

Accountability Systems in Healthcare

An Assessment of Their Impact on Patient Safety in Canada

Thesis/Project work submitted in partial fulfillment of the requirements for
the MSc in Human Factors and System Safety

Dr. Robert Robson

LUND UNIVERSITY
SWEDEN

Date of Submission: 2008-01-31



Accountability Systems in Healthcare

An Assessment of Their Impact on Patient Safety in Canada

Dr. Robert Robson

Under the supervision of Professor Sidney Dekker

ABSTRACT

MSc Thesis Abstract

During the 1990's, in most parts of Canada, there were calls for increased accountability on the part of the healthcare system and healthcare providers and administrators alike. These demands occurred in parallel with greater public awareness of the risks facing patients who seek care from complex systems as well as knowledge of the unintended harm that sometimes follows breakdowns in the provision of care. This thesis examines the issue and identifies and explores the origin of significant confusion between the concepts of accountability and responsibility.

The thesis further examines the impact of accountability systems on patient safety in the Canadian context and advances the proposition that the way in which accountability is understood and applied in Canadian healthcare is antithetical to the needs of the patient safety movement. This seems paradoxical at first and the thesis proposes a potential solution to this dilemma which may satisfy a variety of participants.

Key words: accountability, responsibility, causation, de-contextualization, double bind, goal conflicts

TABLE OF CONTENTS

1. Introduction	5
2. Accountability in Patient Safety	7
2.1 Background: Patient Safety in Canada	7
2.2 Guiding Principles in Patient Safety	7
2.3 Applying a Systems Perspective	8
2.4 Shifting from Blaming to Learning: Creating a Culture of Safety	9
2.5 Summary	10
3. Origins, Meanings and Applications of Accountability	11
3.1 Origins	11
3.2 Current Meanings	11
3.3 Applications of the Concept	12
3.4 Perspectives from the Patient Safety Domain	13
4. Accountability Frameworks in Canadian Healthcare	14
4.1 Clinical Practice Reviews	14
4.2 Guidelines	14
4.3 Rounds	15
4.4 Legal Reviews	15
4.5 Standard of Care	16
4.6 Causation	16
4.7 Conclusion	17
5. The Implications of Accountability Systems in Healthcare	18
5.1 Safety Reviews	18
5.2 Context and Causation	19
5.3 Authority-Responsibility Double Binds	19
6. Conclusion	21
6.1 Afterword	21
7. References	23

Chapter 1

Introduction

Prior to the mid 1980's there was relatively little discussion of the question of patient safety. Injuries to patients were viewed as the price to be paid for technological advances in medical treatment.

In the past two decades, interest in the field of patient safety has increased markedly. Several large retrospective studies indicated that the extent of unintentional harm to patients was significant and certainly greater than the harm associated with the activities of other complex socio-technical systems.

The Institute of Medicine (IOM) published the report **To Err is Human** (Institute of Medicine 1999) and estimated that between 44,000 and 98,000 individuals were dying annually in U.S. hospitals due to breakdowns in the way healthcare services were provided. The IOM report acknowledged this was a conservative estimate, as it was based on studies of patient safety events in acute care facilities only.

Canada is the most latest industrialized country to systematically examine adverse events resulting in patient harm or death. The Canadian Adverse Event Study (Baker et al, 2004) using a similar methodology produced results that were in line with the experience in other countries.

For patients hospitalized in acute care facilities in Canada in the year 2000, 7.5% of the patients experienced harm in conjunction with an adverse event. Almost 40% of those events were judged to be highly preventable. These results equate to two patients dying every hour, every day in Canada following breakdowns in the provision of care.

A more realistic estimate, when care across the full continuum of services is examined, is likely in the range of 4 patients per hour; stated another way, approximately 100 patients are dying each day in connection with a breakdown in the provision of services. A much larger number of patients are unintentionally harmed each day. This is clearly unacceptable.

Paradoxically, the funds available to defend hospitals and physicians in the event of litigation in Canada is significantly greater than the funds available to promote patient safety and develop means to modify the host of contributing factors that create conditions leading to harm¹. And yet, there has been a 50% decrease in the number of civil suits (litigation) brought against physicians (CMPA, Annual Reports 1997-2006) and hospitals in the past ten years. This has meant that it is several hundred times more likely for a patient to be injured or die in connection with a breakdown of care, than it is for a physician or hospital to be sued.

¹ The figures from the insurance industry are not published - the combination of governmental, private and not-for-profit company reserves and operating funds exceeds \$ 4 billion. The funds from governments for direct patient safety activities are approximately \$35 million. Again figures are not publicly released. (Personal communication of author with representatives of industry and Ministries of Health)

The imbalance in resources and risks in the domain of patient safety in Canada is staggering and clearly unacceptable. It is beyond the scope of this thesis to examine the various reasons for this imbalance. I will explore accountability as a crucial factor that has affected the active engagement of healthcare providers and managers in the search for and implementation of remedies that could address and restore justice to the culture of patient safety.

It is postulated that a **misunderstanding of the concept of accountability as well as its clumsy application in healthcare has influenced the current patient safety culture and served to impede progress in patient safety.**

Chapter One examines how the concept of accountability has come to occupy an important place in current patient safety debates. Chapter Two will include a critical analysis of the various meanings that are ascribed to the term 'accountability' with an examination of the consequences of the different options.

