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Heuristics and Soft Systems of Health Care Risk Management

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Heuristics and Soft Systems of Health Care Risk Management

Abstract

The formal management of risk was an idea in its early stages of introduction into the National Health Service when this research started. In this thesis I document the development of my thinking as an acute hospital risk manager over the last five years as I developed the Trust's risk management system. Using Action Learning as the research approach, I explored theories and concepts and tested them in the fire of real world action and reflective questioning of experiences.

The definition of risk is explored in relation to health care, as are the approaches used to manage these risks. A key finding is that risk management decision making does not generally fit into either programmed or non-programmed decision making models but neither do decision makers guess. Decision makers tend to use heuristics, which are simple rules of thumb, which generally help them make the right decision with minimum mental effort. However, heuristics also tend to be applied inappropriately and can result in an organisation being exposed to unacceptable levels of serious risk.

A number of key heuristics are identified and they appear to fall into two general types, B-heuristics and E-heuristics. The B-heuristics are 'basic' in form and can be summarised as a simple sentence while, E-heuristics have an 'extended' form which can be summarised as a list of related simple sentences.

Knowledge of heuristics helped in the design of the Trust's risk management which has been implemented and its effectiveness tested in the field. This field testing has demonstrated that the worst effects of heuristics can be mitigated by effective soft-system design.

Chapter 1

The Researcher and the Research Context

1.1 Introduction

On 1st August 1994 I was given responsibility for the corporate risk management of a large university teaching hospital. I felt two contradictory emotions - excitement and apprehension. I was excited by the challenge of being able to develop a new area of knowledge and expertise but I was also apprehensive about facing a task which could have serious consequences for me and the Trust should I not do my job well.

My first task was to develop a system and strategy to manage the Trust's risk but I could find very little literature on what risk management in hospital was all about. Health care exemplars in risk management were claimed to exist in the United States but there were many who doubted that their experience was relevant to the British context because of the way in which our different legal and health care systems operate.

Over the next few years I expected my knowledge, together with the general field of health care risk management knowledge, to develop. I intended to record this growth in knowledge and test its value to the practitioner of health care risk management. My main aim was to identify best practice. But I wanted to do more than that. I wanted to understand the nature of the decisions which people facing health care risks make and to understand how organisational structures and procedures might help or hinder that decision making process.

This thesis provides a record of my growth in knowledge together with the concepts and theories that I developed, used and tested in the real world of health care. I hope that the reader will find my experience and conceptual models helpful and I hope these ideas will help make health care less risky in the future. In a wider sense, I also hope that I have contributed to a deeper understanding of the nature of risk management and the decision making process associated with it.

1.2 Background to the Research

The United Kingdom National Health Service is one of the largest and most complex organisations in the world. During the typical day:

- almost a million people visit their family doctor
- 130,000 go to the dentist for a check up
- 33,000 people get the care they need in accident and emergency
- 8,000 people are carried by NHS ambulances
- 1.5 million prescriptions are dispensed
- 2,000 babies are delivered
- 25,000 operations are carried out including 320 heart operations and
  125 kidney operations
- 30,000 people receive a free eye test
- District nurses make 100,000 visits

On a typical day in the NHS, there are:

- 90,000 doctors
- 300,000 nurses
- 150,000 healthcare assistants
- 22,000 midwives
- 13,500 radiographers
- 5,000 occupational therapists' (1)

Such a large-scale activity is likely to have large risks associated with it. Twenty-four hours a day the service is dealing with vulnerable people. Distressed relatives and friends swell the numbers of people flowing through its doors. Health care activities often require staff with high levels of skills. Procedures involved in treating and caring for people are complex. In support of these procedures there is sophisticated equipment and a large, complex, physical infrastructure. All of this contributes to health care being a highly risky activity but the level of that risk is largely un-quantified and not well understood.

According to Bowden the potential cost of clinical risk is high:

> 'The research indicates that a typical 1000-bed acute hospital in the NHS with a bed occupancy rate of 89% can expect 5,800 patient incidents per annum. A patient incident can range from the avoidable death of a patient, to someone simply falling out of bed. Of this total, only 116 will be potentially compensatable events, of which 38 will become claims.
> The cost of settlement of 50% of those claims can be up to £2.6m (1990/91 costs) excluding legal/claims handling expenses. What is more worrying is the way in which the figures will evolve if the NHS does not take preventative action.
>
> It should be borne in mind that negligence claims take many years to settle, so that, based on a 1990/91 exposure of £2.6m, total payment for the 1990/91 year of exposure will be £3.77m by 1997/98 (10% per annum inflation); the base figure for 1997/98 will become £5.76m without any change in the risk, but simply because of the increased frequency and cost of claims, and that base figure of £5.76m will give rise to total payments for 1997/98 year of exposure of £16.29m (by 2004/5). Payments made in 1997/98 will therefore be £7.81m, and outstanding liability will be £48.37m.' (2)

This quote from Bowden, which I read at the start of my research, can now be seen to have been a significant understatement of the problem. The latest research reported at the end of my research claims that preventable clinical adverse events are:

'...a leading cause of death in the United States. When extrapolated to the over 33.6 million admissions to US hospitals in 1997, the results of these two studies imply that at least 44,000 and perhaps as many as 98,000 Americans die in hospitals each year as a result of medical errors. Even when using the lower estimate, deaths in hospitals due to preventable adverse events exceed the number attributable to ...motor vehicle accidents (43,458), breast cancer (42,297) or AIDS (16,516).' (3)

A report by the Department of Health in June, 2000 was still unable to specify the extent of clinical adverse events in the UK.

'Currently, NHS reporting and information systems provide us with a patchy and incomplete picture of the scale and nature of the problem of serious failures in health care. We know, for example, that every year:
'400 people die or are seriously injured in adverse events involving medical devices;
nearly 10,000 people are reported to have experienced serious adverse reactions to drugs;
around 1,150 people who have been in recent contact with mental health services commit suicide;
nearly 28,000 written complaints are made about aspects of clinical treatment in hospitals;
the NHS pays out around £400 million a year settlement of clinical negligence claims, and has a potential liability of around £2.4 billion for existing and expected claims;
hospital acquired infections - around 15% of which may be avoidable - are estimated to cost the NHS nearly £1 billion.' (4)

The Department of Health Report estimates, on the basis of the American study are that:

'...the best research-based estimates we have reveal enough to suggest that in NHS hospitals alone adverse events in which harm is caused to patients:
occur in around 10% of admissions - or at a rate in excess of 850,000 a year;

cost the service an estimated £2 billion a year in additional hospital stays alone, without taking any account of human or wider economic costs.' (5)

Not only is the health service a risky place for patients, it is also a risky place for staff and visitors.

' There are around 450,000 reported accidents a year in NHS acute hospitals in England of which one third are to staff, of those accidents to staff, 14% (over 20,000 per year in number) involve physical violence. 29% of nurses are reported as being above the threshold for psychological distress.

'Whilst it is not possible to eliminate all accidents and their costs any reduction will produce savings that can be used for other services. The scale is significant: the immediate cost of accidents is estimated at £12 million per annum, with long term costs arising from these of £154 million. Furthermore every nurse lost to the service represents a loss of some £33,000 it took to train them.' (6)

All of this is just the 'tip of the iceberg'. It is thought that these recorded incidents do not necessarily reflect the scale of actual incidents; neither does it reflect the immeasurable human costs in terms of suffering, loss of talent and opportunities; neither does it record the cost of internal investigations and any legal costs associated with claims; neither does it reflect the cost carried by society at large.

In spite of the scale of risks facing the health service, prior to 1987 there was hardly any systematic analysis or formal management of risks associated with health care activities. Theoretically, the NHS was subject to the 1974 Health and Safety legislation but because it had Crown immunity from prosecution there was little, other than a moral obligation, to ensure that health service managers conformed. The pressure to take risk management seriously started in the years between 1988 and 1991 when Crown immunity was progressively withdrawn. The reorganisation of

health care into legal and responsible organisational entities called Trusts further focussed the mind of health care managers on risk management. Now the Chief Executive of each Trust is subject to the threat of legal action for any Trust breach of legislation and the NHS is now subject to the full force of the Health and Safety Act (1974).

In addition, the introduction of Crown Indemnity in 1990 allowed vicarious liability claims to be taken out against the NHS for acts carried out by its staff. This allows patients to prosecute both the NHS and individual professionals for alleged clinical negligence. These changes, together with people becoming more aware of their rights and the standards they should expect while receiving treatment, has led to increasing legal action being taken against hospitals.

The importance of risk management for the NHS was emphasised by Sir Duncan Nichol, Chief Executive of the NHS, when he wrote the Forward to the first attempt at a comprehensive guide to risk management in the NHS:

> 'Risk management is an important activity for all parts of the NHS. With all the changes in recent years, including the loss of crown immunity, it is no longer an optional extra.' (7)

1.3 The Research Site

This research was based at Hope Hospital, Salford - a large inner city teaching hospital. The hospital was opened on 19th October, 1882 by the Salford Board of Guardians as a Poor Law Infirmary in order to relieve overcrowding in the local workhouse. In 1925 it became a hospital for general treatment, carrying out about 500 operations and delivering 366 births in that year. During the 1930's the hospital continued to grow with the

addition of outpatient and consultant specialties. On 5th July, 1948 the hospital became part of the National Health Service. It continued to grow and in 1974 it became a teaching hospital of the University of Manchester Medical School. Today it has just over 900 beds and 3000 staff. It deals with approximately 47,000 inpatient episodes per year, 62,000 accident and emergency attendance's and over 200,000 outpatient attendance's.

1.4 Background to the Researcher

I am the researcher and at the time of the research was the Trust's Corporate Development & Risk Manager. In this role I had direct responsibility to the Chief Executive for leading the Trust's performance development, quality and risk management function. I have an honours degree in psychology and a Masters degree for research into the measurement of the effectiveness of nurse continuing education. I joined the NHS in 1970 as a student nurse and became a registered general and psychiatric nurse. I have worked as both a general and a psychiatric nurse and have also worked in both the hospital and community settings. I moved into management in 1989 as part of the Resource Management Initiative moving from training to quality management in 1991. In late 1994, risk management was added to my portfolio of responsibilities.

The formal management of risk is now an important issue for all health service managers but like me they were faced with a lack of credible information on which to design effective risk management systems and make good risk management decisions. I say credible, because I was not short of guidance as to what I should be doing. Experts in risk management were bombarding me with the actions I should be taking.

