn't going to take weeks, probably months.
>
> [Consultant 1] suggests that they didn't hear the second part.
>
> [Consultant 2] notes he was there when [the surgeon] was speaking to the family and also seems to suggest that not hearing the second part was something "we" would do too.
>
> [The clinical psychologist] asks what his prognosis is like.
>
> [Consultants 2 and 4] answer, almost enthusiastically, that he'll be fine. Something about having enough [of a body part] and that he'll readjust fairly quickly.
>
> [The clinical psychologist] says good, she wanted to know just in case they asked her.
>
> (Excerpt from field notes of team meeting, 22 Jan 2007)

In this last excerpt, I highlight again the myriad and multidirectional exchanges of accounts and accountability. The clinical psychologist's question about parents' perceptions of a surgical time frame is discussed by two doctors, before being postponed till the consultant in charge of that patient is back in the room. When he does return, it is another consultant who asks about the patient. When the clinical psychologist repeats her question about his prognosis, we see her asking the doctors for an account that allows her to then relay this account back to the parents if they ask her in the future. The talk here is fluid and multidirectional; several accounts introduced here were also situated elsewhere – in the ward, with the parents, or with the surgeon – and have the potential to be re-situated in these contexts and others.

The examples I have described in this section may, as I alluded to earlier, be seen as rather prosaic and everyday instances of talk, rather than exceptional practices in their own right. However, I argue that it reflects how safety is currently (and perhaps even ideally) enacted – as everyday, ordinary practice. In paying attention to these everyday practices, I have been able to identify ways in which clinicians are enacting accountabilities that address the problems raised in this thesis – of formal accountability disembedded from local contexts, and of local informal activity disconnected from other contexts.

7.4 Discussion

In this chapter, I described two kinds of meetings held by the multidisciplinary team. In first section, I described the smaller M&M meetings held to discuss recent incidents, and in the second section, I described the larger weekly team meetings held to discuss current patients. In this chapter, I extended my arguments from the previous chapter and end on a positive note by showing how accountabilities can be enacted in alignment, and how disembedded practices of accountability can be re-embedded. In Chapter 6, I showed that accountabilities are entangled in practice, and I argued that this entanglement needs to be acknowledged because the enactment of practices of accountability in isolation from other accountabilities becomes problematic. Formal accountabilities have the potential to reach broadly into the system at different levels, and to be more durable in form. However, they can also be incomplete, less effective and less sensitive in engaging with local sites of activity when practiced in isolation. Conversely, informal accountabilities can be more contingent, timely and sensitively embedded in local contexts, but their impact and benefits may also be restricted to these local boundaries.

These arguments were revisited in the first section of this chapter, where I described the discussions held during M&M meetings to show how incident reports could be incomplete, insufficient and even misleading, and that local discussion could also be limited, bounded in such a way as to perform a separation between the local and ‘the system’ at large. The difference here however, was that these findings were described in the context of a situation where accountabilities were actually *in concordance*, where the locally enacted aims of the M&M meetings aligned closely with those of the formal policy and incident reporting system. In these meetings, I also described how the limitations of ‘incomplete’ incident report summaries were ameliorated by their re-contextualisation through clinicians’ discussions. These summaries, created in the recent past as formal reports disembedded from time and space, became re-embedded in the present, through the situated recollections of clinicians. Interestingly, the discussions during these meetings also provided a form of locally-generated feedback to the team for incidents they may have reported, contrasting with the complaint described in the previous chapter that incident reporters seldom or never received feedback following their reports.

To analyse this finding further, I contrast the stability of the ‘form’ of incident reports, made combinable by their common structure, with the stability of their ‘interpretation’ or meaning. Referring again to the multiple ‘meanings’ that can be validly associated with ‘an incident’, the incompleteness of any one account becomes apparent in isolation. In the M&M meetings however, this potential instability could be ameliorated, at least to some extent, by the participation of clinicians who bridged the distances between the incident, the making of the report, and the discussion in the M&M meetings. Here, the problems of formality discussed earlier were avoided by reducing the ‘distances’ that they travelled, by re-embedding the formal accounts in contexts closely linked to their original contexts of production. In this case, the informal accounts that clinicians exchanged with one another were the ‘links’ that re-embedded the report summaries such that clinicians were then able to ‘make sense' of them.

Even in this productive and concordant space however, I could still describe a kind of disembeddedness. The dissociation by clinicians of their local actions from ‘the system’ highlighted the apparent limits of this informal exchange of accounts. From these observations, one could suggest that informal accounts and accountabilities do not cross distances as well as formalised accounts and formalised accountabilities. Whilst I take this to be a valid reading, I also challenged the universality of this notion by describing in the second section of this chapter a different set of meetings in which ‘this same team’ (in its larger and more diverse incarnation) was able to enact the local exchange of informal accounts that were also embedded in other contexts.

In the second section of this chapter, I argued that we could observe the ‘intercontextuality’ of informal accounts and accountabilities in the discussions during the weekly team meetings. By this intercontextuality, I am referring to the re-creation of embedded accounts across different contexts such as when past accounts are repeated or reproduced in subsequent account-exchanges; in this case, via the clinicians who are also situated within and across these contexts. I also suggested that the intercontextuality of these accounts and accountabilities could be reciprocal and multidirectional.

Again, I highlighted the distances bridged by the clinicians who participated in these meetings. They did so not only by relaying their own accounts, but also relaying the accounts of others – in this case, the accounts of patients and family members – and relaying accounts from these meetings back to them in turn. In doing so, I argued that they also enacted their accountability to patients and family members through the accountability enacted with one another during these meetings. This intercontextuality was supported and enabled by the *multiplicity* harnessed in these multidisciplinary meetings. The range of clinicians present and actively participating in these meetings enabled *collective* expectations of care that *transcended* professional boundaries and included more meanings of what this care might mean. As such, I suggest that they would have been more representative of the complexities of care required by patients and their families.

I suggest here that this observation of the intercontextuality of accounts and accountabilities is perhaps one way of 'finding safety' in ordinary and pre-existing practices, rather than in new technologies or guidelines. Here, I repeat again my argument introduced in Chapter 5, that the kind of patient safety we would wish for in our hospitals is perhaps necessarily and inevitably multiple, and that this multiplicity is best supported in turn by the acknowledgement of the multiplicity of the rationalities and forms of accountability by which clinicians determine safety, and align their practices. Furthermore, this acknowledgement of multiple safety(s) and multiple accountabilities should also include an acknowledgement of their entanglement.

Finally, I blur my distinctions between formal and informal accounts. For example, I find that accounts need not be formal in order to travel across distances, although there are trade-offs between stability of form, combinability and stability of interpretation, and between what is made visible and what is left invisible. Rather, what seems to matter instead is that they are *embedded* within these contexts, and also outside of them. Embeddedness here describes an inter-connectivity located *between* contexts of practice, an expression of interdependence that produces safety as an ongoing heterogeneous generation of interrelated practices, rather than static practices in isolation. In the next chapter (Chapter 8), I discuss how this argument reflects a new way of thinking about safety and accountability that may be more appropriate to the increasing complexities of health care organisations and health care delivery.

Chapter 8

Discussion and Conclusion

8.1 Introduction

In this chapter, I present the main arguments of my thesis, and describe my contributions to the research literature. In the first section, I revisit the lessons drawn from the empirical, theoretical and methodological literatures reviewed in Chapters 2, 3 and 4, from which I articulated my research focus and conceptual framework. I present the field of patient safety research and practice as one in which formal accountability is a dominant and actively contested paradigm. Drawing on a variety of literatures, I proposed a new perspective, relocating the contested terrain away from the intersection between formal accountability and local practices, to the intersections between multiple accountabilities in practice.

In the second section, I bring together my findings in Chapters 5, 6 and 7, to answer the research question of how clinicians enact and negotiate these multiple accountabilities in their practices of safety. In the third and final section of this chapter, I conclude this thesis by summarising my arguments, and discussing the implications of these findings for practices of safety in health care. In the following chapter (Chapter 9), I use my findings to reflect on recommendations for health policy, medical education and research practices around safety and in general.

8.2 The literature on accountability and patient safety

In Chapters 2 and 3, I reviewed the empirical and theoretical literatures to paint a picture of current and established trends in health care where, increasingly, systems of formal accountability are proposed and implemented as solutions to problems of patient safety. I showed how these formal systems were approaches designed or created 'at a distance' to control or impact unidirectionally upon frontline activities. In line with the widely-promulgated shift towards looking at 'system causes' for medical error, processes of formal accountability have emerged as systemic approaches towards tackling the widespread and common problem of iatrogenic harm.

The popularity of formal accountability is not limited to health care, and has also developed prior to widespread concerns for patient safety in health care (Wiener, 2000). Dubnick (2007) for example, called this "the Age of Accountability" (p. 3). Although the push for systems of formal accountability has been dominant in safety research, the intersections between formality and local practices have also emerged as contested spaces. In Chapters 2 and 3, I analysed these contestations, to articulate my arguments for 'the problem with formal accountability'.

The problem with formal accountability

In my reviews of the literature, I chose to analyse two prominent manifestations of formal accountability in patient safety initiatives. These were guidelines, a broad umbrella term applying also to protocols, rules, policies, and other written standards or instructions to guide clinical practice (Berg et al., 2000), and the objectivist rationality of Evidence Based Medicine (EBM) as their underlying epistemology and methodology.

I charted the contested terrain of the implementation of guidelines in clinical practice by three main criticisms, namely their threat to professional autonomy, their inappropriate authority, and their limited applicability. Whilst focusing on these controversies, I also acknowledged the utility and attractiveness of these formal approaches, noting that they are not always unwelcomed by clinicians, and furthermore, that they are designed in response to the increasingly large, diverse and widely-distributed realities of modern health care systems. Formal approaches mitigate this distance and diversity by modelling clinical practices and creating *standard* accounts that are seen to be *mobile*, *stable* and *combinable*, enabling visibility, action and control across *distances*, and across multiple contexts (Latour, 1987, 1988). I found however that these same characteristics also underlie the problematic implementation of formal approaches, by promulgating mistaken assumptions about how they are intended to work. Drawing on more literature, I showed that the assumptions behind these formal representational approaches did not necessarily stand up under scrutiny, creating instead a kind of false separation between these approaches and the local contexts and practitioners they are meant to act upon.

It became apparent that representational accounts, conceived of as *disembedded* accounts able to travel distances, are instead both created and adapted via processes that are *embedded* in the contexts of their production, and *embedded* in the contexts of their use. In other words, formal accounts do not stand independently as decontextualised representations of some aspect of clinical practice, even if they are imagined as such. Instead, they are translations, and furthermore, translations which do not carry in themselves the multifarious translational work that was enacted to produce them (Timmermans & Berg, 1997). Also, they are not so much straightforwardly *adopted*, but rather *adapted* by clinicians who carry out contingent articulation work in order to re-contextualise these accounts (Star, 1991). Similarly, studies of successful guidelines pointed to the value of compatibility with (and even subordination to) current practices in the contexts of their use (Grol et al., 1998; Timmermans & Berg, 1997), and the importance of engagement with (and between) clinicians in the re-organisation of practices on the ground (Bosk et al., 2009; Timmermans and Mauck, 2005).