Chapter Three examines three of the accountability systems that are operating in Canadian healthcare. Particular attention will be paid to the themes and precepts underlying these systems. Chapter Four will discuss the requirements for robust and effective patient safety investigations, a relatively new accountability system in healthcare. The implications (for patient safety initiatives) of the themes discovered in Chapter Three will be examined.

The conclusion will link the findings of the thesis and suggest a way in which accountability can be applied without the conflation that impedes patient safety efforts.

Chapter 2

Accountability in Patient Safety

2.1 Background: Patient Safety in Canada

Serious discussion about patient safety in Canada began after the publication of **To Err is Human** (Institute of Medicine 1999). The publication of **An Organization with a Memory** (National Health Service 2000) described experience in the UK and was also influential. In Canada a series of working groups were established by a network of organizations brought together by the Royal College of Physicians and Surgeons of Canada (Wade et al 2002).

This led to the formation in 2004 of the Canadian Patient Safety Institute, a national organization with a mandate to coordinate patient safety initiatives across Canada (Canadian Patient Safety Institute 2007). In the same year, a large retrospective study of adverse events in hospitalized patients in Canada was published (Baker et al 2004).

As the extent of unintentional harm to patients was discovered the issue of **accountability in healthcare** gained prominence. The statistics reflected a situation that was clearly unacceptable. The consumers of the services as well as the providers began to search for and demand explanations about how the situation described in the various large studies has come to pass and what steps are proposed to improve the outcomes for patients.

Some of the basic principles underlying patient safety efforts have also led to concerns about the erosion of **accountability** in healthcare.

2.2 Guiding Principles in Patient Safety

A good summary of the important principles and themes that underlie and inform patient safety programs and initiatives is to be found in the book **To Do No Harm** (Morath and Turnbull 2005).

Two themes have gained broad consensus; (1) the concept of adopting a **systems view or understanding of safety**, and (2) the idea of **moving from an approach that blames individuals and groups to an approach that encourages learning**. The latter idea is often summed up in the concept of developing a “culture of safety”.

The two concepts are inter-related and contribute in a significant way to the increased interest in the question of **accountability** in healthcare. The applications of these two concepts generate contradictory pressures that are manifestations of deeply held values and cultural ‘habits’. These pressures impede progress in patient safety.

2.3 Applying a Systems Perspective

The traditional explanation of critical incidents resulting in patient harm focused on the contributions of individuals involved in the patient's care. This was known as the individual or "person" approach and examined primarily the practitioners at the "sharp end" of the care delivery system – those in closest contact with the patient (the doctor holding the scalpel, the nurse holding the syringe with the "wrong" medication, etc.).

Studies (Reason 1997, Vincent 2001) began to show clearly that in virtually all cases a series of factors had to be present to result in serious harm to a patient. These weaknesses evolved unintentionally in the care delivery system and became 'traps' that would eventually lead even the most experienced professional to become involved in a harm event.

The emphasis on adopting such a systems perspective in order to better understand critical incidents² in healthcare is a useful approach and has been elaborated in greater detail in several papers and books (see for instance, Vincent 2000).

Resistance to these views has been based on an apprehension that adopting a systems perspective will lead to the avoidance of responsibility for decisions and actions of individual healthcare providers and facilities. The reasoning is as follows: "It is fine to gain a broad systems understanding of the various factors leading to specific critical incidents. Such an understanding should not diminish the individual **accountability** of various providers for the outcomes that have so seriously impacted patients and their families. Individual practitioners must be held accountable for their actions."

Such a position begs the question of whether or not the practitioner has any effective control over the environment in which the work is done. The focus on the individual reflects less concern about the role of managers who are relatively remote from direct patient care and work at the 'blunt' end of the system³.

² Multiple overlapping terms (preventable adverse event, critical incident, sentinel event) are used to describe events leading to significant patient harm during the provision of healthcare services, with the harm not being primarily attributable to the underlying condition nor to recognized complications of the treatment of that condition. The term "critical incident" will be used throughout this paper.

³ 'Sharp end' and 'blunt end' are terms used in the analysis of accidents and incidents in complex systems to describe the proximity of managers and operators to a particular event (see Reason 1997). In healthcare, those at the sharp end would typically be the physicians, nurses, or others in close contact with the patient; incidentally those who have most commonly been singled out for blame when harm has followed a critical incident. Those at the blunt end would include managers, executives, and planners who are relatively removed from direct patient care but whose decisions nevertheless impact the ability of those at the sharp end to perform their expected tasks.

2.4 Shifting from Blaming to Learning: Creating a Culture of Safety

The second theme about which there is significant consensus is the shift from a blaming (often characterized as ‘naming, blaming, and shaming’) approach to a learning orientation. It is widely felt that the traditional finger-pointing or ‘blaming’ approach that is present in healthcare has a negative impact on the reporting of safety events (Dekker 2007)). Minimal reporting generates few opportunities for learning and a decreased potential to reduce the risk of recurrence of similar incidents in the future.

At the present time there is a significant challenge related to the under-reporting of critical incidents in healthcare. Even ‘stellar’ organizations estimate that only ten percent of significant critical incidents are reported (Morath 2005). One of the explanations for under-reporting relates to the fear amongst providers about the potential to become involved in litigation or other disciplinary activities (Wade et al 2002).