The Department of Health was starting to set standards with which the Trust had to conform and compliance was going to be enforced and verified through systems of external and internal audit. In addition the Health and Safety Executive had targeted the NHS for special attention now that it's Trust's could be prosecuted.

However, I was not convinced that these standards and legal obligations would help to improve the management of risk. I felt concerned that some of these requirements were just attempts to make people feel that there was effective risk control when, in reality, control was not going to be that easy to achieve.

1.5 Background to the Research Approach

My initial impression of the field I wanted to research was one of ill-defined complexity. I was not really sure I knew what risk meant to me and what it meant to other people. Some used it to mean uncertainty, while others used it to mean danger, yet others used it to mean a balance of opportunities. Even the concept of risk management seemed to be used by different people to mean different things. For some, the term risk management seemed to be applied so loosely that it could be applied to every action that people take every day. For others the term risk management was applied so narrowly that it could only apply to activities associated with complying with Health and Safety or insurance activities.

Added to a personal recognition of my own ignorance was the imperative to act. I did not have the luxury of being able to be a non-participant observer. As the Trust's Risk Manager I was a key participant in the process. I also did not have the time to thoroughly search the published literature and evaluate it in order to develop and test hypotheses - even if the appropriate literature had been there. I had to act with whatever information I had available at the

time. I had to start to make decision and to establish systems immediately. I had to act without all the information being available. I had to take risks.

However, I realised that my actions and my in-actions, my decisions and the decisions of others could be the topic of the research. I could reflect on these experiences and test out the value of the systems I had established. I could use this to identify what was effective and ineffective in the management of the risks that I faced. I could use this real world practical experience of risk management to evaluate the guidance and standards now starting to be given to risk managers by various experts. It may even be possible to develop new guidance for others to test and to use in their particular situation. In this way it might be possible to add to the sum total of human knowledge on the management of risk.

This did cause me some feeling of anxiety, as my research experience and background had been firmly based in the scientific methodologies of psychology and health care. Both of these approaches have a tendency to value more highly quantitative experimentation than they do the more qualitative case study methods.

It would have been possible for me to have chosen an aspect of risk management in which to do an experimental study but I also felt that it would have been an interesting distraction from the real process of risk management which I and others faced within health care. The experimental approach would also not have added anything significant in terms of finding solutions to the problem area I was faced with and I suspect was being faced by many other risk managers. The positivistic approach was also unlikely to have any immediate beneficial effect on the organisation that employed me and had given me permission to spend time on this research.

I also knew that my dual role as risk manager and researcher meant that it would be impossible for me to claim, honestly, that I was able to maintain the objectivity required by positivistic research. How well I managed the Trust's risks would have personal consequences. I was deeply involved. I had to deliver an effective approach. There would be personal consequence for mistakes and failures. The outcomes did matter to me on a personal level. I thus had to abandon, at an early stage, the pretence that I could do an unbiased and objective piece of research. I had to accept that my research would have to be a careful description and analysis of my experience as a risk manager.

My first degree was in psychology and it was during this education that I learnt research methods. The strong leaning of psychology to positivistic methods and the experience of working closely with clinicians for over twenty-five years made me feel uncomfortable with any method which did not use double blind, multi-centre experimental studies. My personal learning would have to provide a corrective to this by strengthening my knowledge and application of qualitative methods.

Discussions with colleagues led me to identify the following criteria by which I would select my research approach. The research approach had to be able to:

- Solve the real organisational problem that I was faced with. It had to therefore involve action. That action would need to be helpful to the organisation by making it more likely that the best risk management decisions were being made and implemented efficiently

- Increase my personal knowledge and skills of risk management. There had to be the opportunity for personal learning as well as organisational learning.

- Be academically acceptable as a legitimate approach to adding new knowledge to the sum total of human knowledge. It had to be knowledge which was generalisable beyond the particular context in which it was generated.

Two approaches to research attracted my initial attention and seemed to provide a structure for the research problem which I was facing. The two approaches were Action Research and Action Learning. No other approach appeared to offer the ability to meet my requirements of progressive knowledge development, action in the field and the ability to allow for reflection on both the complexity and the wholistic nature of the reality I was facing.

This need to manage risk well, together with the lack of research based guidance on what that meant in terms of corporate systems and decision making within the acute hospital setting, encouraged me to join the Revan's Centre for Action Learning and Research. That Centre seemed to provide the right vehicle for achieving new knowledge on how to manage risks in a new field in which action was urgently required and in which little text book knowledge applicable to the situation was available.

In Action Learning I, as the researcher, would be the central participant in the learning and research process. The learning and research would be driven by my desire to understand and manage the situation which I was facing every day. I would be able to use this process to reflect on how I was dealing with the pressures on me to manage the risks facing the Trust. I

would be able to reflect on how my risk management systems affected staff and patients within the changing social and political context in which the Trust operated.

My initial intention was to gather information on current risk management practice, not only by reading the literature, but also by undergoing the Institute of Risk Management's membership course. This would help me to gather an impression as to what the profession of risk management consider to be best practice in fields outside of health care. The value of this programmed learning, in relationship to the research, would be to provide a provisional theoretical framework and accepted best practice developed in the wider field of risk management. This could then be used as the basis for reflection on the learning which would emerge through the application of these theories to the real world situation for which I was responsible. It was clear that over the next few years the literature on health care risk management was likely to grow. Already a number of specialist health care risk management journals had just been founded and could be used to provide further input on what was emerging as best practice in health care.

The programmed learning element and the continuing literature review would thus form the basis of a best practice framework which I would be able to test out in the field of the hospital I was working in. This testing out and the challenges faced in the everyday management of risks would hopefully lead to new insights and new theories which could be tested within my chosen research framework. I expected that my research supervisors and action learning set colleague would play a central part in the development and validation of these new insights and theories by reviewing my work, ideas and progress, as well as providing me with motivational and psychological support.

1.6 Overview of the Research Thesis

The structure of this thesis is designed to aid the communication and sharing of the research process, its findings and the personal reflections and insights gained during the years of this study. However, the structure should not be taken to imply that the research process was a simple linear time ordered sequence of events in which knowledge and insights were built one on top of each other as a logical linear sequence. The reality was that moments of clear understanding were shattered by periods of confusion and lack of progress. At times it felt that rather than making progress I had less understanding and was managing risks worse than before.

Action Learning did not lend itself to a simple series of clearly defined procedures, implemented as a discrete series of events, as could be done if, for example, a classical experimental design had been chosen. New knowledge is generated through systematic action, reflection and testing in the real world. The real world does not have the good manners to do as one expects.

Some elements of the research process continued throughout the whole period of the study, while others came and went as the demands of the real world context interacted with me and my increasing knowledge. Other elements of the research developed in parallel with other aspects of the research process. Yet other elements of the research were implemented as a series of actions which were dependent for their success on previous actions. On reflection, however, all of these can be understood to have developed within four broad phases of research and these phases are reflected in the structure of this thesis:

Chapter 1	The Researcher and Research Context
Chapter 2	Phase 1 Clarification of the Problem Situation and Literature Review (October 1995 - March 1996)
Chapter 3	Phase 2 Pilot Phase - Identifying and Refining of the Research Approach (April, 1996 - August 1996)
Chapter 4	Phase 3 Testing of the Research Approach and Initial Conceptual Model Building (March, 1996 - December, 1996)
Chapter 5	Phase 4 Risk, Heuristics and Gaining Control of Non-clinical Risks (January, 1996 - July, 2000)
Chapter 6	Phase 4 Risks, Heuristics and Gaining Control of Clinical Risks (January, 1996 - July, 2000)
Chapter 7	Reflection on the Research Findings
Chapter 8	Reflections on Learning and the Research Approach

Each phase was not bounded by the dates given. For example, although Phase 1 ended in March 1996 it, in reality, continued but as a less intense activity right to the end of the research study in July, 2000. This is because the context in which the organisation operated was changing due to the external pressures placed upon it. Changes in government policy, changes in the values and standards expected from professionals and the level of tolerance of risk which the public and media would allow, all varied over the period of this study. In addition, the actions taken by my colleagues and I were influenced by a progressively deeper understanding which I and they gained through the action learning and research process. Therefore, the dates should be seen as indicating the boundaries of the primary focus of the research, the period of intense activity, rather than the exclusive focus of the research during a particular period of time.

1.7 Conclusion

Health care organisation face serious risks and have responded by introducing the formal management of risk for the first time. As a risk manager I have the responsibility to build the first risk management system by which Salford Royal Hospitals, a large university teaching hospital will manage the risks it faces. The development of this risk management system will result in learning which should have a wider value than just in the Trust from which it arose. Such learning is also research. New knowledge can be extracted from the experience of changing the real world through action.

This research process is therefore reflected in the structure of this thesis. The background and origin of the research is thus given in this chapter. Chapter 2 reviews the literature and status of knowledge on the subject of risk management in order to help clarify the nature of the research problem being faced and how it might best be approached. Chapter 3 considers the research approach in detail. Chapter 4 describes the initial insights and models developed during the early stages of the research. Chapter 5 describes how these initial insights and concepts were used, developed and tested in the real world as exemplified by my experiences of managing non-clinical risk. Chapter 6 challenges and extends these ideas with the experience of managing clinical risks. In Chapter 7 the conclusions of this research are drawn and reflected upon. Finally, in Chapter 8 I reflect, with colleagues in my learning set, on the research and learning experienced.

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Chapter 2

Phase 1 - Clarification of the problem situation and initial literature review (October, 1995 - March 1996)

2.1 Introduction

When I started this research in October, 1995 I thought that I had a clear idea as to what I wanted to achieve. I had a basic understanding of risk management and I had started managing the Trust's corporate risk in line with the NHS guidelines available at the time. People with expertise in specific areas of risk management, such as Health and Safety, finance and clinical audit, provided valuable advice and support. My action learning set had been established and we were going through the initial stages of group formation.

By December, 1995 many questions had been posed and discussed within the action learning set and with work colleagues, but three questions recurred time and time again. These three questions started to dominate my thinking during this phase of the research. These three questions were:

- What is the meaning of the risk?
- What constitutes a good risk management decision as opposed to a bad risk management decision?
- In what way is 'Risk Management' different from risk management carried out daily by all grades of health service staff?

These questions occurred so many times and from so many different quarters that they seemed to be the fundamental questions that needed to be addressed in my research.