Safety and accountability as everyday practice

In this literature therefore, the emphasis is shifted away from the apparent *mobility* and *stability* of the objective 'evidence-based' guideline, to the local *activity* of clinicians involved in creating and using these guidelines. Sachs (1995), for example, clearly positioned tacit articulation work as being more central to the efficient performance of work than explicit representations of work like guidelines and protocols. This describes the second shift in the literature. In my review of the literature, I described three shifts. The first was the shift from a focus on individual actions and accountability for safety to a focus on systems, mediated by formal approaches designed to act across distances and imagined to be removed from the immediacies of local contexts and local activity. The second shift, where I locate my study, takes the lessons of 'systems thinking' and extends them beyond the concern for producing formal systems of accountability, to focus instead on the local contexts of activity meant to be bridged by these formal systems.

As such, my study follows in the footsteps of the few studies that have located either accountability or safety in everyday practices, as ongoing practical accomplishments (Gherardi & Nicolini, 2000a, 2000b, 2002a, 2002b; Mesman, 2010; Yakel, 2001). My study extends this literature by examining how accountability *and* safety *intersect* in clinical practice. Furthermore, in taking the field of practices as my concern, I have also reframed the debate, by proposing a *third* shift. I showed that accountability has also been described as informal and everyday social practice (Gray, 2002; Roberts, 1991; Munro, 1996), at the very heart of which is the premise of ethnomethodology, that we are always acting accountably with one another, as the method by which we order and make sense of our worlds (Garfinkel, 1970; Munro, 1996). As such, it no longer made sense to talk about accountability as singular, nor as located only in formal systems or formal accounts.

I suggested instead that the controversies discussed earlier, previously located 'between formal accountability and local practices' could be described instead as tensions arising 'between multiple accountabilities in practice'. This new focus was supported by literature that described tensions and interferences between what researchers identified as different codes, models or *rationalities* of accountability in health care, mirroring the complaints previously discussed regarding formal accountability (Gray & Jenkins, 1993; Degeling, 2000; Stinchcombe, 2001). This shift was also in line with my aims stated early in Chapter 2, to attend to the informal and less visible practices that also produce safety. As such, I suggested that the accountability that is increasingly associated with safety might not only be enabled through formal distance-spanning systems, but might also be found in the informal and local. Furthermore, by comparing formal accountability with informal accountability and by situating them both as practices, I sought to foreground their similarities and comparability, even as I differentiated them in my analyses. My research aim therefore was to better understand how patient safety is produced and could potentially be improved, by observing how multiple accountabilities are currently enacted in clinicians' practices of safety.

8.3 On methodology: Accounting for accountability and safety in practice

This thesis is an account of accountability and safety as everyday practices, developed through my use of ethnographic methods in the context of a children's hospital, and a multidisciplinary group of clinicians who worked in the hospital. I described my methodology in Chapter 4, wherein I foregrounded again the message of multiplicity in articulating the multiple theoretical frameworks underlying the literatures that have informed this study. In that chapter, I also foreshadowed my findings, by reflecting on this thesis as a kind of formal account in itself.

This thesis is an account created to translate four years of research work that was embedded in multiple fields – not only the hospital in which I carried out my field work, but also the academic literatures that I read and engaged with, and to which I have also contributed (see Appendices D & E). As such, it is a formal account of my research practices that contains an acknowledgement and description of its embeddedness, and of its iterative and messy construction. Furthermore, this thesis is written to be a useful account, not as a standalone piece of work that travels independently or somehow ‘speaks for itself’, but rather making a contribution by describing new connections between different ways of thinking and doing.

In the first part of this thesis (Chapters 2 and 3), I made several connections between a range of literatures to frame the interactions between multiple accountabilities in clinicians’ practices of safety as a locus of interest. From this exercise, I also developed a conceptualisation of multiple accountabilities in practice, and a framework for their analysis, using key terms and concepts that emerged from the literatures as salient to these tensions. I described this framework in Chapter 4, and in Chapters 5, 6 and 7, I described my observations from the field, using this conceptualisation and framework as a guide for analysis.

A conceptual framework for analysing accountabilities in practice

Firstly, I described accountability as multiple – that is, that there are multiple practices of accountability that differ by *rationality* and by *form*. By *rationality*, I mean the standards and norms by which meaning and significance are determined and practices are evaluated (Degeling, 2000). These are not only technical, financial, scientific or managerial, as rationalities have most commonly been described, but can refer also to the informal ‘social’ norms governing interpersonal and interprofessional relationships. By *form*, I introduced formal and informal accountabilities as different formats through which these rationalities could be enacted. Here, I contrasted the more rigid, distancing and formalised accountability described previously with the more fluid ‘socialising’ accountability proposed by Roberts (1991), characterised by informal talk, mutual meaning-making and interdependence.

Moving closer to the realm of practices, I drew on my reading of the literature to propose a ‘working definition’ of accountability as that which is enacted by clinicians through their creation, exchange and use of accounts – that is, through the movement of accounts. These accounts are representations of practice, as well as explanations or justifications of practice. In other words, they are both *representative* and *normative*. Guided by the literature on formal accountability, I proposed a framework of terms with which I could analyse and compare the different forms of accountability. These terms are descriptors of accounts themselves – their stability, mobility, combinability and visibility, which are in turn interdependent and interrelated with terms that describe the movement of these accounts, namely distance, dis/embeddedness and directionality. Directionality in particular was a ‘new’ term derived in this thesis from the analysis of the literature, rather than a term borrowed from a previous analysis.

In the next three sections of this chapter, I deliver the main arguments of this thesis. I reflect on the data and findings presented in Chapters 5, 6 and 7, re-assembling them to present an argument in three parts. First, I describe the multiplicity and ubiquity of safety, and the interconnectedness and complexity of practices of safety. Second, I elaborate on the problem of disembeddedness, of how current models of accountability do not adequately engage with this complexity, and the problems that ensue. Finally, I present my argument for re-thinking accountability, describing how clinicians are successfully engaging with complexity and multiplicity, and how we might further enable them to do so.

In the following sections, I refer also to the literature reviewed throughout the thesis, to situate and relate my findings to the research that has informed this study. As I have done through most of the preceding chapters, I also introduce ‘new’ literature with which I frame my arguments. As mentioned in the Introduction, this iterative review of the literature maps the development of my thinking around patient safety and accountability, and links each stage of my research to the literature that informed my thinking at that time. Here, I also discuss literature that I have cited previously but not discussed in detail, and works that I cite for the first time, including Annemarie Mol’s book, “The Body Multiple: Ontology in Medical Practice” (2002).

I came to this work late in my research, and was made aware of it by Law (2004), who credits Mol with "inventing" multiplicity (p. vii). This caught my eye as I was trying to articulate the multiplicity I was talking about in my own work. As I read Mol's work, I found her description of praxiography (of telling a story about practices) and her description of multiplicities in the enactment of atherosclerosis to be entirely lucid and analogous to the way I was conceptualising my own findings. As such, the following discussion is inspired by the theoretical arguments of Mol (2002) and Law (2004), with this thesis finding its 'home' in the work of Science and Technology Studies/Science, Technology and Society (STS) researchers, after having journeyed through a mixed landscape of different bodies of literature, theoretical frameworks and paradigms of research[40].

8.4 Finding safety in practice

The ubiquity of safety

To begin with, I found, as so many others have described, that hospital work is complex (Plsek & Wilson, 2001) and characterised by practices so interconnected that 'safety work' is not easily separated out from all the work that might be described in a hospital. I differ here from Strauss et al. (1985), who described several different kinds of medical work and differentiated, for example, articulation work from safety work. Here I conflate them, seeing safety as ubiquitous in hospital work, much like safety researchers who argued that error could be located throughout a complex system, and not only at the frontline of patient care (Reason, 2000; Perrow, 1984/1999).

Despite the widespread acceptance of this 'systems view' of medical error, the frontline of care delivery is still where 'harm' becomes most visible and tangible. This was my first impression, as an outsider, when faced with what was being done with patients under the banner of 'treatment'. As Mol (2002) pointed out, surgeons in operating theatres are allowed to cut into someone else's flesh as a technical rather than violent matter; elsewhere, this would be considered a serious transgression (p. 142). Outside of surgical theatres, relatively 'normal' procedures carried out in the wards such as

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[40] The meandering path taken through the literatures in this thesis has cost a certain degree of structural 'coherence' and completeness that might have been achieved had I framed it within a more traditionally 'bounded' literature. However, in line with the lessons learnt through this research journey, I chose instead to present a thesis that acknowledges mess and multiplicity, by making visible the messiness in how this research conducted.

injecting drugs, taking blood, inserting catheters, and withholding food in preparation for an operation, would generally be considered harmful outside of a medical context. Even within the hospital, these treatments could also be seen as harmful by clinicians, depending on the details – an incorrect rate of delivery, an incorrect dose, the wrong order, and so on. When ‘safety’ is invoked in practice therefore, its meanings depend on the ‘contexts’ of its invocation (Gherardi & Nicolini, 2000a, 2000b).

Safety as multiple

In line with the focus of this thesis, I observed and described ‘contexts’ in terms of accountabilities enacted by clinicians. As Munro (1996) noted, “far from being somewhere ‘out there’, context is that which is always being created and reproduced through accounts” (p. 3). In addition, I also attended to the *rationalities* evoked through these accounts. As Mol (2002) pointed out, “separating out right and wrong is only possible if one has a standard”. Here, her statement applies also to distinctions between *safe* and *unsafe* in clinical practice, where the ‘standards’ for determining them vary according to the various rationalities that are in play. I argue therefore that practices of safety are not only ubiquitous in clinical practice, but that they are also intertwined with practices of accountability – of communicating ‘what it means to be safe’ in accounts.

The conversations that I described in Vignette 1 in Chapter 5 around the safety of various syringe sizes illustrated this argument particularly. In this example, I showed how a ‘safe’ syringe size was a shifting and nebulous distinction, supported and contradicted by different (and overlapping) accounts given by clinicians of what is and is not ‘safe’. Furthermore, the nurse at the centre of this example was herself able to relate several different accounts, formal and informal, of acceptable syringe sizes. These included those from her past experience, to the current hospital policy, and other pre-prepared syringes. Multiple accounts of safety (multiple in rationality and form) can therefore co-exist in the same context.