While there are undoubtedly many other cogent reasons to understand the under-reporting phenomenon⁴, a common belief has arisen that shifting away from a blaming to a learning orientation will tend to increase reporting of critical incidents, with the subsequent potential for increased learning.

Establishing a culture of safety has been characterized as a generational shift (Institute of Medicine 1999). To assist in this change, emphasis has focused on the introduction of legislation to provide legal protection (also known as ‘legal privilege’) for the work and discussions of groups that are reviewing critical incidents for the purpose of improving patient safety. Such protection, if effective, should allay many of the fears of providers about becoming enmeshed in litigation simply because they were involved in reporting or subsequently reviewing a critical incident.

⁴ For instance, lack of feedback following reports, lack of implementation of changes arising from reviews, logistical challenges involved in the reporting act itself.

For instance, the Canadian province of Manitoba has recently introduced such legislation. During the first year following proclamation of the legislation there has been a modest (ten percent) increase in reporting in a large urban region (Winnipeg Regional Health Authority 2007).

Significant concerns have been raised about the proposed development of a culture of safety with the observation that this will also lead to an undermining of the accountability of individual healthcare providers as organizations focus on 'learning'. The reasoning in this case is along the following lines: "While it is laudable to encourage increased reporting of critical incidents by providing legal protection for the work of committees examining those incidents, surely there are some individuals who merit being blamed for egregious activities. And how are we to hold people **accountable** for negative patient outcomes if there is no blaming?"

These are virtually identical to the concerns raised about the application of a systems perspective. There is no evidence that a focus on learning and the provision of legal protection for the reporting and analysis of critical incidents would in fact lead to an erosion of accountability/responsibility in healthcare. At the same time there is no discussion about why the healthcare system should be primarily preoccupied with issues of blame and responsibility when the central mission involves the safe delivery of services to individuals in need of them.

2.5 Summary

As can be seen, the question of accountability has come to occupy a central position in the debates and discussions around patient safety. This relates to both the broad impact (in terms of unintentional patient injuries and deaths) of patient safety challenges as well as the implications of two of the underlying principles that guide patient safety efforts and initiatives.

Chapter 3

Origins, Meanings and Applications of Accountability

3.1 Origins

The term “accountability” refers to the “quality of being accountable” (Compact Edition of the Oxford English Dictionary 1971); the term “accountable” has several meanings in the English language, all of which are drawn from the root word “account”.

The origin of the term “account” is from the 14th century French words “*aconte*” or “*acomte*” (both of which come from the word “*conter*” meaning “to tell a story”). An optional spelling (“*conpter*” or “*compter*”) evolved, possibly related to the Latin origins (from the word “*acomputare*”, itself derived from “*ac*” and “*computare*” meaning “to calculate”) of the concept. Further derivation of the Latin word “*computare*” (from “*com*” and “*putare*”) means to “reckon together” (Compact OED 1971).

The optional spelling of *conter* reflected the double meaning of the term in the 14th century; one sense referring to calculation or computation and the other to narration or story-telling. In the Compact OED discussions of the origins of the word there is no suggestion that the original meanings of “account” included the concept of being ‘responsible’ for actions or decisions (Compact OED 1971).

3.2 Current Meanings

In terms of current usage, there are four groups of meaning for “account” and “accountable”, an interesting expansion on the original bifurcated meaning of the 14th century (Compact OED 1971).

The meaning with the most derived definitions refers to various forms of counting and calculating of figures or the ordering of accounts in a systematic way. This is in keeping with one of the original meanings of the term. When used this way it does not play a central role in patient safety activities.

The second common meaning refers to taking into consideration the qualities of individuals or groups, as a form of estimation of importance. This is not a meaning that was immediately obvious in the 14th century origins of the word. There is also very little reflection of this meaning in the patient safety domain.

Accountability is also equated with responsibility or answerability for actions or conduct. As noted above, there is not a hint of this “expansion” of the original “*conter*” when looking at the origins of the word. This meaning is commonly used in the patient safety field as well as in many other domains of public services. As will be explored later it may be an important factor explaining the potential negative impact of accountability systems in healthcare in Canada.

A fourth meaning of the term refers to the process of providing of an account or an explanation of an event or the role of individuals involved in the event. This is equivalent to one of the original meanings from the 14th century– the concept of story-telling or narration. It is likely that this original meaning gradually transformed into the concept of being responsible for actions or decisions. The conflation between these two meanings or paradigms (‘telling a story’ versus

‘responsibility for actions and decisions’) helps to explain some of the important barriers to advancing initiatives in the patient safety field.

3.3 Applications of the Concept

A comprehensive review of the research on accountability in a wide variety of organizations describes the concept as the **“implicit or explicit expectation that one may be called on to justify one’s beliefs, feelings, and actions to others”** (Lerner et al 1999) (page 255). The authors note that negative or positive consequences may follow on the process of justification, depending on how successfully it was performed. By introducing the outcome (consequences) they moved the concept of accountability into a dual purpose construct, combining the ‘telling a story’ and the ‘responsibility’ components.

The authors (Lerner et al 1999) do offer the opinion (page 256) that “there are as many distinct types of accountability as there are distinct relationships among people and between people and the organizations that give structure and meaning to their social world”. This should not be discouraging as long as there is clarity about the “distinct type” that is applicable in a given situation.