I also felt that these questions were so fundamental that there must already be a body of knowledge that had addressed these questions already and had come to some definitive conclusion. My initial search through the literature on risk management in health care found that there was little that helped to answer these three questions. However, a number of journals related to health care risk had just started to be published. I felt they would start to address these issues over the next few years of my research.

I, therefore, decided to develop a thorough understanding of what was considered to be the core knowledge of the risk management profession outside of health care. I enrolled on the Institute of Risk Management membership course. I expected this would help develop my understanding of risk management in fields unrelated to health care and which could then be tested, for applicability, within the health care sector.

The process would involve learning the accepted theory and practice of risk management applied to the non-health care sector and validated by the risk management profession itself. I would do this learning with the critical eye of researcher and practitioner rather than as a naive student. I intended to supplement my own critical eye with the challenging and questioning framework provided by my action learning set, my research advisor and supervisor, and the daily problems which I faced with colleagues working with me in the Trust.

During the following years the literature on risk management in health care started to enlarge. Journals and opinions started to be published and so did a number of key texts on the subject of risk management.

2.2 What is the meaning of risk?

Risk is derived from 'risicare' meaning to dare. (1) and many definitions can be found in the literature:

Dickson defines 'risk' as:

> '...the unlooked for, unwanted event in the future.' (2)

The problem with this definition is that it fails to include the concept of the likelihood of the unwanted event occurring. Without including the concept of likelihood in a definition of risk, the term can becomes over-extended to include even imaginary unlooked for and unwanted events such as an invasion from Mars.

British Standard 4778 1991 makes quantification of the likelihood a key part of the definition of risk:

> 'This is the quantified chance, that is probability or frequency, of a specific hazard occurring.' (3)

Within this definition it defines hazard as:

> 'This is the potential for injury, damage or economic loss. The seriousness of an hazard is determined by the seriousness of the consequences should the hazard become an event.' (4)

Knight makes the distinction between risk and uncertainty, with risk being restricted to potential future events that can be given a statistical probability of occurring, while uncertainty is applied to those potential events that cannot be given such a probability of occurring. (5)

Such a restricted definition of risk, with its limitation of the term to potential events that have quantifiable probabilities of occurring, does not go unchallenged by many writers on the subject of risk management. The ability to determine the probability of a future event is based on the assumption that the probability of past events will be repeated in the future - this is an assumption that does not always hold true.

The value of such probability estimates for insurance company risk managers was clear to me. They could use the probability estimates to help them make their decisions as to which risks to take and which it was not wise to take. However, the risks, which I had to help make decisions about, either did not have sufficient history to be able to make an estimate of their probabilities, or other factors, such as moral obligations, took on a more important dimension than did the cold statistics.

Gordon (6) outlines a further set of definitions of risk but they all similarly rely on being able to specify probabilities. However, he does give recognition to subjective risk which he defined as:

> 'the uncertainty of an event as seen or perceived by an individual'(7)

Such a definition introduces the important idea that risks can be assessed using subjective estimates of their likelihood. These are not necessarily congruent with the actual probabilities but, for me faced with a lack of objective probabilities, the concept that one could use subjective risk assessments was of great interest. This was because most decisions which I was faced with, as a risk manager, were based on subjective risk estimations.

At the start of this research I had come across few risks which could be given probability estimates and of those which could, the probability estimate played little part in the decision as to whether to act or not. Subjective judgements, personal levels of risk tolerance and the context in which the decision had to be made, seemed to be more important in determining what was considered to be acceptable as oppose to unacceptable risk.

However, there did seem to be a difference between subjective estimates made by expert panels and those made by individuals with no expertise in the field. An helpful distinction between these two types of subjective risk estimations is given by Viek and Keren who divide subjective risk into what they call 'assessed risk' and 'perceived risk'.

An assessed risk is one determined on:

> '...an expert basis arguing by analogy from relevant data, including like events or similar agents, or something on the basis of probabilistic conclusions derived from expert judgement and knowledge, generally supported by, or aimed at improving, a model of the hazardous process involved.' (8)

While perceived risks are those assessments of risk made by non-experts.

Another important way of defining risks is in terms of its outcomes rather than its likelihood of occurring. Gordon distinguishes between 'Pure Risks' as opposed to 'Speculative Risks'. Pure Risks are those in which the outcome will only be a loss of some type, while Speculative Risks offer the possibility of some gain. (9)

This separation of risk into those which can only result in losses and those which might result in gain originally developed from two different roots and along two independent pathways. This has resulted in the view, by some in the field of risk management, that pure and speculative risks belong to different domains of the risk management endeavour. For some, speculative risks are the domain of the commercial world of profit and loss, while pure risks are seen as the domain of insurance and its related fields. However, there are many who consider that this is an historical but artificial distinction as the approaches and techniques used by both types of risk manager have many similarities. I also felt that many risk decisions made by clinical staff were more like speculative risks than pure risks. For example, the risks associated with hip joint replacement surgery is taken, by patients and clinicians, in the hope of gain in terms of less pain and increased mobility for the patient.

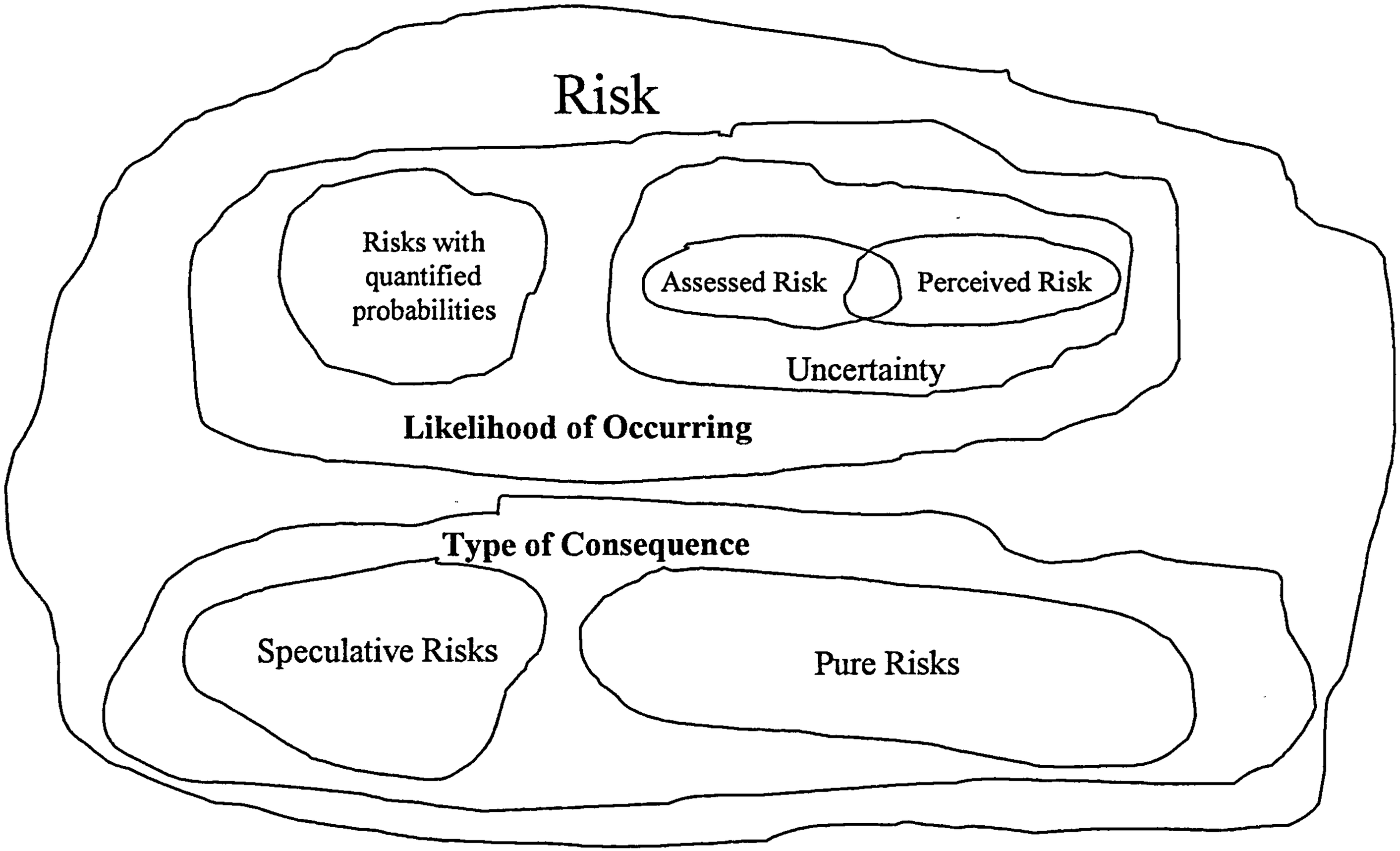
Risks thus appeared to be made up of two key distinct dimensions; likelihood and consequences. Fig 2.1 provides my initial conceptual model of what risk is. Risk's two main dimensions, likelihood of occurrence and

type of consequence have a number of subsets. Within the dimension of likelihood there are two further dimensions. The first is uncertainty in which a probability of occurrence cannot be calculated and the second is a likelihood of which a statistical probability can be calculated. However, even when probabilities cannot be calculated, it is possible to make a subjective assessment of the likelihood. Such subjected judgements can be further classified into two subgroups: subjective judgements made by a knowledgeable expert group, 'assessed risk' and those judgements of risk made by people without any special knowledge, 'perceived risk'.

Along the likely consequences dimension there are two major subgroups: those risks which provide only the possibility of loss, 'pure risk' and other risks which hold out the possibility of some gain, 'speculative risks'.

This model of risk seemed to work very well until I was faced by a difficult risk decision. The background to this decision was a warning letter circulated about the effect of regular sterilisation of face masks used to give medical gases to patients. These needed to be re-sterilised after use but the manufacturers warned that this process of re-sterilisation should only be repeated a set number of times depending on the mask material being used. Failure to withdraw the mask after this period could result in a poor seal being made around the patient's mouth and a resultant inefficient supply of the medical gas to the patient.

Initial Conceptual Model of the Nature of Risk (Fig 2.1)



This letter caused alarm amongst the clinicians. They agreed to do a risk analysis on the problem. This was a pure risk because the consequences could only offer a loss should the risk become manifested as an event - lack of medical gas supply to the patient. There was no information on the probability of this event occurring because the Trust had had no experience of this type of failure resulting in any harm to any patient. However, this was clearly an assessed risk made by an expert group, the manufactures, and we accepted that expert analysis. According to the above model we therefore had a risk which needed a risk control measure. There was an assessed likelihood and there were pure risk consequences.