Gherardi et al. (1998b) similarly identified different ‘cultures’ of safety corresponding to different ‘communities of practice’ (Wenger, 1998) that were present in Italian building sites. They found that safety engineers and site managers offered different kinds of explanations for accidents, and different concerns for accident prevention. Their use of ‘culture’ coincides here with my use of rationality or meanings of safety, and their notion of communities of practice coincides with my concern for the ‘contexts’ of practice. My argument departs from theirs however in that I invest these terms with fewer boundaries. For example, I found that the same person could describe multiple meanings of safety, and that the contexts of practice I described could have more diversity in their memberships and more flexible boundaries. I am aligned with Araujo (1998), who described ‘knowledge systems’ within organisations as *overlapping* and *variously embedded*, rather than as bounded “containers” and “privileged locales” (p. 331).

The multiple accounts of safety expressed in Vignette 1 for example, were located within a certain time frame, and primarily within a certain ward. The ‘context’ of safety production here however was not only limited to the local (time- and place-specific) enactment of these accountabilities. Instead, I suggest that the ‘context’ of safety production here extended beyond the frontlines of clinical activity, through the ‘movement’ of accounts, *both* formal *and* informal, across various contexts of safety. To make this argument, I blurred the distinctions between formal and informal accounts and accountabilities by entangling them, extending my aims stated earlier in foregrounding their similarities and correspondences in practice.

On interconnectedness through intercontextuality

In this vein, I introduced intercontextuality in Chapter 7, to make the point that *both* formal and informal accounts and accountabilities can be ‘mobile’ across contexts and are not necessarily limited to the physical contexts of their production or enactment. Intercontextuality here refers to the re-creation of accounts across multiple contexts, such as when accounts are *included* in other account-exchanges, as I described above. Inclusion is a term I have borrowed from Mol (2002), who used it to describe how different things could incorporate one another, and be interrelated in intransitive ways. For her, these inclusive relations were “not hidden in the order of things, but enacted in complex practices” (p. 150).

For example, included in the informal accounts of the nurses I described in Vignette 5a were other informal accounts, such as those of other nurses and a gastroenterologist, generated elsewhere and re-created in these conversations. Formal accounts were also included in these conversations, particularly policies of the hospital, of hospitals in other countries, and of syringe manufacturers. In this example, the context of safety extended beyond the ward by way of the informal exchange of accounts that *included* other informal accounts created by other clinicians for other procedures at other times, formal accounts in the practice manual, and even formal accounts from hospitals overseas. I argue therefore that the practices of safety I observed could be characterised by the interweaving of multiple meanings of safety. These meanings were made present and visible through the inclusion of accounts that originated elsewhere and could travel on further, thus extending the ‘context’ of each occasion safe practice beyond the site of its enactment.

This intercontextuality of accounts has also been described by researchers following in Garfinkel’s ethnomethodological footsteps, but calling it *intertextuality* instead (Flynn, 1991; Munro, 1996). Munro (1996) for example described it thus: “when one mode of accounting speaks from and through another, we call this intertextuality. This is the idea that no one context of interpretation is sealed off from another” (p. 8). Here however, I have chosen a different term for three reasons. First, the term ‘intertextuality’ has a history in the fields of semiotics and cultural studies (Kristeva, 1986), bodies of literature with which I have not engaged in this thesis. As such, I seek to avoid an uninformed (or rather, poorly-embedded) use of the term. Second, I chose the term ‘inter*context*uality’ to reflect my interests in this study around ‘contexts’ as sites of practices, and the problems of distance between different contexts of practice. As such, the term allows me to highlight the context-dependent and -traversing movement of accounts, both formal and informal. Finally, in emphasising the ‘context’ here rather than the ‘text’, I feel more comfortable applying this concept not only to accounts but also to the notion of enacted practices. I suggest that accountabilities, for instance, are more easily described as communicative practices than as texts. As I articulated in Chapter 7, I describe not only the intercontextuality of accounts, but also the intercontextuality of the *relationships* and *connections* produced through accountability.

Matching complexity with complexity

In this thesis, I describe the intercontextuality and inclusion of accounts and accountabilities to argue for the *interconnectedness* of health care practices. I argue that the determination of ‘safe practice’ at any one time and place by clinicians, administrators or anyone else is not limited to that particular time or place. It may depend however, on the accounts and accountabilities, formal and informal, that are present, included and entangled in each articulation of safety. Furthermore, this dependence is recursive and generative, in that each articulation of safety then becomes one of potentially multiple accounts of safety that might be used to articulate another account of safety in another context of practice. Practices of safety therefore are multiple, iteratively generated and *generative*. They are produced through *and* produce entanglements of multiple accounts and accountabilities, which travel between and interlink different practices of safety. Practices of accountability therefore 'link up the system'.

Accounts do not necessarily travel however. In the following sections, I present my remaining findings along two themes, which are recursively related. Along the lines of my discussion above, I continue to describe the interactions between multiple formal and informal accountabilities to demonstrate the complexity and interconnectedness of clinical practice. From this point however, I also describe the different (and differently successful) ways in which formal and informal accountabilities are enacted to manage this complexity. Bringing both themes together, my main argument is that *we need to match complexity with complexity*. That is, we need to match complex clinical practices with accounting practices that engage with and *create* multiplicity and interconnectedness, rather than trying to reduce complexity in attempts to compensate for perceived *deficits* in *individual* human cognitive capacity[41].

As Vincent (2009) noted, clinicians themselves (and not only social scientists) are well aware of what he called the "wider issues" and the complexities of clinical care (p. 1778). I suggest however that the predominantly formal ways in which clinicians are being encouraged to account for and hence manage and negotiate these complexities are less than adequate to the task. Amidst the entangled practices I observed, I found that accounts of safety did not always include one another, and that their capacities for intercontextuality were not always actualised. More specifically, I found that the 'exclusion' and 'isolation' of accounts and the lack of accountability could often be 'found' in situations identified by clinicians to be problematic and unsafe. In Vignette 5e for example, I described how an 'unsafe' situation (according to the nurses) unfolded around High Dependency (HD) nurse-patient ratios. This situation was characterised by what I described as *disembedded* accountabilities – in the absence of doctors' engagement with nurses' accounts of the situation, in the creation and eventual

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[41] As suggested by the human factors model of safety (Leape et al., 2002)

‘resolution’ of the problem, and in the apparent lack of reciprocity of accounts exchanged between the nurses and doctors.

In the next section, I present the second part of my findings, around this notion of disembeddedness. I describe how disembedded practices work against intercontextuality and interconnectedness, and how they can be described as problematic in clinicians’ practices of safety.

8.5 The problem of disembeddedness

In Chapter 3, the term ‘disembedding’ was introduced as a form of ‘time-space distanciation’ (Giddens, 1990) that I associated with decontextualisation (Tsoukas, 1997) as an underlying principle in the creation of formal accounts. As mentioned above, I also drew on the literature to argue that this disembeddedness was central to the problematic engagement of clinicians with formal accountability. The example mentioned above (Vignette 5e) involving HD nurse-patient ratios seems to confirm this argument, with the surgeons’ production of a formal ‘count’ of the HD patients in the ward described as both problematic and disembedded. My interpretation of disembeddedness differs however from its origins in the literature. As I argued in Chapter 3, the assumption of decontextualisation – of independence from context – does not hold, and not only is the creation of an account (formal or otherwise) a process embedded within a context of practices, its subsequent use is also dependent on the context of practices in which it is introduced. My argument against disembedded accountability therefore is not that it produces decontextualised accounts, somehow made independent from context, but rather that it does not *adequately engage* with the complexity of contexts in which multiple meanings of safety may co-exist.

In Chapter 6, I described a case study of an incident reporting system and its accompanying incident management policy (NSW Health, 2007) to show how disembeddedness could become problematic in the way clinicians created accounts around ‘unsafe’ practices. Incident reporting was an chosen as a case study as the policy itself specifically *prescribes* accountability, directing clinicians to create accounts (incident reports) of situations or events that they consider to be unsafe, and then to investigate them.

Disembedded accountability as transgressive and conflicting

Firstly, I observed that incident reporting could be carried out in a disembedded way as a selective engagement with some accountabilities over others, such that the reporting process could become incompatible with these other accountabilities, and seen to be transgressive. This came to light particularly around the two main competing accountabilities that were attributed to incident reporting in the literature, in the incident management policy, and also by clinicians in practice. I found that although ‘learning’ was articulated by clinicians as the primary purpose of incident reporting, punitive conceptions of reporting were also salient. For instance, incident reporting could be felt by clinicians as an allegation of wrongdoing, of practices made visible and labelled ‘unsafe’, which was punitive in and of itself, even if no one was clearly at fault (see Vignette 6d). Furthermore, the time and effort costs of creating and investigating an incident report could also be seen as punitive – in requiring clinicians to stay back after work or come in early to fill in reports, and in requiring clinicians and managers to spend scarce time and energy in investigating these incidents.

As noted by ‘just culture’ researchers (Beyea, 2004; Dekker, 2007; Reason, 2000; Wachter & Pronovost, 2009; Weiner et al., 2008), punitive notions of accountability are not necessarily unwelcome. Sanctions are seen to be appropriate, for example, for incidents involving ‘blame-worthy’ practices like drug or alcohol abuse (Bagian, 2005). Likewise, the notion of reporting for learning and improvement becomes particularly salient when safety has clearly been threatened, or rather, when there is agreement as to the threat to safety. However, when the ‘blame-worthiness’ of an incident or the threat to safety is disputed – which may be the case for most incidents, but particularly so for near miss incidents – then the ‘reportability’ of these incidents can likewise be contested. Clinicians who make reports of these incidents risk transgressing interprofessional accountabilities by their actions, attracting recrimination and rebuke from colleagues (see Vignette 6a, Excerpt 6b and Vignette 6c).

Here, the formal reporting process is described as being in conflict with other accountabilities enacted informally between clinicians, recalling the studies cited in Chapter 6 that characterised interprofessional and cultural factors as ‘barriers’ to incident reporting (Kingston et al., 2004; Leape, 1999; Pfeiffer et al., 2010; Vincent et al., 1999; Waring, 2005). I have shown however that this conflict emerges not as static opposition, but rather as dynamic interplay; the incompatibility between incident reporting and other local accountabilities is neither given nor fixed, depending instead on how clinicians *attend to, include* and *engage with* the multiple accountabilities involved in their incident management practices. Clinicians, as such, are adapting their use of the incident reporting system in alignment with the interplay of accountabilities in their *local* contexts. In Vignette 6e for example, where the severity level of an incident was discussed, I showed how incident reporting at a higher level of severity could be framed as disruptive and in conflict with local accountabilities, or productive and concordant, depending on the contexts of accountability. What clinicians *include* and *engage with* in each enactment of accountability determines which practices and rationalities are *made visible* and *enacted* in each instance.

For Law (2004), these inclusions could be described as what is ‘made present’, that is, the talk and action that occurs directly, or ‘manifest absent’, which are those practices that are absent but included by reference or relevance (p. 84). As for the practices and rationalities that are excluded (by not being included), Law (2004) described them as being ‘Othered’ (p. 84). He pointed out that this ‘Otherness’ was a necessary co-creation of accounts made present – that when we include some things, we necessarily exclude others. This was also a point made by Bowker and Star (1999), who noted how it was inescapable that each act of classification or standardisation “valorizes some point of view and silences another” (p. 5).