Such a position mirrors the views of a political scientist in Canada who has coined the term “Multiple Accountabilities Disorder” (Thomas 2004) and notes that in the public domain “accountability becomes synonymous with other concepts like responsibility, integrity, control, transparency, and responsiveness” (Thomas in Siegel, ed. 2008) (page 53).

While this feels like a somewhat amorphous and rapidly moving target, Professor Thomas suggests **“accountability should be restricted to situations where an authoritative relationship exists between a principal and an agent”** (Thomas in Siegel, ed. 2008) (page 53). This brings us much closer to the ‘responsibility’ paradigm when trying to understand the role and impact of accountability in a given system.

With this latter comment Thomas introduces the concept of authority, which is developed in more detail by others (Woods 2008, Dekker 2007). To hold an agent responsible for actions, that agent must have the authority and control or capability to modify the environment in which work is accomplished. Too often, the word accountability (in its “responsibility” meaning) is used without regard to the question of authority or ability to control or influence the conditions that pertained at the time of the event for which an explanation or justification is requested or provided.

Another assessment of the state of governance and accountability in healthcare in Canada’s largest province sees accountability as a way of ensuring **“that those who perform functions and make decisions are open to being rewarded or punished by those whose interests that performance and those decisions are meant to serve”** (Tuohy 2003) (page 2). This is a complex and nuanced understanding of the concept, which makes sense in public service situations but may be intrinsically more difficult to apply in other systems.

According to Tuohy there are three elements of an effective accountability system: “(a) the identification of responsibility – who is responsible, over what scope of behaviour, for what performance; (b) information regarding the performance of responsible actors within their scope of responsibility; and (c) the availability of sanctions to reward or punish actors for their performance against objectives” (Tuohy 2003) (page 3).

In this way Tuohy provides elements to help decompose accountability and moves away from the simplistic equation of accountability with responsibility. By introducing the concept of “scope of responsibility” Tuohy allows for the possibility that a particular operator or agent involved in an event may not have the ability or authority to influence conditions in their working environment. When such conditions exist it is inherently more difficult (and probably less ‘just’) to assign individual responsibility for a specific outcome (for instance, patient harm after a critical incident).

A final comment about how the concept is applied “popularly” as reflected by the media and public usage. It is clear that there is little effort to differentiate between the various meanings of accountability; rather there is a consistent and facile linkage of accountability and responsibility.

3.4 Perspectives from the Patient Safety Domain

An influential book cites the office of the Auditor-General of the United States, which provides a very broad framework indeed. Accountability is considered to be “**the obligation to demonstrate, review, and take responsibility for performance, both for the results achieved in light of agreed expectations and for the means used**” (Morath 2005) (Page 256). In this way Morath and Turnbull seem to support an umbrella definition which can include all four of the categories of general usage outlined above. This will and does result in significant confusion.

Sharpe is more categorical in her definition stating “**I use the terms ‘accountability’ and ‘responsibility’ synonymously**” (Sharpe 2004) (page 10). She later tries to soften this position by distinguishing between retrospective and prospective accountability. Of interest is the fact that none of the other thirteen authors who contributed to the book edited by Sharpe have addressed the question of the meaning of accountability and how different understandings might impact healthcare.

The Canadian Patient Safety Dictionary (Davies et al 2003) provides no definition for the concept of accountability. A search of the website and resource centre offered by the National Patient Safety Foundation (National Patient Safety Foundation 2004) in the US also provides no definition. The influential Institute for Healthcare Improvement (Institute for Healthcare Improvement 2006) also provides no meaning for the concept on its website.

These facts lead one to conclude that within the patient safety field the socially constructed meaning of accountability (as equivalent to responsibility) has been considered a straightforward matter not requiring any further inquiry or elaboration. This sets the stage for significant conflation of meanings with important consequences for patient safety efforts.

Chapter 4

Accountability Frameworks in Canadian Healthcare

In this chapter, three accountability systems will be reviewed in an effort to identify the specific meaning of accountability that is operative as well as to examine the impact of that choice.

The term “accountability system” will be taken to mean **any method, or process within an organization that allows or promotes the expression or understanding of accountability**. As noted (Lerner et al 1999) accountability itself is clearly a social construct. For this reason, the definition of accountability system is deliberately broader than that proposed by Tuohy (Tuohy 2003).

Multiple accountability systems exist in healthcare. They include complaint and feedback processes, clinical review meetings, bio-ethics reviews, research committee reviews, privacy impact assessments, standards committee reviews, licensing body processes (complaints, disciplinary hearings, fitness to practice reviews, billing reviews), internal administrative reviews, governmental investigations (coroner’s inquests, human rights complaints) and a variety of legal processes.

The list is quite astonishing. This chapter will focus on clinical practice reviews and legal reviews. A comprehensive assessment of the spectrum of accountability systems that function at this time in Canadian healthcare is clearly beyond the scope of this thesis.

4.1 Clinical Practice Reviews⁵

There are two broad types of review which involve accountability by providers for the clinical care that is provided to patients. The first of these, clinical practice guidelines (CPGs), are intended to guide clinical decision making prior to its implementation. The second category of clinical review (‘Rounds’) is utilized after the fact to review a clinical situation.

4.2 Guidelines

Clinical practice guidelines (CPGs - including clinical algorithms and care maps) are the logical outcome of the growing movement to base care on reproducible evidence, the so-called evidence-based medicine movement which has been described extensively in the literature (Strauss et al 2005).