We attempted to find a risk control solution to this risk. One idea was that there should be some way of marking the masks each time they were sterilised. Once the mask had sufficient marks on it would be withdrawn. This solution was felt to be difficult to achieve both in terms of ability to mark and ability to count the marks to see if the threshold had been reached. Another solution considered was to keep a register of all masks and record their history. This was felt to be a bureaucratic nightmare because of the number of masks in circulation. It would also require a full time person to do just that job. The solution seemed to evade us until we asked why we had not experienced any problems associated with this assessed risk. According to the model above we should have had some experience because we used so many masks and yet, until now, there had been no problems we were aware of.

We decided to examine the way that doctors used the masks. It was clear that each time they used a mask they checked the seal both visually for

obvious wear and tear and by how well it fitted the patient. They had experienced ineffective seals in the past but this was not necessarily because of age or due to perishing of the material through sterilisation. Other reasons, such as accidental damage, could occur even to a new mask and this could also cause the seals to be ineffective.

The conceptual model of risk we had, therefore, seemed inadequate because it only considered two dimensions of a risk, its likelihood and its seriousness. However, this experience revealed to us a third dimension of risk which reminded me of my early training in psychiatry. In psychiatry there was a concept of the 'prodromal features' of some mental illnesses. These features included certain personality and behavioural characteristics which, though not symptoms of a mental illness, provided early warning that such an illness might develop. In the example we have just discussed, some risks also seem to have the characteristics of giving an early warning that the risk will become manifest as an event. I, therefore, decided to call this dimension of a risk 'prodromal visibility', which is the degree to which a risk provides early warnings that its consequences are about to become manifest.

Re-looking at the example of the face mask, the risk is real and has a likelihood of occurrence and clear consequences - brain damage to the patient. However, it also has high 'prodromal visibility' in that before the risk of failure can have an effect there is clear and early warning - the fit of the mask is not right, so the doctor can change it. Therefore the risk is entirely preventable just before it becomes manifested as an harmful event.

I had, therefore, to further develop my definition of risk to include this important characteristic and, at this point in the research, defined risk as:

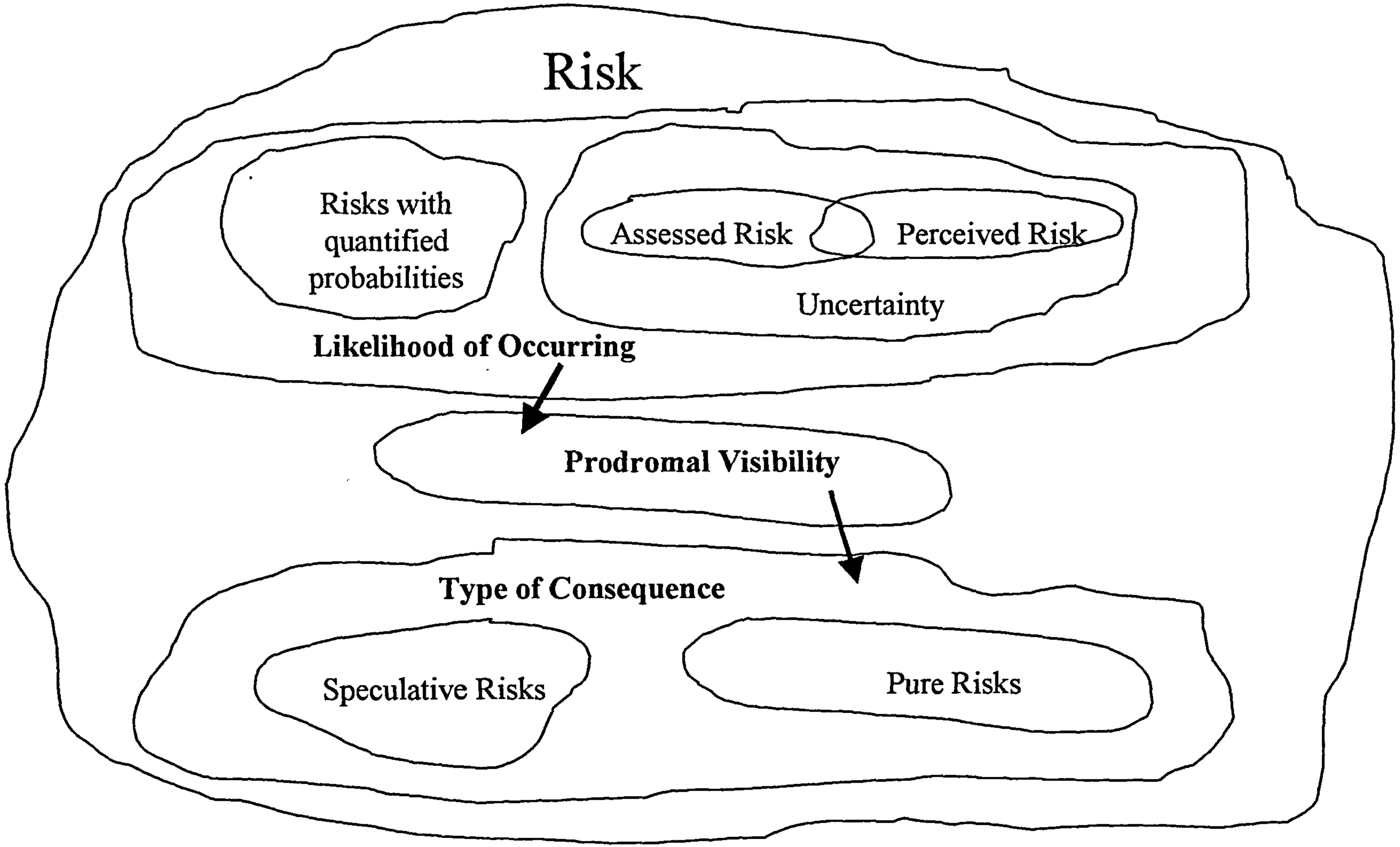
The product of the likelihood of an event, together with its prodromal visibility and potential consequences.

Fig 2.2 shows my conceptualisation of risk in terms of this definition.

A risk, therefore, can only be properly understood in terms of the product of the interaction of these three dimensions. For example, a risk which has no likelihood of occurring is no risk no matter how serious the consequences or how low the prodromal visibility. There is also no risk if there are no consequences of a very likely event no matter how low the prodromal visibility. Finally, there is no risk even if the likelihood is high and the consequences are serious if, because of prodomal visibility, action will always be taken before the damage can occur.

The use of the word 'product' allows for the mathematical interpretation of these dimensions to be multiplied if the dimensions can be described using mathematical measures. The word 'product' also allows, when no useful mathematical measure is available, the term 'product' to be used to mean 'the result of the interaction'.

Initial Conceptual Model of the Nature of Risk (Version 2) (Fig 2.2)



2.3 What constitutes a good risk management decision as opposed to a bad risk management decision?

2.3.1 The origins of risk management.

Having developed a preliminary conceptual model of risk I needed to be able to understand what the literature had to say about risk management decision making. The book that most influenced my thinking in this area was Bernstein's book 'Against the Gods. The Remarkable Story of Risk':

> 'The revolutionary idea that defines the boundary between modern times and the past is the mastery of risk: the notion that the future is more than a whim of the gods and that men and women are not passive before nature. Until human beings discovered a way across that boundary, the future was a mirror of the past or the murky domain of oracles and soothsayers who held a monopoly over knowledge of anticipated events. (10)

Bernstein's book was published at the end of this phase of the research in 1996. Although it was discovered at the end of this phase of the research it was the book which provided me, for the first time, with a comprehensive analysis, from an historical perspective, of how risk management developed and how historical factors had shaped the form it is in today.

The book traced the origins of risk management, as opposed to risk taking, to the Renaissance and the development of the theory of probability. It was in this period that humanity felt that it had developed methods to unlock the secrets of nature and therefore control the world. No longer was risk taking to be about hoping for the best or appealing to 'the Gods' for protection. Risk taking could be done in a scientific way based on mathematical models which, at that time, people felt would make the future more predictable and therefore more possible to manage.

Attempts to create mathematical models of human decision started to develop alongside the new statistical methods being developed at this time. In 1783 Daniel Bernoulli described the rational decision making process on which the principles of investment management is based today. Bayes developed a method which allowed for intuitive assessments of the likelihood of an event occurring to be systematically modified in the light of future information.

> 'All the tools we use today in risk management and in the analysis of decisions and choice, from the strict rationality of game theory to the challenges of chaos theory, stem from developments that took place between 1654 and 1760, with only two exceptions:
>
> In 1875, Francis Galton...discovered regression to the mean...
> In 1952 Markowitz...demonstrated mathematically why putting all your eggs in one basket is an unacceptably risky strategy...' (11)

However, in spite of this growing confidence in the developing techniques of the natural sciences and that of probability theory, to make all things understandable and controllable, there were those who warned that it might not be possible to use the scientific method to control all things. Leibniz as early as 1703 warned that though the past did repeat itself, it did not always repeat itself. (12)

This idea, that not all things can be subjected to rational mathematical models, is one which is mirrored in the conflict between those who consider that quantitative methods are superior to qualitative methods, and that quantitative statements are somehow more accurate reflections of reality than are qualitative statements. This fundamental debate still continues today and was a continuing concern to me because of my research training in psychology. Even after recognising that risks could not be usefully

conceived simply in terms of mathematics there was still a lingering feeling that qualitative statements were still second best to mathematical statements.

Debates with colleagues and the arguments articulated in Berstein's book progressively removed my narrow thinking in this area. According to Berstein this conflict, between the view that risks are best managed using quantitative as opposed to qualitative methods, has been reflected throughout the history of risk management:

> '...a persistent tension between those who assert that the best decisions are based on quantification of numbers, determined by the pattern of the past, and those who base their decisions on more subjective degrees of belief about the uncertain future...The issue boils down to one's view about the extent to which the past determines the future. We cannot quantify the future, because it is unknown...Which matters more when facing a risk, the facts as we see them or our subjective belief in what lies hidden in the void of time?' (13)

Bernstein's book provided me with the first clear articulation of the basic research question faced by those attempting to understand the nature of risk management. It put into historical context the issues which I was facing in the real world and in the literature which I had read to date.