Every account therefore can be described by inclusions and exclusions, and is, *inevitably*, incomplete and potentially transgressive and in conflict with other accountabilities. As such, the important implication that follows is that each enactment of accountability is, in isolation, disembedded. This is a crucial point, to understand that just as every account is *(re-)embedded* in the contexts of its use in order to be made sense of, every creation, exchange and use of accounts is also *disembedded* from the context of its production. Having described the inclusion and intercontextuality of accounts and accountability to argue above for the interconnectedness of practice, I now point to the distances and disconnections that are also enacted through exclusions in disembedded practices of accountability.

Disembedded accountability as distancing and disconnecting

In Chapter 6, I described how clinicians can practice incident reporting ‘at a distance’, disengaged from the local mix of accountabilities by avoiding prior or concurrent communication with the clinicians involved. This is facilitated by the option of reporting incidents anonymously, intended to counteract the fear of punitive consequences, as described above, that can inhibit unpopular or controversial accounts of unsafe practices (see Runciman et al., 2001). Reporting an incident anonymously however does not directly address the controversy of these accounts nor the underlying differences in views. Instead, such a practice can actually transgress the ethos and rationality of being open about mistakes and safety issues for learning (see Excerpt 6f), by producing accounts of ‘unsafe practice’ that are created and made visible without clinicians having to engage with one another and the other meanings that may be involved around these incidents.

Not only does reporting ‘at a distance’ result in practical delays in terms of additional time taken to resolve mistakes or other issues through the formal system, there are also emotional costs borne by clinicians whose own accounts have been bypassed in this process (Vignette 6g). I suggest that this ‘distanced’ use of the reporting system can be a ‘mismatch’ for clinicians who might prefer to talk more locally and interpersonally about unsafe practices, especially with regards to common or minor issues. Where this is inhibited by professional or hierarchical ‘distances’ currently in play, a distanced process of accountability does not, by itself, ameliorate these distances.

This point can also be made by observing the unidirectionality of the incident reporting system, where the majority of incident reports created by clinicians travel ‘distances’ through the electronic system to arrive with managers at various levels, and further on still, in aggregate form, to the Department of Health and the Clinical Excellence Commission (CEC) in New South Wales. Where there is any engagement between clinicians at any stage around these incident reports, it happens informally, and at their initiative. This formal unidirectionality is further underscored by the lack of direct feedback given to clinicians about reports they have made (see Excerpt 6h). The formal system therefore can be used to enact linear paths of accountability that fail to engage with the messy and co-constructed nature of accounts of safety, and do not ‘match’ interconnected and complex models of clinical practice (Plsek & Greenhalgh, 2001). As such, they can result in accounts of safety that become increasingly 'incomplete' as they travel. The aggregated accounts generated from the system are examples in particular of accounts created by *combining* other accounts in such a way that *reduces* the complexity of these accounts even as they are *added* together. When accounts flow only in one direction, the singularity of focus and lack of reciprocity can mean that the mix of accountabilities present in each – and each subsequent – context of account creation or use is not subsequently *accessed* or *addressed*, rendering the process as one of increasing disembeddedness.

Here, the problem of disembeddedness is clarified even further. As mentioned earlier, each enactment of accountability is disembedded *by itself*. Furthermore, the disembedded practices of incident reporting I described in this section were characterised by *lack* – by the lack of other accountabilities enacted alongside them. I argue therefore that engaging with (or 'matching') complexity cannot be described by singular or solitary actions, but can be *approached* instead, through the engagement of *multiple accountabilities*, characterised by variety and interdependence. In the next section below, I review the third stage of my findings where I elaborate on this argument. I re-think some of the assumptions that have been made about accountability, beginning with a discussion of stability to demonstrate how potentially disembedded incident reporting practices can be re-embedded by clinicians, through the narrative complexity of their discussions in team meetings.

8.6 Re-thinking accountability

Re-thinking stability and form

A problematic consequence of the disembedded accountabilities described above was that they could produce accounts of safety (which could then go on to produce *other* accounts of safety) that would be incomplete in such a way that threatened the validity and *stability* of these accounts. In particular, threatening their stability in terms of how these accounts could be interpreted. In Chapter 5, I argued that stability is two-fold; an account may be physically and tangibly durable in form, but unstable if it cannot be read or understood as intended. Conversely, an account may be fragile and transient in form, but still capable of being intelligible to its recipient(s) as intended by its creator(s). Here, I re-think what stability might mean in relation to the disembeddedness of practices of accountability.

In Chapter 3, I reviewed several problematic assumptions relating to decontextualised accounts (see the section ‘On Transparency’). Tsoukas (1997) for example argued that ‘knowledge asymmetries’ between parties ‘at a distance’ could not be removed simply by generating ‘more information’ since this information would need to be placed into context in order to be intelligible, and contexts separated by distance were likely to be especially different. As such, what was ‘intelligible’ in one context could easily be ‘unintelligible’ in another. Furthermore, as accounts travel through multiple contexts, they are made and re-made accordingly, in response to the contexts in and for which they are produced. The management of incident reports for example, and their subsequent aggregation (combination) and comparison for trends, creates certain categorisation requirements in incident reporting such as the allocation of severity scores, and labels for sorting errors by time, place, and type.

Waring (2009) demonstrated similarly in his study of incident reporting in the UK that accounts of incidents could differ qualitatively between different contexts – when clinicians made sense of the incident with one another, when clinicians translated the incident into a structured report form, and when risk officers in the risk management department translated these accounts again according to different categories and priorities. As accounts ‘travelled’ a linear path through this incident reporting system, further away from the contexts of their creation, they became ‘washed’ of their original contexts, transformed from “qualitative and ‘rich’ verbal accounts” into “quantitative and ‘narrow’ metrics of risk management” (p. 1729).

In Chapter 7, I described similar findings, focusing on the M&M meetings of the multidisciplinary team. I showed that the incident report summaries produced through the system and reviewed by the team during these meetings could seem incomplete and also misleading by their brief content and categorisation – factors which made the reports more amenable to being *combined* at aggregate level, but also potentially less stable. Through their discussions however, clinicians were able to recontextualise and ‘make sense’ of the report summaries, by drawing on their memories and experiences of the incidents described (see Vignette 7b and Excerpt 7c)[42].

The contrast between the richness and dynamic complexity of the discussions during these meetings and the static brevity of the incident report forms and summaries is particularly stark, and reflects Tsoukas’ (1997) criticisms of the *capacity* of such disembedded processes of accountability for ‘informing’ others at a distance. The discussions themselves however allowed me to go beyond this familiar critique of disembedded accountability, to discuss how they were also meaningfully re-embedded by clinicians. As such, although the ‘instability’ of these reports may have remained an issue outside of these meetings, within them, the contexts in which these reports were produced were both *accessible* and *accessed* through the clinicians bridging these contexts, diminishing the distances between them. The ‘knowledge asymmetry’ here was not so much ‘removed’ by generating more information (as Tsoukas, 1997, argued against), but rather it was bridged by the *movement* of information – by the intercontextuality of accounts relating to the incident. In these discussions therefore, clinicians were able to *include* other accounts and accountabilities enacted around the incident and/or the reporting of the incident, re-embedding the report summaries and, in doing so, stabilising them.

My description of stability here therefore extends beyond notions of physical durability – what I referred to as ‘stability of form’ – seen as a quality belonging to objects, preventing their decay over distances and time. Instead, as described in Chapter 3, I attend more towards the idea of ‘networks’ identified by Latour (1987), which sustain the *intelligibility* (or the ‘stability of interpretation’) and *mobility* of these accounts across these distances. An example of such a network may be evidence-based medicine (EBM), discussed in Chapter 2. EBM is characterised by the scientific and statistical rationalities that have come to permeate medicine (Berg, 1997), represented in the widespread acceptance of notions of ‘gold standard’ research and diagnostic methodologies, hierarchies of evidence, and the belief in objective and value-free information. ‘Riding on’ these shared beliefs, formal and normative ‘standards’ of safe

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[42] As mentioned in Chapter 3, Roberts (2009) described a similar discussion around a set of annual accounts in a meeting, where the accounts presented were described to be ‘nonsensical’ by those in attendance, although their “omissions and abstractions” were “concretised and re-contextualised by virtue of everyone’s rich and elaborate local knowledge” (p. 964).

practice such as guidelines and protocols are produced, travel, and are made not only intelligible but also valid and authoritative. Crucially, the notion of EBM not only sustains the legitimacy of guidelines as standards, but also the legitimacy of the concept of a standard itself. In other words, it validates, stabilises and promulgates the value of objectivist notions of universal meanings of safety, which can be used to view, combine and act on practices ‘at a distance’ (Latour, 1998).

Uniformity therefore, as well as combinability and the standardisation of forms, are strategies for enabling the long-distance stability of formal accounts (Star, 1995; Miller, 1994). Throughout this thesis, I have identified such approaches as disembedded practices of formal accountability, and argued that they become problematic when they fail to acknowledge, engage with and match the complexity and multiplicity of clinical practices. Earlier, I also noted that singular enactments of accountability are almost inevitably disembedded, as well as necessarily (re-)embedded. As such, I am not suggesting that standards or other kinds of formal accountability are the problem, but rather that they become problematic when we take them to be sufficient *in isolation*, and when we hide or deny the multiplicity and complexity of the contexts in which their enactments are situated.

In this thesis therefore, I challenge the sufficiency (and stability) of singular definitions of safety as our *sole* model of formal accountability for patient safety. I look instead to other researchers who have spoken about *flexibility*, *fluidity* and *multiplicity* as reasons underlying the broad and successful use of various objects and technologies over multiple contexts (De Laet & Mol, 2000; Mol, 2002; Star & Griesemer, 1989; Stinchcombe, 2001); a key commonality in their arguments being that these objects and technologies avoid imposing single meanings upon multiple sites. Instead, they act as *coordinating resources*. Star and Griesemer (1989) for example described ‘boundary objects’ as objects which successfully “inhabit several intersecting social worlds (…) *and* satisfy the informational requirements of each of them” by being “weakly structured in common use” and “strongly structured in individual-site use” (p. 393). As Mol (2002) described atherosclerosis, and as we might describe the concept of ‘patient safety', such boundary objects encompass different meanings but have a common enough 'structure' to act as temporary bridges across contexts[43].

Discussing financial markets, Stinchcombe (2001) described in familiar terms how abstractions could reduce complexity by 'ignoring' differences. That is, not by imposing singularity, but rather by being stripped of specificities in order to be generalisable, rendering the value of assets more "knowable" and transferable, and therefore more liquid (or mobile) – more easily bought and sold (p. 107). This liquidity however depended on a kind of stability derived not from the 'inherent' value of an asset, but rather on *what* everyone in a market knows, and how much they *agree* on what they know about these assets through shared information.