While CPGs are intended as guidelines only and are to be adapted to the circumstances of the individual patient, they have gradually taken a greater prescriptive role. In many instances, CPGs will be the basis for conducting clinical audit reviews of the practice of individual practitioners or care units. While it is laudable to undertake such reviews, it is imperative that the tools being used are those most likely to produce the result that is sought, namely the provision of safe quality care to patients.

⁵These comments are based on the author’s 35 years of experience in attending rounds and 15 years experience attempting to apply CPGs.

In the case of CPGs the progression of evidence-based decisions is linear (albeit with identified decision points that may result in different treatment streams) based on a simple form of deterministic cause-and-effect understanding of treatment. While the decision points introduce some elements of context (primarily with respect to the patient's particular situation) there is no opportunity to integrate the broader context within which care is being provided.

Since the CPG is directed at specific members of the provider "community" the focus is once again on individual performance. There is an implicit assumption that the 'evidence' that has been gathered to support a particular CPG can smooth out the variations in working conditions and result in an 'averaged' or 'reasonable' approach to treatment of a large number of individual patients being treated by a large number of providers working in a large and variable mix of conditions.

4.3 Rounds

In the second type of review, problematic cases are presented for discussion. These may be presented at "grand rounds" which are large, usually multi-disciplinary, facility-based educational sessions. More commonly there will be departmental or sectional presentations, as well as informal case presentations during unit or ward rounds.

A specific variant known as M&M (morbidity and mortality) rounds involves an examination of one or more cases with unexpected negative outcomes. M&M rounds are usually "closed" with only those directly involved in the discipline (for instance, surgery) invited to participate.

In all instances the discussion centres on the details of a specific case with a goal of identifying errors that were made in the delivery of the care. While the goal is to learn from these errors to prevent future similar events, the focus is very much on the individual practitioners. There will be some examination of the context surrounding the particular patient but very little focus on the broader environmental, institutional, or team context. An early extensive ethnographic study of surgical trainees (Bosk 2003) looked at M&M rounds in some detail.

For both types of clinical reviews the focus on individual patients, individual practitioners, and the identification of errors reinforces a conception of accountability identified above as being equivalent to the term 'responsibility'. Without meaningful examination of the broader context it is difficult to see how the issue of the individual's authority to change conditions and the resources to do so in a timely manner can be addressed.

4.4 Legal Reviews

Two broad categories of legal reviews will be considered – civil litigation usually involving allegations of negligence as well as the much rarer instance of charges being laid under the Criminal Code of Canada.

An important distinction between civil and criminal cases concerns the level of legal standard that is applied to the evidence. For civil litigation the court should find the evidence persuasive 'on the balance of probabilities' (often understood as 50% plus 1) whereas for criminal responsibility to be found the standard is 'beyond a reasonable doubt'. In all cases, the subjective nature of the standard is resolved by a Judge.

With respect to claims based on allegations of negligence the plaintiff is required to prove four elements to succeed (Picard et al 1996). These include the presence of a duty of care, a

demonstration that the duty was breached through the provision of substandard (negligent) care, evidence that the plaintiff suffered measurable damages or harm, and an argument that the damages were causally related to the breach. This discussion will focus on the second and fourth issues.

4.5 Standard of Care

The classic determination of the standard of care in Canada is found in the 1956 Judgment in *Crits v. Sylvester* (Crits v. Sylvester 1956):

“Every medical practitioner must bring to his task a reasonable degree of skill and knowledge and must exercise a reasonable degree of care. He is bound to exercise that degree of care and skill which could reasonably be expected of a normal prudent practitioner of the same experience and standing...”

The concept of the ‘reasonable’ person (or practitioner or patient or operator...) pervades the standard and seems eminently fair. Determining what such a ‘reasonable’ individual might do or decide in a particular case is eminently challenging. Of note is the absence of any consideration of context in this standard.

The issue of the influence of the broader institutional and environmental context has been treated in a number of recent Canadian Judgments (Picard 1996). Resource limitations and other items outside the control of a particular practitioner will not, in the normal course of events, alter the way in which standard of care is decided in a given case.

4.6 Causation

Canadian courts rely on a classic deterministic model to assign causation. Judgments are replete with comments about ‘cause-in-fact’ which is sometimes called the ‘actual cause’ or even the ‘factual cause’. The test which is applied is also known as the “but-for” test (Picard 1996) (page 218-222) with the implication that the damage would never have occurred absent (“but for”) the substandard care of the defendant provider. Picard goes on to note that “determining cause-in-fact is a more or less scientific inquiry into the cause-and-effect relationship which brought about the injury.” (page 219).

The concept of proximate cause (also sometimes called the ‘legal cause’ to distinguish it from the ‘actual cause’) has developed in common law judgments to deal with the issue of ‘remoteness’ or ‘foreseeability’ of a particular consequence of substandard or negligent behaviour. While substandard care may be scientifically related to the damage suffered by the patient it is possible that the connection is too remote to have been recognized by the provider and the court will conclude that the care was not the legal (‘proximate’) cause of the damage. The plaintiff’s case will then fail.