It showed how the fundamental argument about the nature of knowledge could be divided into those who believed in the precision of mathematical explanations and those who did not. I too wanted a simple mathematical model which would help me make the right decisions but by this stage I was feeling less certain that such a model could exist.

I understood how and why so many in the field of risk management searched for such mathematical models and the ease with which researchers

could fall under the spell of the promise of an objective accuracy. Bernstein's book shattered my hope for a complete mathematical model of risk management. It pointed out how such models are also based on some fundamentally subjective beliefs and can lead one to a claim a spurious precision in a field were beliefs, emotions, cultures and personal values play such a large part.

I was excited by Bernstein's argument. These arguments broadened the relevance of my research from the specifics of risk management in a particular hospital, to one in which the findings could provide insights into the way real decisions in general are made and how they could be improved. I, as the researcher, would have to face the fundamental question about the relevance of positivism to any understanding of risk management. I would now have to examine the extent to which the extensive research on programmed decision making had relevance to the real world of human decision making in which I operated.

2.3.2 The nature of risk management.

'One-off accidents have also been researched extensively both in medicine and elsewhere. However, no overall theoretical and practical guide to risk management in healthcare have been available in the UK.' (14)

There are however well developed theoretical and practical guides to risk management outside of health care. The starting point of risk management decision making is the identification of those unwanted future events which could impede the organisation from achieving the purpose for which it exists. To achieve this efficiently, tools and techniques have been developed to assess risks and to quantify these in terms of the potential financial consequences to the organisation. Dickson (15) describes the key components of the risk management process which is shown diagrammatically in Fig 2.3. The risk management process consists of the following key steps:

- Risk Identification
- Risk Analysis and Prioritisation
- Risk Control

KEY STEPS IN THE RISK MANAGEMENT PROCESS

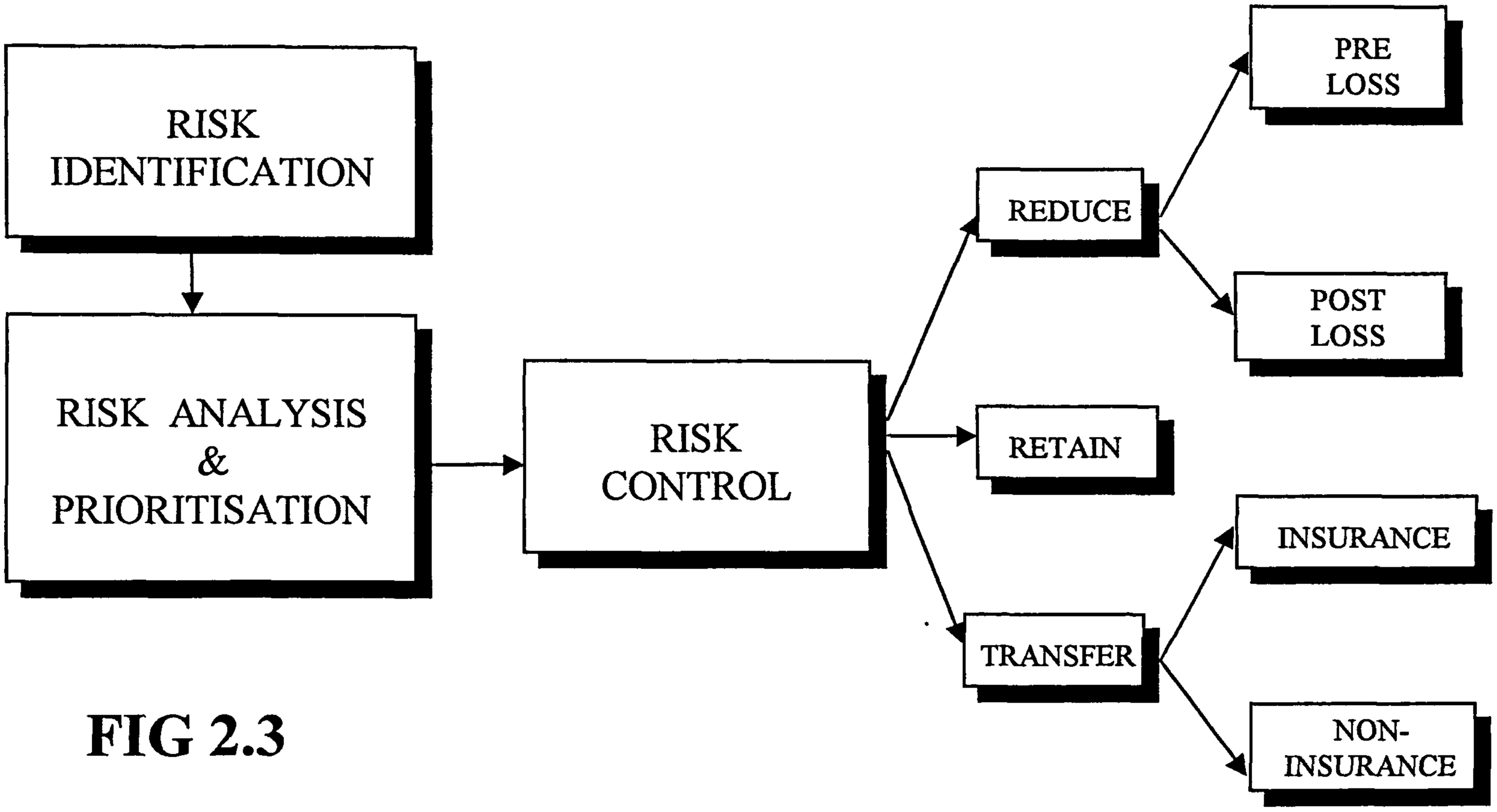


FIG 2.3

2.3.3 Risk identification

Risks cannot be managed if they are not identified but the identification of risks raises two questions. How can risks be best identified and who should be responsible for carrying out that identification? Dickson is clear that an organisation cannot rely on operational managers to carryout this risk identification:

> 'Managers with the company are busy managing finance, production, marketing, sales and so on. We cannot rely on somebody identifying risk unless it is spelled out that it is part of their function. In many firms this will mean the risk manager but in others, which may not be large enough to have a risk manager, it may mean that someone's job description includes the identification of risk.' (16)

According to Dickson, a risk manager is needed because a general manager does not have the time to carryout the process of risk identification. However, on examining the skills needed to effectively manage risks, lack of general manager time may not be the most important reason for having a risk manager. Risk managers, like other management specialist such as finance and personnel, have developed specialist skills and techniques which general managers may not have.

In another book Dickson describes in detail some risk identification techniques:

- Physical Inspection (17)
- Check Lists (18)
- Flow Charts (19)
- Fault Trees (20)
- Organisation Charts (21)
- Hazard Indices (22)
- Hazard and Operability Studies (23)

Besides allocated time and specialist risk identification skills, the risk manager of a large organisation is likely to be more informed of incidents than would general managers who would only be made aware of incidents within their own area of responsibility. The risk manager is in this key knowledge position because s/he is at the centre of the incident information flow.

Within incident reporting Capstick distinguishes between untoward incident reporting and serious incidents:

> 'Untoward incident reporting is a term that is used to describe both unexpectedly poor outcomes and errors in the clinical process which do not lead to actual harm...Serious or catastrophic incidents ...are likely to lead to large claims...' (24)

Serious incidents are relatively rare but untoward incidents are much more frequent and are considered to be an indication of 'near misses' which, if the circumstances had been right, could have become a serious incident. The assumption is that if the number of near misses were known and controlled, then the number of serious incidents would also be reduced. Gosling says that the basic idea behind such a system:

> '...is to encourage members of staff to report any situation, however minor, that may put a patient or employee at risk - incidents that in the past had led to a complaint or to litigation; or occurrences that staff members considered might in the future fall into this category.' (25)

Prior to the introduction of the National Confidential Enquiry into Perioperative Deaths (NCEPOD), which began collecting data in January, 1989, there were no truly clinical incident reporting systems within the NHS. There were, however, incident reporting systems related to general health and safety as required under the Health and Safety Act (1974).(26)

Incident reporting to NCEPOD is voluntary and consists of confidential reports on deaths of patients who have had surgery within thirty days. Some of these incidents are studied in detail and NCEPOD provides an annual report together with recommendations to improve clinical practice.

However, with the exception of the NCEPOD reports, untoward clinical incidents not leading to death tended to remain hidden within hospitals. Clinicians tended not to use the incident reporting form provided for health and safety incidents.

Attempts to get clinicians to report untoward incidents have been made with varying degrees of success. Gosling describes introducing an incident reporting form designed with the help of the Medical Defence Union (MDU) and which has a list of criteria developed in consultation with relevant departments. Gosling reports that this increased the number of reported incidents to 13,700 compared to 2,500 per annum prior to the introduction of the new system (27). Gosling, however, recognises that clinical staff do not all enthusiastically support the approach:

> 'Overall, it was generally well received. A large number of staff actively use the system, although I suspect that others merely tolerate it.' (28)

The secret offered to overcome resistance to the reporting of clinical incidents was claimed to be the provision of presentations on how the new system worked together with examples of incidents, without attributing blame, which raised the awareness of staff as to the extent to which errors do occur. (29)

Capstick describes another way of identifying serious incidents, this is through claims analysis which involves identifying common characteristics of cohorts of cases in order to identify recurring factors. There are a number of difficulties identified by Capstick for individual Trusts to be able to do this. Firstly, the number of incidents which will fall into recurring categories, within one Trust, is likely to be few and

secondly, claims can take years, before they becomes manifested to a Trust. Thus such a system is only really possible for claims management solicitors who have access to data on large numbers of claims. (30)

A review of incident reporting systems in the NHS carried out in 1998 found that:

> '... the majority of Trusts (96.4%)responding to the questionnaire have some form of incident reporting system in operation. However...Almost 20% ...have yet to roll out their incident reporting system across their respective organisation... Most Trusts (59%) favoured one incident form for all incidents...Of those Trusts who used more than one form, 56% limited this to two forms only, with the majority differentiating between clinical and non-clinical events...In addition to incident report forms, many Trusts provided other avenues for staff to raise concerns, with over 80% allowing other communication via telephone or in person...(28%) also allowed staff to report incidents via email.' (31)

Clearly, even the latest research on incident reporting, especially in relation to clinical events within the NHS, shows how problematic it is to even know what type of incidents occur.