What this suggests is that successfully dealing with complexity and multiplicity may be enabled by formality, of structuration through abstraction, as many have argued (Carroll, 2009b; Latour, 1993; Stinchcombe, 2001; Timmermans & Almeling, 2009), but crucially, by also *allowing differences to co-exist*. Within the topic of patient safety, this means that no *one* particular account of safe practice is naturally or decisively safe, or safest. Instead, 'what it means to be safe' might be more suitably described as something that is (and should be) negotiated and re-negotiated in each context of practice (Iedema, 2011), akin to Roberts' (1991) description of 'socialising' practices of accountability. The notion of 'safety' therefore becomes (and perhaps always has been) "a site of struggle, a relational effect that recursively generates and reproduces itself" (Law, 1992, p. 5).

Stability therefore is a contingent, relational effect, always in production. It is dependent on the relations generated between contexts by the accounts and accountabilities that flow between them, and the people, artefacts and technologies that carry and create these accounts. Interactivity and interdependence therefore replace notions of objectivity and independence. Furthermore, *every* account is, to some extent, formal – that is to say, every account is an abstraction, and is incomplete. As Stinchcombe (2001)

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[43] De Laet and Mol (2000) take this one step further. Using a successful bush pump technology as an example of a 'fluid technology', they suggest that even the structures and boundaries of these 'objects' are more flexible than firm and that "object and world are intertwined" (p. 257, endnote 7). With this insight, I note that my initial differentiation between 'stability of form' and 'stability of interpretation' no longer holds. I found this distinction helpful earlier for challenging the automatic assumption of stability in formal accounts, and for attributing the capacity for stability to informal accounts; but it now makes sense to describe the interpretation of an account as emerging from the interaction between the form of the account and the context of its interpretation, rather than being somehow distinct and independent.

wrote, “many, probably most, conflicts between ‘formal’ and ‘informal’ aspects of a situation are actually conflicts between different abstractions that might govern, and are misconceived as conflicts between informal and formal ways of proceeding” (p. 16). Here, I discard my heuristic of formal and informal accountability, replacing these categories with observations instead of disembeddedness, connectedness and flow.

‘Form’ however, still matters. I suggest that the stability of accounts across contexts of multiplicity may depend on how ‘open’ or ‘closed’ they are. That is, whether they are presented as ‘facts’ unaccompanied by doubt or controversy – what Latour (1987) called ‘black boxes’ – or whether they are presented as ‘allegory’, which Law (2004) described as “the art of meaning something other and more than what is being said” (p. 88). In other words, we should heed the extent to which multiplicity is inscribed, acknowledged and invited in these accounts, to consider how they might then support or even elicit the flow of accountabilities between and within contexts. Finally, accounts are not (and should not be taken to be) complete. In rejecting the assumptions of independence, universality, and singularity, I take on instead the notions of interdependence, embeddedness and multiplicity; and with these, the blurring of boundaries, and the acceptance of uncertainty and the less definite reality of things.

Inclusions and exclusions: the partiality of accountability

The picture I am painting here therefore is one of *partiality*; each and every account is both inclusive and exclusive, and also incomplete. This incompleteness is most evident when looking at individual accounts or practices of accountability, but ameliorated somewhat by the interrelation of multiple accountabilities within and between contexts. Even so, some practices are still made visible at the expense of others; some accountabilities are carried forward into other contexts, and others are not. We need to heed the duality of these practices of accountability, and acknowledge their limitations – to understand for example, that even where multiple practices of informal accountability are co-enacted to re-embed otherwise unstable formal accounts, disembeddedness may also be described and enacted.

In Chapter 7 for example, I described how disembeddedness could be found in the discussions in the M&M meetings. Alongside the inclusions described above that were involved in stabilising and making sense of incident report summaries, clinicians in these meetings were also enacting a kind of distance from certain problems that were mentioned, particularly those not seen to be ‘team issues’ during their discussions around learning and improvement. These were problems such as non-medical ‘nursing issues’, and organisational staffing and ‘system issues’ seen to be outside their jurisdiction (see Excerpts 7c and 7d).

I described for example, how the discussion around a wrong drug administration was limited to the medical management of this incorrect drug, leaving out the practical matter of how the wrong drug came to be administered in the first place (see Excerpt 7a). Likewise, in discussing an interdepartmental incident around the delayed communication of test results, further communication was initiated with the head of the diagnostic department regarding the incident (see Vignette 7b), whereas for another medication incident (see Excerpt 7d), the suggestion of communicating with the nurses involved in the incident was met with comments that this might be redundant or boundary-crossing. The accountabilities enacted during these meetings could therefore also be described as disembedded.

Unlike the accounts analysed previously, the discussions here were disembedded not so much from the contexts of their creation, but rather from other contexts. The learning discussions were disembedded from other contexts of practice seen to be less relevant to the team, despite in most cases referring to fellow clinicians who were directly involved in the care of the team’s patients, and following the team’s instructions. I argue that these other contexts of practice were in fact closely intertwined with the work of team members, and that opportunities to understand or improve these interactions were not undertaken in these meetings. Arguably, this limited ‘learning’, not only by the team in learning about how their work practices link with those of other clinicians in other contexts, but also by clinicians in other contexts learning about the team.

Here, we are dealing again with the problem of ‘connecting up’ the system, in matching the way the work practices of clinicians are interlinked, with the way clinicians are *articulating* their work, and generating future practices and linkages. The distinction I make here is not to separate practices from accounts of practices, but to emphasise the co-constitutive relationship between the two. For clinicians, as for researchers and for the readers of this thesis, “any access to ‘viewing’ action [at a distance] is always mediated by accounts” (Munro, 1996, p. 6). Furthermore, the lesson of ethnomethodology is that work is organised in order to be ‘accountable’, to be made readable by ourselves and others (Garfinkel, 1967). As such, how work is made accountable – what is included or excluded in how accounts are created, exchanged and used – not only describes, but also determines how work is carried out, and how practices are interconnected. “Enactments, it is being argued, don't just present something that has already been made, but also have powerful productive consequences. They (help to) make realities in-here and out-there” (Law, 2004, p. 56).

Practices of accountability therefore generate interconnectedness *and* distance, inasmuch as they describe and depend on them. The ‘danger’ with disembedded practices of accountability is that they may produce ‘realities’ that are fractionalised and pluralised, by disconnecting otherwise interconnected practices, or failing to connect them when necessary. The *potential* of accountabilities, on the other hand, is that they can also connect practices that might otherwise be disconnected, and reinforce current connections. The lesson I draw from the previous finding is that disembedded (that is, disconnected and disconnecting) practices of accountability are not only described as such by the immediate contexts of their enactment – by the lack of accountabilities enacted *alongside* – but also by the lack of accountabilities enacted *prior to* and *subsequent from* the current enactment. To ‘maintain’ connections between different contexts of practice therefore requires *continual* and *reciprocal* interactions, extending beyond individual interactions and also beyond individual contexts of interaction.

Engaging with multiplicity and multidirectionality

In Chapter 7, I also described discussions from another series of team meetings – the weekly team meetings – as examples of how the clinicians in this study were enacting interconnected *webs* of practice through the multidirectional interweaving of multiple accountabilities. In these examples, I described a more circumscribed set of contexts, demonstrating how diversity enacted around a ‘common’ goal could reflect and support multiplicity.

In their weekly team meetings, ‘the team’ was larger, involving a wider variety of professionals than in the M&M meetings. This diversity of professionals however shared responsibilities of care for the ‘same’ (albeit constantly changing) group of patients. As such, as a diverse and multidisciplinary team, they were able to bridge their discussions within the weekly meetings to *more* facets of patients’ care. In other words, I argue that they wove webs of accountability, by interweaving their accountabilities to their patients and patients’ carers with the accountabilities they enacted with one another during these meetings.

Basically, clinicians did this by relaying the accounts and concerns of patients and carers, and relaying accounts from these meetings back to them in turn (see Excerpts 7e to 7k). Clinicians also relayed each other’s questions and accounts, demonstrating the multidirectional intercontextuality of these accountabilities (see Excerpt 7k). As such, the accountabilities enacted during these meetings were not only embedded in the contexts of the meetings, but also in other contexts where clinicians, patients, and their carers interact. Although each particular link or inclusion was by itself only partial and incomplete as described above, the range and multiplicity of clinicians present and actively participating in these meetings enabled *collective* expectations of patient care that transcended professional boundaries and included *more meanings* of what this care could mean. As such, their talk became collectively more representative of the complexities of care required by patients and their families, which in turn allowed the team to enact more complete, complex, and potentially *safer* accountabilities of care for their patients.

The clinicians in my study were therefore engaging with multiplicity more successfully at some times than at other times. Even in the meetings described above, I could find other clinicians’ accounts and accountabilities to be excluded, depending on who attended the meetings, and how they participated and/or were invited to participate. I might also note that the patients and their carers were themselves absent from these meetings, being included (so to speak) only through their accountabilities with the clinicians present. These exclusions however are not necessarily problematic. In fact, they are inevitable, and are necessary in order to manage complexity. As I have argued against the over-simplification of practices, I argue that we would also wish to avoid over-complexifying them. As described above, exclusions are part and parcel of the productivity of accounts (Timmermans and Almeling, 2009); when we produce some thing, we say what it is, and we also enact what it is not – we draw boundaries around it. The suggestion therefore is not to reject boundaries altogether, for that would become unproductive, but to be *aware* of these boundaries, and be able to *contest* them; to render them permeable, leaving open the possibility for future inclusions of what are presently Othered.

8.7 Conclusion

To conclude my arguments, I return to my research question, of how clinicians enact and negotiate multiple accountabilities in their practices of safety. My best answer may be that they do so in ways that both reflect and (re)produce complexity, with varying degrees of success. They also do this messily, but productively. Practices of safety are generated by clinicians in contexts where multiple accountabilities and multiple meanings of safety are entangled, and these practices of safety are also generative; accounts and accountabilities can go on to produce further entanglements, depending on which accounts and accountabilities are present, included, or excluded in these practices. As such, clinicians, through their accountabilities to one another and to patients, managers, the public and the government, play a significant part in connecting up systems of care, as well as in disconnecting them.

More theoretically, I made an argument against the concept of disembeddedness in the early chapters, linking it with mistaken assumptions of decontextuality, objectivity and neutrality. In the following chapters, I retained this description of disembeddedness as problematic, describing examples from my observations of clinical practice. In this final chapter however, I have reflected on my arguments, and realised that disembeddedness is inherent, *in potentia*, in each and every enactment of accountability, just as much as (re-)embeddedness is. As such, when I describe disembeddedness as the failure to engage adequately with complexity, I am describing the failure of *singular* and *isolated* enactments of accountability that are *both* embedded and disembedded. Multiplicity alone does not overcome this; even accountabilities that are embedded in multiple contexts are also disembedded from others. In fact, the most productive enactments of accountability that I could identify in my study were productive in their multiplicity by being multidirectional, but also by being bounded, around the specificities of patient care within a specific medical specialty.