The discussion around the case [*Fraser v. Vancouver General Hospital*] cited (Picard 1996, page 228) is instructive. Two interns failed to diagnose a significant neck fracture in a person involved in a motor vehicle accident. The person developed an ileus (a form of paralysis of small bowel function) of the small intestine which can occur following spinal cord injury and paralysis. The patient subsequently died as a result of complications of the ileus. The court found that the missed diagnosis (of the neck fracture) was **not** the proximate cause of the patient’s death.

It is clear that all legal reviews frame accountability in terms of individual responsibility with no regard to the issue of authority to change conditions. This is not surprising in view of the retributive role of legal proceedings – they are intended to determine the appropriate level of payment (whether monetary or in jail time) by the appropriate individuals judged to be responsible for a given event that has caused harm. Learning is presumed to flow from punishment.

4.7 Conclusion

The examples of accountability systems that have been examined reflect two underlying concepts - the application of a linear cause-and-effect understanding of causation, and the systematic de-contextualization of the work being done or the care that is provided. These concepts are stated very explicitly in legal reviews. What is interesting is the extent to which the same approach has migrated into the realm of clinical practice reviews.

The healthcare accountability systems examined also share a narrow definition of the concept that equates accountability with responsibility. This leads to a focus on the role of individual practitioners that effectively precludes a full and robust understanding of the role of systemic influences in a given case.

Equating accountability with responsibility requires an assessment of the authority or capacity of individuals to control or change the conditions in which providers work. Failing to do so creates the kind of double bind referred to earlier (Woods 2008) and prevents the possibility of improving system safety in healthcare.

A broader view of accountability that equates it with individual practitioners providing an account of what they were doing and thinking will provide a clear understanding of the rich context in which they are working. Such an understanding of the systemic influences that contribute to accidents will promote substantive progress in patient safety efforts and initiatives.

Chapter 5

The Implications of Accountability Systems in Healthcare

In the previous chapter we explored several common accountability systems that function in healthcare in Canada. Two main themes were identified as important underpinnings of the accountability systems that were examined.

These themes are the **reliance on linear causation** to “explain” events and the **de-contextualization of data** about the various and variable working and environmental conditions that pertained prior to and at the time of the event in question.

5.1 Safety Reviews

Hollnagel identifies three models to understand the origin of accidents or critical incidents in complex socio-technical systems (Hollnagel 2004). These are the sequential model, the epidemiological model, and the systemic accident model. Various types of safety investigations exist and rely on one or the other of the three basic accident causation models.

Patient safety reviews are a relatively recent phenomenon in Canadian healthcare. In most cases the methodology guiding the review is based on a form of root cause analysis (RCA). The Canadian Patient Safety Institute has published an ‘RCA Framework’ as a guide to facilities wishing to analyze and learn from recent adverse events (CPSI RCA Framework 2006).

The RCA Framework is an example of an epidemiological accident model and follows a fairly typical cause-and-effect approach to understanding adverse events.

Most safety investigation frameworks that are currently used in Canada encourage the consideration of blunt end factors by integrating the approach developed by the CRU (Clinical Risk Unit of Imperial College) in the U.K. (known as the London Protocol; see Vincent 2000). This seems to favour a broader exploration of the context in which care is provided.

Unfortunately most patient safety investigation methods currently used in Canada also involve a reliance on generating recommendations, which are “SMART” [**S**pecific, **M**easurable, **A**greed, **R**ealistic, and **T**ime-bound] (Dekker 2006). This can lead to a re-focusing of attention away from the broader context towards a narrow band of actionable recommendations. One result is to avoid making recommendations about contributing factors at the broad political environment or institutional level, since they are rarely actionable in the short or medium term.

This then leads the investigation in the direction of searching for fixable causes rather than seeking an understanding of events. The most accessible and visible ‘fixable’ causes are littered amongst the sharp end practitioners, where traditional assessments have always found them.

At the present time there is only one jurisdiction in Canada which is trying to apply a systemic accident model in its safety investigation methodology on a consistent basis (WRHA 2007). The so-called New Lens method emphasizes the importance of understanding the broad context around an event as well as accepting that a significant number of the events leading to patient harm do not follow typical linear causation models and occur very unpredictably and in ways that initially defy simple explanation. This is quite typical of complex socio-technical systems (Vicente 2004, Perrow 1999).

5.2 Context and Causation

What impact will concepts such as linear causation and de-contextualization have on safety investigations?

The experience of system safety experts from a myriad of domains and industries where socio-technical systems operate indicates clearly that context is of prime importance. This has been variously described as “the view from inside the tunnel” (Dekker 2006) or the “second story” (Cook 1998). A more robust appreciation of the context in which the work was being accomplished will enhance our understanding of how multiple factors and conditions combine and interact to produce the fertile ground for a particular “accident” to occur.

In order to hear and understand the view from within the tunnel, investigators must be open to hearing the story of the operators and providers within the system – a form of story-telling that is reflected in one of the original meanings of accountability. This openness to narrative accounts was explored by Klein when he examined communication and de-briefing techniques in a number of safety critical environments (Klein 1998). The growth of the narrative medicine movement in the past three decades is another reflection of the value of learning from stories (Frank 1995, Brody 2003).

To remove context is to severely limit the ability of healthcare accident investigators, patient safety experts, and managers to fully understand a given situation. Without that understanding the possibility of formulating changes or introducing controls to limit the risk of recurrence in the future is diminished. Reliance on accountability systems which are based on standards that de-contextualize events and actions cannot lead to positive results for patient safety.