2.3.4 Risk analysis and prioritisation

After risks have been identified they need to be analysed and ranked in order of relative risk. The better the whole risk portfolio of the organisation is known, the more useful will be this risk prioritisation ranking. Risks are only potential events and there are likely to be many more risks identified than can be managed within the resources available. Ranking of a whole portfolio of risks helps to ensure that the more serious risks are controlled before the less serious risks. Ranking also helps in the decision to retain less serious risks rather than use precious resources to control them at the expense of the productive and service capacity of the organisation. Potential events may not ever turn into losses even without controls being put in place, so a decision to spend on risk control must be considered worthwhile in comparison to other options for expenditure such as delivering the service to patients.

Fig 2.4 shows my initial impression as to how the risk management decision making process starts. Firstly, there are a whole series of production and service activities, some of which are risky. When things go wrong and incidents occur people decide whether or not to report the incident. In addition, active risk identification activities may be carried out. The result is a known risk portfolio for the organisation. This risk portfolio is subjected to analysis in order to prioritise the risks in order to help in the decision as to whether or not to introduce risk control measures.

Within each of these areas of the model, different fields of interest interact in a way which Dickson describes as a set of freely moving spheres of interest each of which is trying to manage risks from its own perspective. Occasionally these spheres will collide with each other and when the spheres collide there is a conflict of interest as each sphere tries to maximise the benefits to its own area of interest. (32) The danger of such a system is that the most powerful spheres will maximise their own position at the expense of the weaker spheres. However, with restricted resources, the draw on resources of powerful spheres from weaker spheres could result in serious errors in risk management decisions as far as the Trust as a whole is concerned. Clinicians were particularly adept at gaining resources by raising the spectre of risks to patients, this was so well known within the health service that it had its own name, 'shroud waving'. A lack of comparative analysis of the relative risk of clinical as opposed to health and safety risks during the period of Crown immunity left significant risks being carried by the Trust.

Initial conceptualisation of the risk management decision

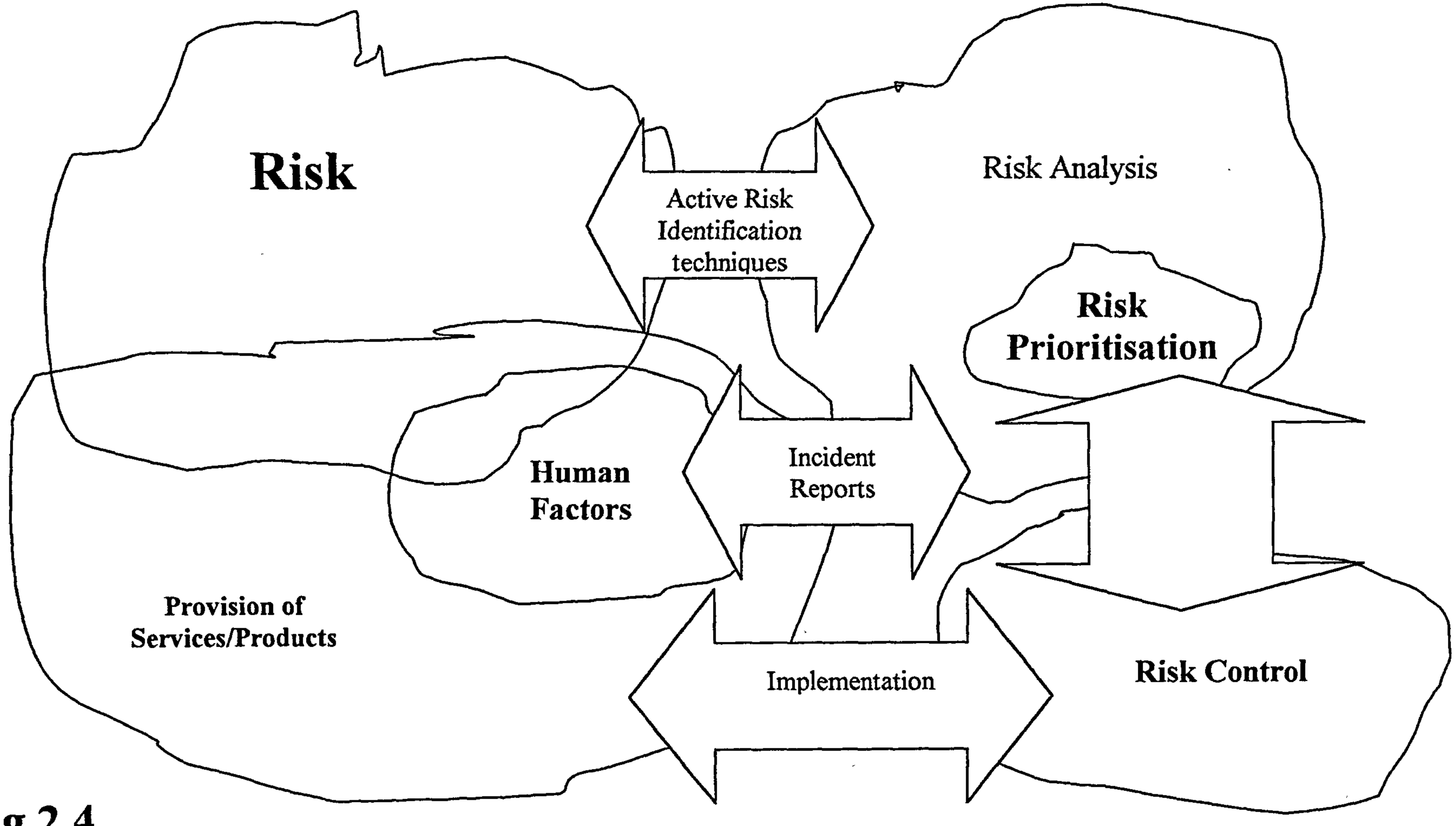


Fig 2.4

When I became risk manager a list of serious risks was presented to me. These risks had been retained by the Trust because it was claimed that no funding had been made available to remove them. These risks included:

- Water temperature at outlets in excess of 43 °C risking scalding to patients and staff.

- Gluteraldehyde (Cidex) disinfectant hazard to staff.

- Some fume cupboards failing to meet legal requirements.

- Unable to autoclave high risk samples taken in Immunology risking infection to staff.

I decided to act and made the removal of the water temperature risk a priority. It was a risk I had seen result in the death of a patient at another hospital in which I had worked and I was not going to repeat that experience now that I was the risk manager. Using my influence with various managers and the Chief Executive, over the following few months the water temperature risk was removed by the addition of thermostatic control valves at the water outlets throughout the Trust.

I felt it was the right decision but was it? I wanted to understand what constituted the right decision in risk management terms and how should such decisions be made.

According to Simon (33) decisions can be classified as falling along a continuum between 'programmed' those which are 'repetitive, routine or a definite procedure has been established for making the decision' and 'non-programmed' those which are 'novel, unstructured and consequential.' Typical programmed decision making can be described using Normative Models such as the one shown in Fig 2.5 (34).

Programmed (Normative Decision Making Model)

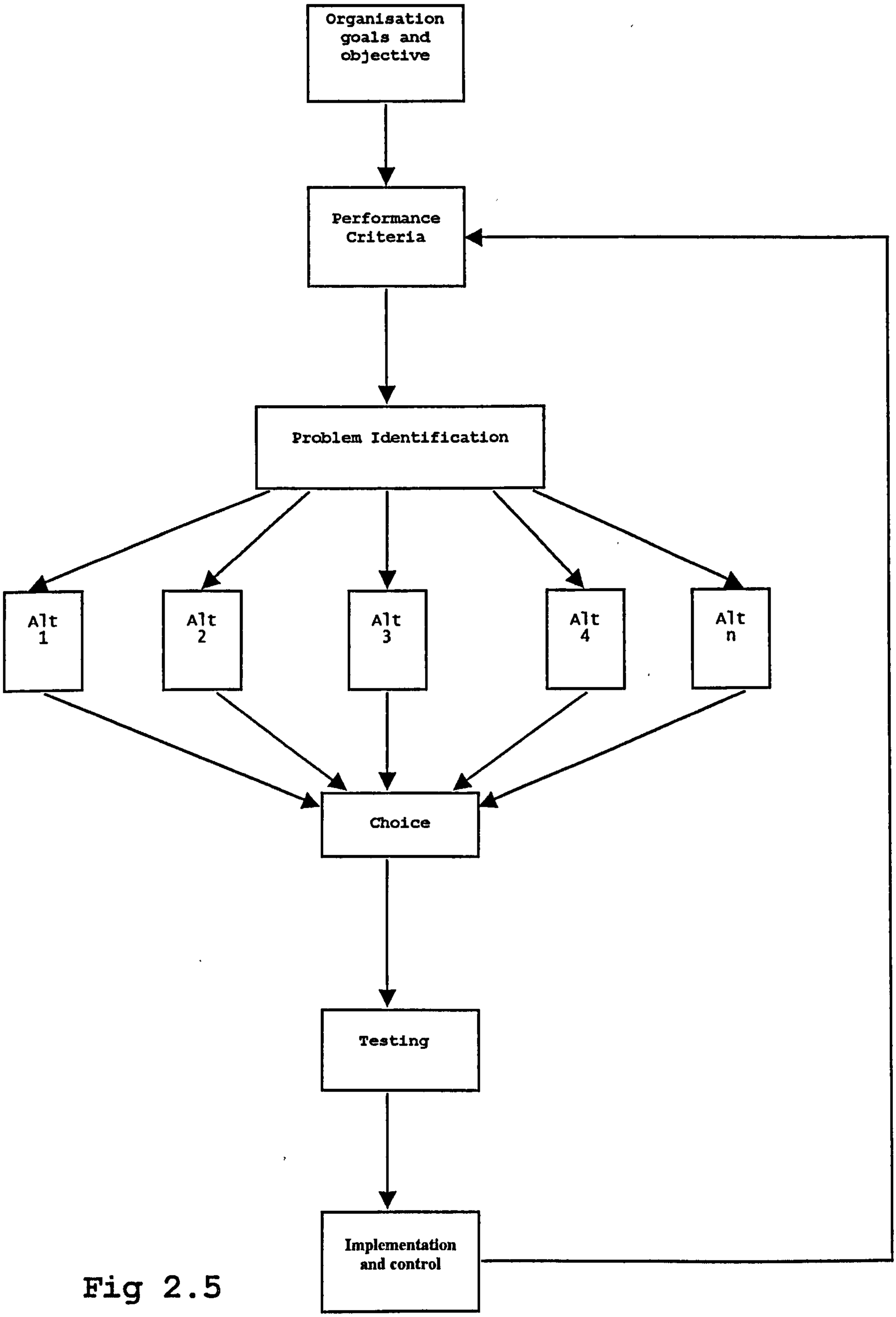


Fig 2.5

Programmed models require that the objectives of the decision are clearly stated and measurable criteria for success defined. The gap between what is required and what is present, helps to define the problem for which a set of alternative solutions can be identified. A choice is made on the available information and the decision is implemented. Feedback as to how effective was the decision made, is used to determine whether to repeats the process. This cycle of iterations continues until the required performance is achieved.