As such, I argue that we need to understand and acknowledge the partiality of these matters, to balance their limitations with their potentialities, and to match the complexity of practices with complexity in the way we *account for* those practices. I argue that we need to engage with multiplicity, interconnectedness and multidirectionality as our guides in our practices of accountability, even as we inevitably create simplifications and enact boundaries, to manage the complexity of delivering safe care at every level of the health care system.

Implications for 'improving' safety in clinical practice

> In a constellation of interconnected practices (…) comparing among different perspectives does not necessarily involve the merging of diversity into some sort of synthesis – harmonizing individual voices and instruments into consonance or unison – but rather contemplation of the harmonies and dissonance, consonance and cacophony, that may coexist within the same performance
>
> (Gherardi & Nicolini, 2002b, p. 420)

Clinicians are currently constantly faced with calls for 'more accountability', in the belief that this will improve patient safety. In this study, I have described how clinicians are already accountable in multiple ways, and are behaving accountably. However, because there are multiple accountabilities and multiple rationalities of what it means to be safe, they transgress some accountabilities whilst acting in alignment with others. That is, they can be both safe and unsafe, depending on whom you ask. Each determination of safety – and the practices that follow – depends on which rationalities come into play, and whose accounts are present, included or excluded. The question then becomes a political and ethical one, of determining whose accounts should be included, and whose might be excluded, in each articulation and negotiation of safety.

In this thesis, I have argued that if we wish for practices of accountability to reflect and support clinical practices that we see as complex and interconnected, then we need to embrace complex and *interconnecting* practices of accountability – that is, practices engaged with movement, multiplicity and multidirectionality rather than isolation, singularity and unidirectionality. I have also argued that we are dealing here with practices that are processual; that is to say, that 'stable' accounts of 'safety' and other descriptions of practice are always contingent, always in formation, and described by dynamic relational activity, rather than fixedness. As such, in responding to the political and ethical questions of whose accounts we include in determining safety, the answer from this researcher's perspective has to be that it depends.

To suggest, for example, that patients and their families should always 'have a say' in their care is certainly an argument that I would make. The most important part of this argument for me however is that the argument itself should always be *able to be made* by people involved in or directly affected by the consequences of these accounts, and *to* *be heard and responded to*, by those who currently have a say. In other words, that the accounts (and meanings) of people involved should not naturally be included or excluded, but that the process of determining these boundaries should be, as much as possible, an inclusive, ‘transparent’, and reflexively-iterative process.

My use of the term ‘transparent’ here differs from its more common usage as described in Chapter 3. As I have described other important terms in this thesis, I refer to transparency as a relational effect, achieved by the interconnectedness of practices and people through the flow of accountabilities. In other words, where transparency is usually called for by way of more accountability across distances, I argue here that what we need instead is *more accountabilities*, bringing people closer together. By increasing the reciprocal and dialogic engagement of clinicians with one another, with patients, with managers and everyone else involved in the health care system (and beyond), we might enact care that is more responsive to the multiple needs of participants. We may also be forced to be humbler, to be less certain, if we are constantly confronted with differences and contradictions, and constantly required to negotiate. In enacting and engaging with practices of accountability that match more closely with the complexities of clinical practice, clinicians, patients and other participants in health care may also as a result have more ‘realistic’, and more meaningfully ‘safe’ notions of care.

Chapter 9

Reflections and Recommendations

9.1 Introduction

The field of patient safety research to which this thesis seeks to make a contribution has been concerned primarily with deficit representations of safety. For more than a decade now, the status quo has been described as unsatisfactory, controversies have erupted and continue to erupt, and clinical practices continue to result in harm to patients. As such, we are re-making understandings of what safe practice means. Most studies in this field have attempted to re-make safety by borrowing practices from other industries, such as aviation, in order to replace defective models of practice with better ones. In this study, I did not quite undertake this aim, at least not directly. Instead, I began by examining and evaluating the approaches that have been recommended to achieve these aims, and then looked at current clinical practices (a small subset of them), to see if I could describe how these approaches emerged within the new 'status quo'. My aims were to find safety within practices, to counteract the deficit view of safety by identifying how safety was currently being created.

In doing so, I took the issue of accountability away from the research literatures, into everyday clinical practices; and as I did so, I found parallels between my research activities and the clinical activities of my participants. That is to say, we were all engaged in accountability, and in (re-)making safety. Accountability and safety were ubiquitous in this study. Like a hall of mirrors, my research methods for producing accounts of safety practices reflected my participants' own methods of accounting for safe practice; I have produced here an account of their accounts, and of the way they produced their accounts. As such, my findings apply not only to clinicians and safety, but also to the matter of researching safety, amongst other topics. This is also why John Law's (2004) book, 'After Method', about research methodology in the social sciences, was so relevant to my arguments around clinicians' practices of accountability. I will address this confluence a little later. In the following sections, I offer some recommendations for health policy, medical education, and finally safety research and social science research in general. I conclude, in recursive fashion, with a reflection on some of the exclusions enacted in this thesis that I think could, or perhaps should, be included in future iterations of this work and the ideas developed therein.

9.2 Recommendations for health policy

I would encourage health policy makers to develop a more sophisticated approach towards the use of formal accountabilities, and the rhetoric of evidence-based medicine (Russell et al., 2008). Taking guidelines as an example, this would involve treating them as coordinating mechanisms, rather than objective standards to reduce practice variation. As such, they could be used as points of focus around which different accounts and accountabilities could be negotiated by those involved. They might also be created 'in house', situated in the specificities of care within each unit (Timmermans & Berg, 2003), with the boundaries of each unit remaining flexible and inclusive. Zuiderent-Jerak (2007) noted that the 'pathway movement' was initiated along these lines, although it has since become another movement involving the 'implementation' of standardised tools, rather than engagement with practices. Guideline development is known to be a costly and laborious process (Grol et al., 1998). In light of the significant and increasing pressures on health care funding, I suggest that the current investment in the development and dissemination of guidelines that are not effectively used is becoming untenable, making it imperative for health care policymakers to re-think their approach.

Taking incident reporting as another example of formality developed for safety, I suggest again that it is the process of negotiating meanings of safety around the formal report that is important, rather than the report itself. We could place more emphasis on using the incident reporting system to initiate conversations between clinicians (and between clinicians and patients)[44], rather than as ways of avoiding these conversations. Where reports are aggregated and delivered externally, to decision-makers and analysts in the Department of Health and the Clinical Excellence Commission, their analyses of the ‘data’ and efforts at designing safety initiatives could be usefully re-embedded by regularly engaging with clinicians on the ground (Bosk et al., 2009; Timmermans & Mauck, 2005). In fact, I would argue that it would be difficult to produce valid analyses or safety recommendations without doing so.

9.3 Recommendations for medical education

Hunter (1996) wrote about the paradoxical tensions between two paradigms of medicine that are presented to medical students: the certainty and stability of medicine as science, and the uncertainty, contingency and complexity of medicine as interpretive art. She argued that medical discourse and its educational methods both embody and accommodate these tensions, but with a kind of “epistemological naïveté” (p. 230), a lack of explicit acknowledgement of these contradictions. She then questioned if this naïveté might be necessary, if exposing the fiction of coherence and rationality might be dangerous: “it is remotely possible that for physicians an awareness of their interpretive method, like the centipede's attempt to study its gait, might turn out to be crippling” (p. 239) [45]. Preceding this quote however, the paragraph began with a sentence which, in view of the current focus on safety, throws new light onto this supposition: “In the meantime, however, patients are in no danger. Medicine's odd phronesiological scotoma works quite well” (p. 239).

Currently, we cannot say with as much assurance that patients are in no danger, or that turning a blind eye to this paradox works well. Instead, I would argue as I have above, that this scotoma, or blind spot, on the part of clinicians should be challenged directly, beginning within medical education. I take a normative position here, and argue that clinicians need to be able, *and taught*, to speak about the complexities and uncertainties

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[44] Recent work around the Open Disclosure policy in Australia has demonstrated the importance, and ethical value of engaging with patients and their families around instances of iatrogenic error or harm, and the potentially severe costs of excluding them from these discussions (Iedema, Mallock, Sorensen et al., 2008; Iedema, Sorensen, Manias et al., 2008; Iedema et al., 2010).

[45] Latour (1993) made a similar point, that we have achieved a great deal because we believe that we are modern, and rational, and we can maintain those beliefs only because we have hidden or denied the messy practices of mediation and translation that enable them. He also argued that our beliefs in abstraction have, paradoxically, enabled us to engage more effectively in enacting and managing mess and complexity.

of practice without being hobbled by the false weights of scientific certainty and authority. I argue this for the reasons mentioned above – for humbler and more inclusive care for patients, family members, and other health care professionals. Here I refer also to Timmermans and Mauck's (2005) point that we should re-think notions of medical autonomy, particularly of doctors as the sole decision makers in health care, in light of the increasingly collaborative nature of medical work. By tempering the authority of biomedical science, a broader and perhaps more collaborative conception of health care decision making might become possible.

I also make the above argument for doctors themselves. Hunter (1996) for example, also suggested that to tackle the current (and I suggest that it remains current) naïve epistemological assumptions of medicine in medical education could be "more humane" (p. 238), allowing novice medical practitioners to cope with the increasing uncertainty they would face as they moved into clinical practice, and to cope with the changes they were likely to face in their careers. Drawing a link directly to safety, I suggest that this would also address the 'culture of infallibility' and shame found to prevent clinicians from sharing, discussing and learning from instances of patient harm. Not only might students learn to be more open about their own errors, the emotional "horror" associated with causing harm to patients might become less debilitating, allowing for instances of harm to become productive foci, around which the "socio-affective fabric" of clinical relationships might be strengthened (Iedema, Jorm & Lum, 2009).

Finally, apart from the arguments already made, it would seem strangely asymmetrical and patronising to suggest that medical students and professionals (or anyone else) should (or indeed could) be kept naïve 'for their own good', whilst social scientists and philosophers alone grapple with difficult or dangerous truths.

For all these reasons therefore, narratives, anecdotes, stories and allegory may be crucial, for enabling researchers, professionals and laypeople alike to grapple with complexity. Law (2004) recommended the use of allegory as a resource that "makes space for ambivalence and ambiguity" (p. 90). In making this 'space', narratives and especially dialogic narratives, have the capacity to encompass complexity – that is, to include non-linear unfoldings, multiple and conflicting perspectives, and affective content (Fraser & Greenhalgh, 2001; Iedema et al., 2009). Stories, like all other accounts, both include and exclude realities. However, by allowing for more heterogeneous inclusions and ambiguity, they are also accounts that may be more open than closed in form. Stories for example, can be read metaphorically and figuratively, inviting alternative readings. Hunter (1996), for example, noted that the juxtaposition of conflicting anecdotes and maxims in medical discourse engenders a kind of practical skepticism in students and practitioners, forcing (and also equipping) them to deal with doubt and uncertainty in practice. Mol (2008) likewise sought to raise the status of 'telling stories': "rather than a matter of 'merely' sharing private experiences, telling stories is a form of public coordination. It is part of how we govern ourselves and each other" (p. 89).