With respect to causation, the legal system that pertains in Canada is firmly wedded to a traditional view of causation. This same view is found within the accountability systems examined in the previous chapter. This is often presented as being a “scientific” form of causation but is in fact simply the most popular framework (a Newtonian or mechanical view of causation) that is applied in understanding how events may occur. Hollnagel has analyzed this question in detail (Hollnagel 2004).

While there are many events which can be understood by applying such a mechanical view of the world, it is apparent as more is learned about the working of complex socio-technical systems, there are also many events which cannot be understood by applying such simplistic causation.

Fundamentally this becomes a question of whether a safety investigation is interested in seeking causes for events or rather in coming to an understanding and explanation of the many factors that may have contributed in a non-linear fashion to the event occurring. This is sometimes summarized with the mnemonic WYLFYF (Hollnagel 2004, Dekker 2006), which stands for “what you look for is what you find”.

5.3 Authority-Responsibility Double Binds

The requirements for a robust and effective patient safety investigation would seem to run counter to the precepts that underlie the accountability systems examined in Chapter Three. If anything, these themes will tend to impede effective healthcare safety investigations. It is important to understand why this may be happening.

David Woods has dealt with these issues in a recent article in which he speaks of the “authority-responsibility double binds” in healthcare (Woods 2008). He states specifically that such double binds occur when “one has responsibility and others will impose sanctions for outcomes, but that party no longer has sufficient authority to influence or control the processes that lead to outcomes.” Dekker has also explored this issue in greater detail (Dekker 2007).

Woods’ reference to parties that no longer have “sufficient authority to influence or control the processes that lead to outcomes” is a relatively common phenomenon in healthcare.

Unfortunately, when healthcare adopts methods that de-contextualize events there is little opportunity for leaders, managers or investigators to discover that the front line operators or providers are lacking in the authority to change processes. This then will lead to inappropriate “solutions” and a culture or atmosphere anchored in blaming that will reduce the reporting of events.

Chapter 6

Conclusion

This thesis has examined the impact of accountability systems on patient safety initiatives in Canada.

The concept of accountability occupies a central position in discussions in the patient safety realm. The various meanings of accountability, as well as their origins were explored. At least two of the current meanings are applicable in the healthcare and patient safety domain.

Accountability is often equated with responsibility, for actions and decisions, with the implication that negative consequences will likely follow negative outcomes. The systems of accountability that were examined adopt this commonly accepted meaning of the term.

Accountability can also be understood as providing an account or an explanation, a variant of story-telling or narration. This is a less commonly applied meaning within healthcare.

There is commonly conflation of these two meanings. The basic postulate of this thesis concerns the negative consequences of such conflation for patient safety efforts and initiatives.

Three of the many accountability systems operating in healthcare were examined in more detail and two important themes were identified, both derived in large part from a legal orientation or framework. These are the concepts of linear causation and de-contextualization of data. A common consequence of applying these two precepts is the tendency to focus on the individual contributions to an event, rather than broader systemic factors.

The requirements for an effective and robust safety investigation were examined and found to include reliance on a rich understanding of context as well as accepting the possibility of non-linear causation of events in a complex socio-technical system like healthcare. These require an application of accountability in terms of the narrative or story-telling meaning of the term.

This introduces a dilemma. The most commonly applied meaning of accountability (equivalent to responsibility) includes reliance on precepts that impede effective safety investigations or understandings.

6.1 Afterword

Elements of a solution to this dilemma must include more precise use of the term “accountability” in healthcare.

When seeking to understand a particular critical incident that led to patient harm, it would make sense to apply the “narrative account” meaning of accountability. By inviting the operators involved in a particular event to tell their story it is more likely that the safety investigator will be able to gain a rich understanding of the context in which the work was done.

When seeking to assign responsibility (sometimes known as “holding a person accountable”) for the consequences of a critical incident, then the more common meaning is appropriate, with the caveat that such accountability only makes sense if the person or unit or system has the authority and ability to make requisite changes in the situation that might have prevented the particular event.

A short summary would read as follows: **Actively promote patient safety through a robust application of accountability** (as narrative) **while seeking to understand harm events. Then seek to provide appropriately fair justice for those harmed by a focused application of accountability** (as responsibility) **whether that be at the individual or system level.**