There are a number of serious criticism of such a model when applied to risk management decisions. The first is that the model is describing what should happen rather than what does happen. Secondly, defining the objectives of a risk management solution and the criteria for success is difficult to do in such a way that it helps the problem definition. The information on which to judge what is the right solution and when the solution has been effective is also limited in terms of risk control. Further, the perception of stakeholders in the decision process and range of consequences is significantly variable. Real organisational decision making is therefore much more difficult to carryout than programmed models suggest.

However, even non-programmed decision making has a pattern to it. According to Mintzberg, Duru, Rasinhani and Theoret (35) unstructured decision making has three identifiable phases: identification, development and selection. Within each phase a subset of routines take place. These routines can also take place in parallel and over long periods of time. Progressively the nature of the problem and appropriateness of potential solutions are clarified. This very well described the research process which I was experiencing.

The first phase starts with information revealing the need to make a decision. This routine is called the 'decision recognition' and although the need to make a decision is recognised the decision maker has only partial and poorly structured information on which to base that decision.

During the development phase a further two routines take place, the 'search routine' and the 'design routine'. In spite of partial data the decision maker uses the search routine to identify potential solutions which are ready made but these are reduced to a manageable number by a 'screening routine' which identifies those which are worth a more detailed evaluation. The 'design routine' is used to create new solutions specifically designed for the current problem as understood, these are selected according to a wide range of factors including whether the solution is practical and politically acceptable. A further routine called the 'authorisation routine' takes place once the solutions identified have reached a certain stage of development. During this stage, those with the power to implement the solutions must understand and agree to the solutions which are to be implemented. Each routine interacts with each other helping to deepen the understanding of the issue of concern and leading progressively to the preferred solution. Fig 2.6 shows the Mintzberg et al model of non-programmed decision making.

MINTZBERG et al (1976) GENERAL MODEL OF UNSTRUCTURED DECISION MAKING

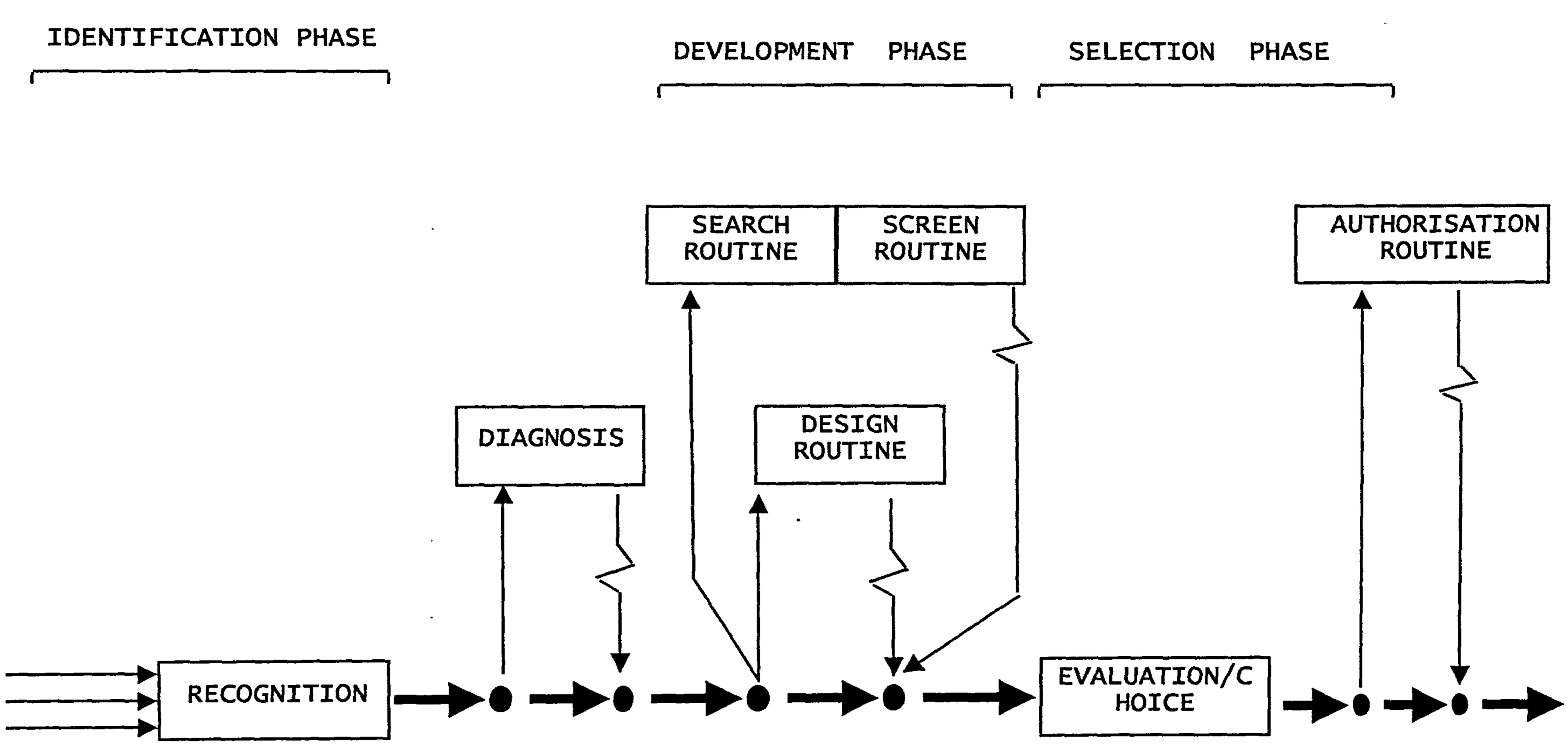


Fig 2.6

Other models of decision making concentrate on the use of time to develop an understanding of the issues and to gain commitment to the decision. Lindblom's (36) incrementalist model identifies two approaches the 'root approach' and the 'branch approach'. The root approach requires the decision maker to have detailed information on the nature of the issues, the goals to be achieved and the potential solutions together with the advantages and disadvantages of each. Using this information the best solution is selected on the basis of which is best able to achieve the goals required. With the branch approach the decision maker has not the same detailed information available as in the root approach and so uses the more limited information to generate a small range of alternative solutions which are similar to present practices within the organisation. These are tested and in the light of experience further developed so that by successive approximations they eventually produce the effective solution. A danger with this approach is that the rate of change may not be sufficient to keep up with the changing nature of the issue being addressed.

Quinn (37) identified a development of the branch approach which is given the name 'logical incrementalism'. In this approach an executive has a broad vision of what is to be achieved by the decisions but the information is not available on which to identify which is the best decision and so over a period of time (typically between 3 and 10 years) the executive carries out a series of actions which builds understanding, resources and commitment to the developing decision.

Jenning and Wattam (38) summarize the incrementalist approach as:

- 'Rapidly acquire information about the problem from a few reliable sources, such as immediate colleagues.

- Act immediately only on those parts of the problem that require urgent attention; recognise that time is available to explore the remainder of the problem.
- Discuss solutions with those who feel they have a stake in the situation.
- As far as possible if immediate choices have to be made select alternatives that leave room for later manoeuvre when more information becomes available.'

Fig 2.7 shows my second iteration as to what good risk management decision making involves. The key stages now were the recognition that a risk management decision was needed and this had to be based on information on risk identified by active risk identification processes and incident reports. Once the information made it clear that a decision was needed a series of routines would come into play in order to generate potential solutions and deeper understanding of the problem until it was possible to make an evaluation of the alternatives. These risks would then have to be prioritised against each other so as to ensure that higher risks were dealt with before lower risks. Once this priority was agreed, there needed to be some form of authorisation to act and if this was forthcoming then the risk control measure could be put into place. Its effectiveness could be assessed on its impact on the identified risks and/or incidents reported.

I have not made any attempt to show what order these events take place in, as in reality they do not follow a logical sequence. Information on risks, flow in an unpredictable order and with differing degrees of detail. Searching, screening, designing and evaluating occur in no particular order but interact with each other and shape and inform each other.

Conceptualisation of the risk management decision process (Version 1)