9.4 Recommendations for safety research, and research in general

> *Method always works not simply by detecting but also by amplifying a reality.* The absent hinterlands of the real are re-crafted - and then they are there, patterned and patterning, resonating for the next enactment of the real.
>
> (Law, 2004, p. 116)

As self-professed producers of 'knowledge', researchers are professionally engaged in producing accounts of 'reality', of telling stories about the world. As such, we are, as argued above for clinicians and scientists, also obliged to be reflexive about how this knowledge is produced (Gherardi & Nicolini, 2000b). In the terms I have used through this thesis, this would mean reflecting on how research accounts are explicitly and implicitly embedded, which arguments they carry forward, and which they dismiss or neglect. As Zuiderent-Jerak and Jensen (2007) suggest, we should ask: "which partial connections with the field do my approach, discourse and activities strengthen? Which partial disconnections do they establish? And what kinds of normativities are enacted through these?" (p. 232)

As researchers, we also draw our own boundaries around knowledge – by field, discipline, epistemology, ontology, methodology, and so on (Crotty, 1998). Arrington and Schweiker (1992) made the point that research communities, as "anticipated audiences" (p. 515) not only influence the kinds of knowledge produced, but also limit it to "particular empirical perspectives", "particular value judgments", "particular (and often quite specialized) languages common to them but not necessarily to others, and a common body of canonical texts" (p. 523). As above, Arrington and Schweiker (1992) noted that these limitations mean that individual knowledge claims do not have to be defended against all possible arguments against them, only those within its limits. At the same time however, this can also mean that research that keeps within these limits can tend to be repetitive and to perpetuate the status quo at the expense of innovation and change, as well as inhibiting dialogue and communication between research communities (Arrington & Schweiker, 1992; Talburt, 2004).

The other disadvantage that comes from keeping within disciplinary boundaries is that dialogue between researchers and *everyone else* is also inhibited, limiting the impact, and arguably the importance, of academia to the rest of society. In light of the current financial pressures being placed on universities in Australia and the UK for example, the importance or relevance of various academic disciplines is no longer ‘self-evident’. Janasoff (2003) pointed out that “science that draws strength from its socially detached position is too frail to meet the pressures placed upon it by contemporary societies” (p. 235). She described current models of research as “technologies of hubris” (p. 238), which produce overconfidence in their results by ignoring uncertainty and ambiguity, which pre-empt political discussion, and which are limited in their abilities to meet challenges that arise outside of their jurisdiction. These are, by now, familiar arguments. Likewise, her proposal for “technologies of humility”: “to make apparent the possibility of unforeseen consequences; to make explicit the normative that lurks within the technical; and to acknowledge from the start the need for plural viewpoints and collective learning” (Janasoff, 2003, p. 240).

These are all arguments I have made in this thesis, and which have also been developed for social science methodology, in much greater depth and breadth by Law (2004). In this thesis, I have attempted to enact an account of humility, but a valid and persuasive account nonetheless. I may have begun so initially by default, owing to a novice’s ignorance of disciplinary boundaries and hospital practices. Throughout this research journey, I have worked to overcome this early ignorance; but here, at the end of this particular piece of work, I welcome my previous (and current) ignorance. I am grateful for the opportunities that it has afforded and continues to afford me in being forced, and perhaps thus enabled, to grapple with uncertainty, complexity, mess and multiplicity. I suggest that researchers who wish to deal with complex problems should likewise embrace ignorance and mess. They should ‘unbracket’ and examine the practicalities of everyday life, and seek to produce not so much solitary accounts of new knowledge, but dialogic accounts engaged with and embedded within multiple contexts, with the aims of describing and supporting new relationships and connections.

In the next and final section, I end with a brief reflection on the things that were not included in this thesis, and which I suggest might productively be included in future generations of these ideas.

9.5 Admitted exclusions, and/or proposed future inclusions

> But, though I know, even by my own increasingly modest standards, that the study is incomplete, I now see things differently: since there are discontinuities in place, and discontinuities in ordering, it follows that the largest part of the action is always being generated elsewhere.
>
> (Law, 1994, p. 47)

In hindsight, this thesis is theoretically indebted to Foucault, in particular his notions of discipline (1977), of Power/Knowledge (1980), and even of his notion of the "violence" of interpretation (1971/1984, p. 86)[46]. In this thesis, I have accessed the ideas of Foucault primarily through the work of actor-network theorists like Bruno Latour and John Law. Miller (1994) however articulates quite clearly the links between the above-mentioned works of Foucault, and those of Latour (1987, 1988), with managerial accountability. This thesis could therefore have been written differently, anchored from the beginning to those interconnections, the STS literature and ethnomethodology, and perhaps delivering very similar arguments. Future papers directed at a sociological audience could therefore benefit from more direct engagement with this theoretical foundation.

Moving away from the theoretical context, attention towards the physical context would also be a fruitful continuation of this work. The design and impact of spaces, of hospital architecture, technology and artefacts, could be described also as accounts made physical and manipulable, and examined much like the verbal and written accounts dealt with here (see for example Akrich, 1992; Gieryn, 2002, Kornberger & Clegg, 2004, Latour, 1992). In terms of other kinds of accounts, a study of accountability through food, for example, would also be fascinating, especially considering its central (if sometimes backseat) role in health care.

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[46] Here, the work of Nietzsche is another identified omission.

Next, the community context could be explored – embedding the accountability practices within hospitals to the work carried out in community medicine and other public health programs. Arguably, this could also be extended and interrelated with attention to the contexts of economic, political and environmental activity, to name just a few others. Within the hospital, more attention could and should be paid to the practices of allied health clinicians and administrative staff as well as that of hospital management. In this study, I had fascinating data relating more specifically to my allied health participants, the team secretary and the ward clerk, which I analysed to inform my findings, but did not include in this thesis.

Finally, and perhaps most importantly, patients require attention. This thesis did not directly include the practices and accounts of patients, largely due to the necessity of keeping within the boundaries of the larger project, that was itself limited by the boundaries of institutional ethics approval. Nevertheless, the centrality of patients as co-producers of their care and their health (Iedema, Sorenson, Jorm & Piper, 2008), makes their absence in any conversation or dialogue about accountability in health care a regrettable omission, especially when we seek to re-make our understandings of *patient* safety, and how to go about achieving it.

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List of Appendices

Appendix A:
Participant Information Sheet and Consent Form

Anchoring preventive health care to positive learning:
A 3-year Australian Research Council-funded project

INFORMATION FOR PARTICIPANTS

You are invited to take part in a study of the ways in which clinicians discuss their work in a team setting. We seek to understand how clinicians address and learn from organizing their work, including discussions which address adverse and potentially adverse events. To this end we are interested in studying multi-disciplinary communication and clinical team work processes with a focus on the organisation and re-organisation of clinical care. You are invited to take part as a possible participant in this study because you are a member of staff involved in these kinds of processes. The study is being conducted by Prof Rick Iedema, *Director*, at the *Centre for Health Communication, The University of Technology, Sydney* and Prof Jeffrey Braithwaite, *Director*, at the *Centre for Clinical Governance in Health, The University of New South Wales.*

Procedures

Two to three teams of clinicians will be enrolled in the study, comprising between 8 and 15 clinicians in total. Two meetings a week will be attended per team for a period of up to six months. When meetings are attended, consent from all present will be obtained; if this is not possible attendance is deferred until consent from all present is obtained, or alternative teams will be approached. Given the project is able to employ a post-doctoral and a doctoral researcher, and these two researcher are also responsible for carrying this research in a sister-site ([redacted]), this number of two teams and 15 participants per hospital site is a maximum. After the six-month period of attending team meetings, there will be three feedback sessions to present conclusions about how clinicians devise their own strategies to ensure quality and safety. Following these feedback sessions, the information derived will be structured into papers reporting on clinicians' 'local' quality and safety practices, and on how to communicate with senior management about the validity of clinicians' strategies of learning and improvement. Clinicians who are members of participating teams will be invited but are not required to participate in this authoring process. Their input into this writing process may range from simply approving content, to commenting on content, to co-authoring specific papers.

If you agree to participate in this study of team communication and learning, you will take part in tape-recorded sessions.

This will involve you being taped by a researcher using a tape-recorder:

- Individually during interviews;
- In meetings while you go about your work with other clinicians.

Please note that:

- You may request for tape-recording to cease and/or for recorded data to be deleted at any time.

- Where the tape-recording is in the vicinity of a patient, where the patient could potentially be captured on tape, the recording will instantly cease.
- If there is a risk that the recording captures non-participating clinicians, then the recording will cease, unless the participating clinician(s) find the opportunity to ask for their verbal consent (which will be recorded on tape).

Confidentiality

Your identity will remain known only to the researchers, as any identifying features will be deleted from transcripts.

Only those parts of the data that will help us understand and illuminate the way that clinicians discuss adverse events will be retained in digital form on a password protected and multi-cable secured computer for the purpose of transcription and analysis. All data will be stored in locked cabinets and in a password protected PC for a minimum of seven years and then disposed of by shredding or erasure.

In cases where particular segments prove useful to explain facets of the way you structure your discussions and learning about adverse events, and if these segments involve you, written permission will be sought from you prior to using them.

All details obtained by those named will remain confidential. Access to data generated will be limited to the Research Officers involved in the collection process and the Chief Investigators. All information collected will be de-identified before public dissemination. A report of this study will be submitted for publication or presented at official meetings, but no individual participants will be identifiable in such a report.

Potential Benefits

We cannot and do not hold that you will gain any benefit by participating in this study. However, it is hoped that the project will contribute to understanding of the ways in which clinicians benefit from learning opportunities, including adverse events.

Withdrawal from the study

Participation in this study is entirely voluntary. You are in no way obliged to participate and - if you do participate - you can withdraw at any time. Whatever your decision, please be assured that it will not affect your relationship with hospital staff.

When you have read this information, a member of the research team will discuss it with you further and answer any questions you may have. If you would like to know more at any stage, please feel free to contact Rick Iedema on (02) 9514 2709 or 0414 553 742. This information sheet is for you to keep.

This study has been approved by the Human Research Ethics Committee of [redacted] Health Service. If you have any concerns or complaints about the conduct of the research study, you may contact the Research Ethics Secretariat, [redacted], (phone [redacted], fax [redacted], email [redacted]).