7. References

- Baker, G.R., Norton, P.G., et al (2004), The Canadian Adverse Events Study: the incidence of adverse events among hospital patients in Canada, *CMAJ*, 170 (11): 1678-1686
- Bosk, C.L. (2003) *Forgive and Remember: Managing Medical Failure* (2nd Ed'n), Chicago, University of Chicago Press
- Brody, H. (2003) 2nd Ed'n, *Stories of Sickness*, Oxford, Oxford University Press
- Canadian Medical Protective Association Annual Reports (1997-2006), Ottawa, Canadian Medical Protective Association, available at www.cmpa.org (accessed January 27, 2008)
- Canadian Patient Safety Institute, (2007), Edmonton, CPSI Annual Report, available at www.patientsafetyinstitute.ca (accessed January 15, 2008)
- Compact Edition of the Oxford English Dictionary (1971), Oxford, Oxford University Press
- Cook, R. I., Woods, D. D., and Miller, C. (1998). *A Tale of Two Stories: Contrasting Views on Patient Safety* Chicago, IL: National Patient Safety Foundation
- CPSI RCA Framework (2006), Edmonton, RCA Framework available at: <http://patientsafetyinstitute.ca/uploadedFiles/Resources/March%202006%20RCA%20Workbook.pdf> (accessed January 15, 2008)
- Crits v. Sylvester* (1956), 1 D.L.R. (2d) at 508 (Ont. C.A.), aff'd [1956] S.C.R. 991
- Davies, J.M. and Hebert, p. (2003), *The Canadian Patient Safety Dictionary*, Ottawa, Royal College of Physicians and Surgeons of Canada, available at: http://rcpsc.medical.org/publications/Patient_Safety_Dictionary_e.pdf
- Dekker, S.W.A., (2005). *Ten Questions about Human Error*, Mahwah, NJ, Lawrence Erlbaum Associates
- Dekker, S.W.A. (2006) *the Field Guide to Understanding Human Error*, Aldershot, England, Ashgate Publishing
- Dekker, S.W.A. (2007) *Just Culture: Balancing Safety and Accountability*, Aldershot, England, Ashgate Publishing
- Frank, A.W. (1995), *the Wounded Storyteller*, Chicago, University of Chicago Press
- Fraser v. Vancouver General Hospital* (1952), 2 S.C.R. 36, [1952] 3 D.L.R. 785
- Hollnagel, E., (2004). *Barriers and Accident Prevention*, Aldershot, England, Ashgate
- Hollnagel, E., Woods, D.D., and Leveson, N., Ed., (2006). *Resilience Engineering*, Aldershot, England, Ashgate
- Institute for Healthcare Improvement (2006) Boston, available at www.IHI.org (accessed January 15, 2008)

Institute of Medicine, (1999) *To Err is Human: Building a Safer Health System*, Washington, D. C., National Academy Press

Institute of Medicine, (2001) *Crossing the Quality Chasm: A New Health System for the 21st Century*, Washington, D. C., National Academy Press

Klein, G., (1998). *Sources of Power*, Cambridge, Massachusetts, MIT Press

Lerner, J.S. and Tetlock, P.E. (1999), Accounting for the Effects of Accountability, *Psychological Bulletin*, 125(2): 255-275

Morath, J.M. and Turnbull, J.E. (2005) *To Do No Harm: Ensuring Patient Safety in Healthcare Organizations*, San Francisco, Jossey-Bass

National Health Service (2000), *An Organization with a Memory: report of an expert group on learning from adverse events in the NHS*, London, The Royal Stationery Office

National Patient Safety Foundation (2004) Chicago, available at www.npsf.org (accessed January 15, 2008)

Perrow C (1999) *Normal Accidents* 2nd Ed'n, Princeton, NJ, Princeton University Press

Picard, E.I., and Robertson, G.B. (1996), *Legal Liability of Doctors and Hospitals in Canada* (3rd Ed'n), Toronto, Carswell Thomson Professional Publishing

Plsek, P.E. and Wilson, T. (2001) Complexity, Leadership, and Management in Healthcare, *British Medical Journal*, 2001; 373:746-749

Reason, J., (1997) *Managing the Risks of Organizational Accidents*, Aldershot, England, Ashgate Publishing

Sharpe, V.A. ed. (2004), *Accountability: Patient Safety and Policy Reform*, Washington D.C., Georgetown University Press

Siegel, D. and Rasmussen, K. (ed.) (2008) *Power, Professionalism and Public Service: Essays in Honour of Kenneth Kernaghan – Chapter Two: The Swirling Meanings and Practices of Accountability in Canadian Government*, Toronto, University of Toronto Press (page 43-75)

Strauss, S.E. et al (2005) *Evidence-Based Medicine: How to Practice and Teach EBM* (3rd Ed'n), London, Elsevier Churchill Livingstone

Thomas, P.G. (2004), Parliamentary Scrutiny and Redress of Grievances, *Canadian Parliamentary Review*, 170(11): 1678-1686

Tuohy, C.J. (2003), *Governance and Accountability in the Ontario health care arena* (research paper prepared for the Panel of the Role of Government), Toronto, Panel of the Role of Government, available at <http://hdl.handle.net/1873/3512>

Vicente, K. (2004) *The Human Factor*, New York, Routledge

Vincent, C. et al (2000), How to Investigate and Analyze Critical Incidents: Clinical Risk Unit and Association of Litigation and Risk Management Protocol, *BMJ*, 320: 777-781

Vincent, C. et al (2001), Adverse Events in British Hospitals: Preliminary Retrospective Record Review, *BMJ*, 322: 517-519

Wade, J. et al (2002), Building a Safer System: a National Integrated Strategy for Improving Patient Safety in Canadian Healthcare, Ottawa, available at www.rcpsc.medical.org (accessed January 27, 2008)

Woods, D.D. (2008 in press), Conflicts Between Learning and Accountability in Patient Safety, *DePaul Law Review*, Chicago, DePaul University Press

Winnipeg Regional Health Authority (2007), unpublished report to Senior Management on the first twelve months of critical incident reporting following proclamation of new legislation

WRHA (2007), Using a New Lens To Understand Healthcare Critical Incidents: An Intensive Three Day Workshop for Patient Safety Investigators, available from WRHA Patient Safety Team at www.wrha.mb.ca