Anchoring preventive health care to positive learning:
A 3-year Australian Research Council-funded project

PARTICIPANT CONSENT FORM

I ………………………………………………………………………… [name] of

……………………………………………………………………….. [ward/department]

have been invited to participate in the above named research study and have discussed the study

with …………………………………………………… [name of informant and position]

- I acknowledge that I have received and read the Participant Information Sheet and the purpose and nature of this research, including any possible risks, have been explained to me.
- I understand that my participation in this study is entirely voluntary and I may withdraw at any stage. If I withdraw, this decision will not affect in any way my future treatment or my relationship with my doctors and other members of my health care team.
- I also understand that information relating to my participation in the study is strictly confidential. I agree that research data gathered from the results of the study may be published, provided I cannot be identified.
- I understand that the research project will be carried out according to the principles of the National Health & Medical Research Council National Statement on Ethical Conduct in Research Involving Humans.
- I understand that if I have any questions relating to my participation in this research study I may contact Prof Rick Iedema on (02) 9514 2709 or 0414 553 742, who will discuss any concerns I may have.
- I understand that if I have any questions about my rights as a research subject, or on other administrative matters, I may contact the Research Ethics Secretariat, [redacted], (phone [redacted], fax [redacted], email [redacted]).

I hereby freely agree to participate in this research study.

I also state that I have/have not participated in any other research project in the past 3 months. If I have the details are as follows:

……….…………………………………...……………………………………………………………

……

Name (Print)……………………………………………………………………….

Signature……………………………………………**Date:** ……………………….

Name of Witness (Print)……………………………………………………………….

Signature of Witness…………………………………**Date:** ……………………….

Anchoring preventive health care to positive learning:
A 3-year Australian Research Council-funded project

REVOCATION OF CONSENT

I hereby wish to **WITHDRAW** my consent to participate in the research proposal described above and understand that such withdrawal **WILL NOT** jeopardize my relationship with the University of Technology, Sydney or participating hospitals and Area Health Services.

Name (Print)………………………………………………………………………………………

Signature………………………………………………………Date: ………………………..

The section for Revocation of Consent should be forwarded to:

Prof Rick Iedema, Centre for Health Communication, Faculty of Humanities and Social Sciences, University of Technology Sydney, PO Box 123, Broadway NSW 2007, Australia.

Appendix B:

Research Information Sheet

Anchoring preventive health care to positive learning:
The impact of team processes on quality and safety

What is this research about?

How clinicians act and interact with each other to deliver safe and high quality care.

Significance of research

This project focuses on exploring and understanding the less visible aspects of delivering patient safety and quality of care, particularly looking at how clinicians work together, using self-initiated, local, culturally-relevant and practical strategies for learning and handling the day-to-day challenges of hospital work. This knowledge will hopefully allow us to identify what it is that clinicians are already doing well in their practice, which would be a valuable resource for understanding how to achieve quality and safety, apart from and alongside the external demands for learning and improvement that are increasingly implemented in the health system.

What will the research involve?

- Attending with and recording the [redacted] team during meetings and rounds.
- Attending and interacting with ward staff during handovers and normal shifts in [redacted].
- Writing field notes.
- Interviewing participating clinicians.
- Audio recording interviews and conversations *only* with consenting participants.
- Following data analysis, we will conduct feedback sessions to present our conclusions and to get your feedback on them.
- Participating clinicians will also be invited to take part in the process of producing presentations or papers from this research.

What is this research not about?

- This project is *not* about surveillance of clinical work.
- It is *not* about evaluating clinician performance.
- It is *not* about the patients or their families.

Privacy and confidentiality

All information given or observed is strictly confidential. The identity of participating clinicians will be known only to the researchers. Any identifying information will be de-identified and coded so as to be unrecognisable.

Who is the researcher?

Fieldwork with the [redacted] team and [redacted] will be conducted by Su-yin Hor for her PhD research, under the supervision of Prof Rick Iedema at the Centre for Health Communication at the University of Technology, Sydney. Su-yin has a background in Psychology and Education, with a BPsych(Hons) and a MEd in Teacher Effectiveness from UNSW. Su-yin can be contacted on 0414 416 415 or by email at suyin.hor@student.uts.edu.au.

This project is funded by the Australian Research Council and has Ethics Approval from The University of Technology, Sydney and the [redacted] *Area Health Service Ethics Committee*

Appendix C:

Severity Assessment Code (SAC) Matrix

Severity Assessment Code (SAC) November 2005

This matrix should be used in conjunction with the NSW Health Incident Management Policy Directive

STEP 1 Consequences Table (For notification, consider the actual consequence or outcome using this table as a guide. The examples listed here are not exhaustive.)

		Serious	Major	Moderate	Minor	Minimum
CLINICAL CONSEQUENCE	Patient	Patients with **Death** unrelated to the natural course of the illness and differing from the immediate expected outcome of the patient management or: ■ **Suspected suicide**[1] ■ **Suspected homicide**[2] or any of the following: **The National Sentinel Events** ■ Procedures involving the wrong patient or body part ■ Suspected suicide in hospital ■ Retained instruments ■ Unintended material requiring surgical removal ■ Medication error involving the death of a patient ■ Intravascular gas embolism ■ Haemolytic blood transfusion ■ Maternal death associated with labour and delivery ■ Infant discharged to the wrong family	Patients suffering a **Major permanent loss of function (sensory, motor, physiologic or psychologic)** unrelated to the natural course of the illness and differing from the expected outcome of patient management or any of the following: ■ Suffering significant disfigurement as a result of the incident ■ Patient at significant risk due to being absent against medical advice ■ Threatened or actual physical or verbal assault of patient requiring external or police intervention	Patients with **Permanent reduction in bodily functioning (sensory, motor, physiologic, or psychologic)** unrelated to the natural course of the illness and differing from the expected outcome of patient management or any of the following: ■ Increased length of stay as a result of the incident ■ Surgical intervention required as a result of the incident	Patients requiring **Increased level of care including:** ■ **Review and evaluation** ■ **Additional investigations** ■ **Referral to another clinician**	Patients with **No injury or increased level of care or length of stay**
CORPORATE CONSEQUENCE	Staff	Death of staff member related to work incident or suicide, or hospitalisation of **3** or more staff	Permanent injury to staff member, hospitalisation of **2** staff, or lost time or restricted duty or illness for **2** or more staff or pending or actual WorkCover prosecution, or threatened or actual physical or verbal assault of staff requiring external or police intervention	Medical expenses, lost time or restricted duties or injury / illness for **1** or more staff	First aid treatment only with no lost time or restricted duties	No injury or review required
	Visitors	Death of visitor or hospitalisation of **3** or more visitors	Hospitalisation of up to **2** visitors related to the incident / injury or pending or actual WorkCover prosecution	Medical expenses incurred or treatment of up to **2** visitors not requiring hospitalisation	Evaluation and treatment with no expenses	No treatment required or refused treatment
	Services	Complete loss of service or output	Major loss of agency / service to users	Disruption to users due to agency problems	Reduced efficiency or disruption to agency working	Services: No loss of service
	Financial	**Loss of assets** replacement value due to damage, fire etc > $1M, **loss of cash/investments/assets** due to fraud, overpayment or theft >$100K or **WorkCover claims** > $100K	**Loss of assets** replacement value due to damage, fire etc $100K-$1M, **loss of cash/investments/assets** due to fraud, overpayment or theft $10K-$100K or **WorkCover claims** $50K-$100K	**Loss of assets** replacement value due to damage, fire etc $50K to $100K **or loss of cash/investments/assets** due to fraud, overpayment or theft to $10K	**Loss of assets** replacement value due to damage, fire etc to $50K	No financial loss
	Environmental	Toxic release off-site with detrimental effect. Fire requiring evacuation	Off-site release with no detrimental effects or fire that grows larger than an incipient stage	Off-site release contained with outside assistance or fire incipient stage or less	Off-site release contained without outside assistance	Nuisance releases

[1] **Suspected suicide** of a person (including a patient or community patient) who has received care or treatment for a mental illness from an Area Health Service or other PHO where the death occurs within 7 days of the person's last contact with the organisation or where there are reasonable clinical grounds to suspect a connection between the death and the care or treatment provided by the organisation;

[2] **Suspected homicide** committed by a person who has received care or treatment for mental illness from an Area Health Service or other PHO within 6 months of the person's last contact with the organisation or where there are reasonable clinical grounds to suspect a connection between the death and the care or treatment provided by the organisation.

STEP 2 Likelihood Table

Probability Categories	Definition
Frequent	Is expected to occur again either immediately or within a short period of time (likely to occur most weeks or months)
Likely	Will probably occur in most circumstances (several times a year)
Possible	Possibly will recur – might occur at some time (may happen every 1 to 2 years)
Unlikely	Possibly will recur – could occur at some time in 2 to 5 years
Rare	Unlikely to recur – may occur only in exceptional circumstances (may happen every 5 to 30 years)

STEP 4 Action Required Table

	Action Required
1	**Extreme** risk – immediate action required – Reportable Incident Brief (RIB) for all SAC 1 incidents must be forwarded to the DoH within 24 hours. A Privileged Root Cause Analysis (RCA) investigation must be undertaken for all Clinical SAC 1 incidents with a report being submitted to the DoH.
2	**High** risk – need to notify senior management. Detailed investigation required. Ongoing monitoring of trended aggregated incident data may also identify and prioritise issues requiring a practice improvement project.
3	**Medium** risk – management responsibility must be specified – Aggregate data then undertake a practice improvement project. **Exception** – all financial losses must be reported to senior management.
4	**Low** risk – manage by routine procedures – Aggregate data then undertake a practice improvement project.

NB – An incident that rates a SAC 2, 3 or 4 should only be reported to the DoH if there is the potential for media interest or requires direct notification under existing DoH legislative reporting requirements or NSW DoH Policy Directive.

STEP 3 SAC Matrix

		CONSEQUENCE				
		Serious	Major	Moderate	Minor	Minimum
LIKELIHOOD	Frequent	1	1	2	3	3
	Likely	1	1	2	3	4
	Possible	1	2	2	3	4
	Unlikely	1	2	3	4	4
	Rare	2	3	3	4	4

Every incident assessed against the Severity Assessment Code Matrix should be scored separately for both their actual and potential consequence or outcome

SHPN (OSB) 050138

NSW HEALTH

Appendix D:
Papers and Presentations from this Research

Peer-Reviewed Papers

Hor, S., Iedema, R., White, L., Williams, K., Day, A. S., Kennedy, P. (2010) Multiple accountabilities in incident reporting and management. *Qualitative Health Research, 20*(8), 1091-1100.

Hor, S., Iedema, R., Williams, K. (2008) Electronic incident reporting: A case study of formal and informal accountabilities. International Conference on Organisational Behaviour in Health Care [Refereed paper in conference proceedings], 26-28 March 2008, Sydney, Australia.

Conference Presentations (based on peer-reviewed abstracts)

Hor, S. (2010) Learning from incident reports: A study of local practices. Emerging Health Policy Research Conference, 11 August, University of Sydney, Australia.

Hor, S. (2009) Incident reporting: A journey from principles to policy and practice. Emerging Health Policy Research Conference, 16 August, University of Sydney, Australia.

Hor, S., Iedema, R., Day, A. S., Williams, K., White, L. (2008) A multidisciplinary approach to patient accountability. New South Wales Child Health Networks Conference, 2-4 September, Sydney, Australia.

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Other Presentations

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