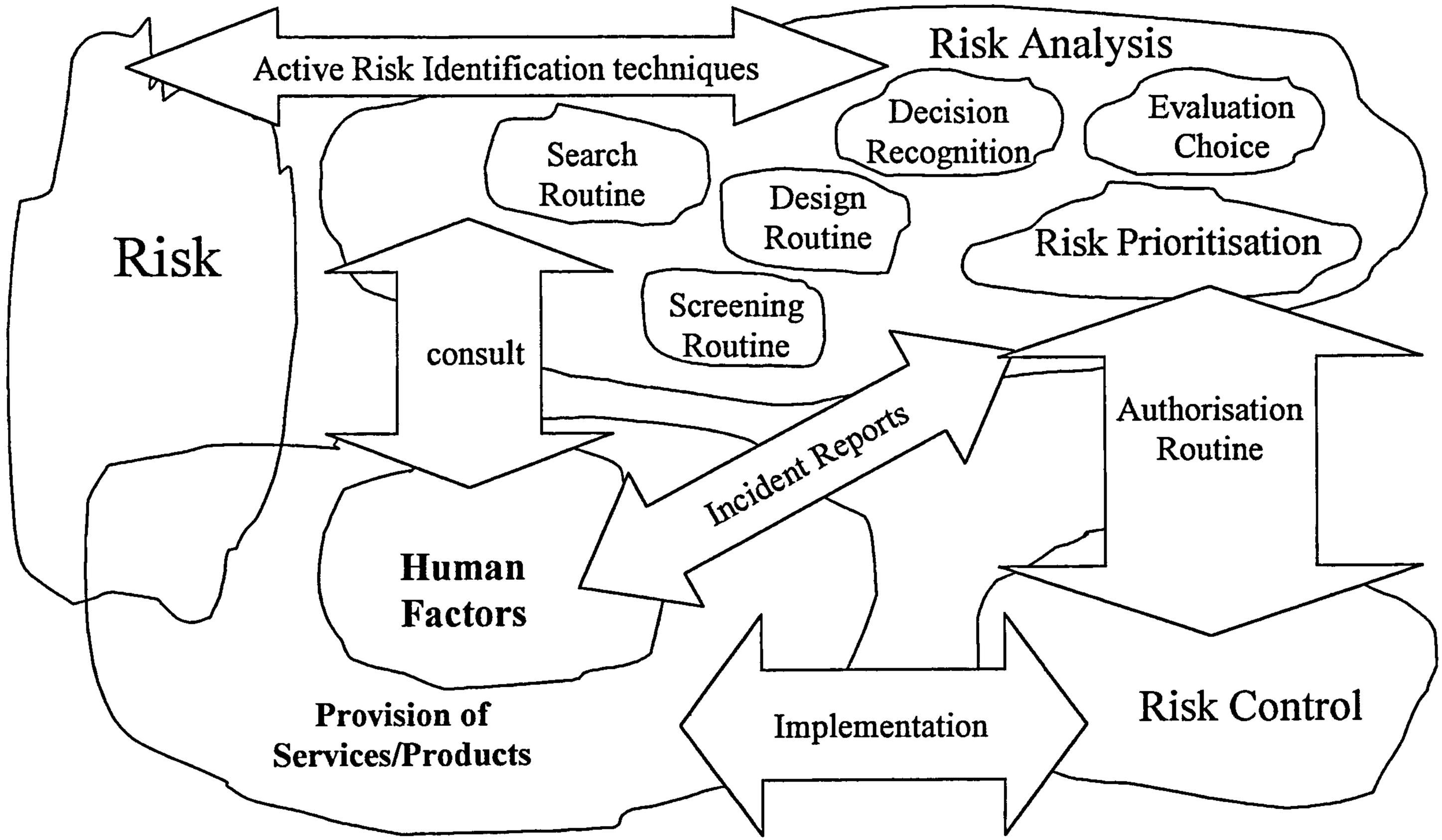


Fig 2.7

The type of decision making that is carried out is also affected by the time scale and managerial level of the decision making. Jennings and Wattam summarise this relationship in the following table (39):

Decision Table				
Table 2.1	Timescale	Nature of Risk	Structure	Control
STRATEGIC TACTICAL OPERATIONAL	Long Term Medium Term Short Term	High Moderate Low	Ill Defined Variable Well Defined	Heuristic Qualitative Quantitative

From the review of the literature on decision making, it is clear that time is needed to achieve the right decision at the strategic level while at the operational level programmed decision making is possible. However, Jennings and Wattam warn that with the changes to management structures leading to flatter hierarchies and major decisions being devolved closer to the operational level, the time span for considered strategic decision making is becoming much shorter:

> 'This reduction in time span of making any decision at whatever level will decrease the consideration given to that decision by the decision maker(s). This in turn increases the risk of making an inappropriate decision. The decision maker(s) will try to offset this by obtaining as much information as possible regarding the problem area. The purpose is to reduce the risk by knowing more. Unfortunately this often presents the decision maker(s) with an information overload, ie, too much information, and hence an increase in complexity and perceived uncertainty.' (40)

According to Jennings and Wattam, the effect of increasing risks due to short timescales for decisions to be made can lead to strategic level management reasserting control of operational decisions in the mistaken belief that they are strategic or tactical decisions. The result is even slower responses by the organisation to the changing environment in which it operates. A further effect, with potentially more risk for the organisation, is to 'fire fight', that is only make decisions when things go wrong (41).

A review of the current literature (42) on organisational risks and how managers view the risks and the factors influencing risk in organizational purchasing found that the process is based on assessing the stakes and the odds of success and failure. But this is affected by psychological factors affecting the assessment of those stakes and odds. For example, immediate threats seem more tangible than strategic risks. In addition the way that data is presented can significantly affect the decisions made, this is because very little analysis is done by the decision maker on the quality of the data presented.

Since risks cannot be fully eliminated and complex analysis is both not practical and in many cases is impossible, because of a lack of good comprehensive data, the solution may be to identify simple rules of thumb which can be used in particular risk management situations.

'Since we cannot devise rules and techniques for eliminating risks from our lives, perhaps all that we should be aiming for is a few simple rules for coping in an environment on which future events may cause unwanted consequences.' (43)

The Institute's risk management course tended to miss this essential point and focussed on mathematical techniques and a set of frameworks by which decisions should be made. It glossed over the fundamental issue of the problem with all these techniques which is that they are all based on an assumption of the mathematical predictability of risk and risk management is an essentially objective science. This initially filled me with a false sense of security that mathematical models and established procedures would provide me, the novice, with sure ways to make the right decision. That personal feeling seemed to be reflected in the guidance and standards set by NHS guidelines on risk management which the Trust was now being bombarded with.

The reality of the decisions I and my team had to make did not lend themselves to the techniques and statistical methods and programmed decisions making which were put forward as the theoretical ideal. I found, that for me and my colleagues, subjective judgements kept dominating the decision making process whether it was at a strategic, tactical or operational level. My own feelings dominated by past experience and my cultural and moral values seemed to play a more important part than the statistical evidence, the risk of scalding patients was a good example of this.

However, occasionally there was statistical and research evidence on the best course of action. But even here judgements could not simply be made on the right course of action because such decisions needed to take into account the other risks being faced, many of which did not have statistical information or clear cut solutions. Risks cannot be managed in isolation from other risks because there is always a lack of resources to manage all

the risks identified and therefore a decision to spend a resource on one risk inevitably means not spending it on another risk.

> One important question that must be addressed concerns whether attempts at objective risk assessment can ever be totally free from elements of judgement, and hence from some degree of selectivity or subjective choice? (44)

The most important factor in the decision making process seemed to be the way the risk was perceived and this did not seem to fall into the statistical model and techniques which I had been taught.

> 'What is clear is that risk perception cannot be reduced to a single subjective correlate of a particular mathematical model of risk, such as the product of probabilities and consequences, because this imposes unduly restrictive assumptions about what is an essentially human and social phenomenon.'(45)

Pidgeon et al has identified a clear set of trends in the literature on risk management as:

> 'First, the view that a separation can be maintained between 'objective' risk and 'subjective' or perceived risk has come under increasing attack, to the extent that it is no longer a mainstream position ... Most people would agree that the physical consequences of hazards, such as deaths, injuries and environmental harm, are objective facts. However, assessments of risk, whether they are based upon individual attitudes, the wider beliefs within a culture, or on the models of mathematical risk assessment, necessarily depend upon human judgement.
>
> ... Second, the early psychological empirical studies of risk perceptions, and in particular those pioneered by the Decision Research group led by Paul Slovic, Baruch Fischhoff and Sarah Lichtenstein in Oregon, have been extensively replicated and extended ...
>
> A third trend, and perhaps the most significant one, is that many researchers have sought to look beyond purely individual, psychological explanations of human responses to hazards. Social, cultural and political processes are now acknowledged as all being involved in the formation of individual attitudes towards risks and their acceptance....
>
> Finally, part of the field has undergone a process of self-redefinition with

> the emergence of risk communication as a topic of concern. The study of risk communication ... relates theory and findings from basic risk perception studies to the formulation of policy (for example for risk managers and regulators), to the currently evolving legislative frameworks for dealing with hazards, and to the key question of public involvement in decision making about hazards.
> '(46)

A further issue that raised its head during this period was that most risk decision making that I was involved with was carried out within a group. The effect of the group on the nature of decision making had not really been considered extensively within the risk management course. It had dealt with risk decision making as though it occurred through some disembodied programme of objective facts and mathematical logic. But there had been a warning from the 1983 Royal Society report that understanding individual decisions in relation to risks did not necessarily help in understand how groups came to their decision.

> 'Arriving at consensus decisions over the question of acceptable risks in society is not a simple matter. At minimum, one might ask of any hazard, 'to whom might it be acceptable or unacceptable, when, and under what circumstances? (47)

Smithson (1989) provides a helpful classification of ignorance which forms the basis of our uncertainty. This ignorance may arise from a distortion of our knowledge, or because we lack some key pieces of information, or because we consider the information we have as not relevant to the particular task at hand.(48) Green et al summarised the problem of uncertainty which continued to dominate the real task of decision making as a risk manager and this was that my ignorance was two fold:

> 'what you know you don't know'

'what you don't know you don't know'(49)

At this stage I had started to detect in myself and in my colleagues another form of ignorance:

What you think you know but don't know.

This type of ignorance is very difficult to detect because the knowledge is presented as certainty and believed to be certain and acted on as if certain, when in reality it is not certain. Much of the confidence with which assessments based on probabilities are made started to fall into this category. This error is based on the false assumption that the past will always be repeated in the future.

Turner (1978) demonstrates the critical role of management and organisational failings in human errors which lead onto disasters (50) These failings usually revolve around poor communication, information management and co-ordination systems. In spite of its importance there has been little research in this area.

Most of the time, people have to make decisions without complete information and without the skills to carry out formal problem solving methodologies. When people are called upon to make a decision in these circumstances there is evidence that they do not guess but apply a mental rule of thumb called a 'heuristic' which will help them to draw conclusions quickly and easily. According to Kahneman et al (51) these heuristics are useful because they are quick, simple and accurate most of the time but the inappropriate use of these can lead to errors called fallacies and biases.

A key heuristic used is called the 'Availability' heuristic which is the making of judgements according to how easily instances come to mind. Therefore, memorable events distorts the perception of the likelihood of that event occurring. Another heuristic is the 'Representative' heuristic in which judgements are based on typical cases. This is associated with the 'Over-confidence' heuristic in the judgements and the selection of information which supports the original theory 'Confirmation' heuristic. A further loop in the spiral is that of the 'Commitment' heuristic which brings about a tendency to continue with the solution embarked upon even if the evidence is pointing that the decision is wrong. 'Anchoring' and 'Adjustment' heuristics are demonstrated by people having difficulties in adjusting probability estimates from a given starting point, so for example: disjunctive events are consistently underestimated and conjunctive events are overestimated.

It was clear to me that I had been unwittingly using the 'Availability' heuristic in my 'scalding' example of decision making. I was making risks a priority according to how easily the risk was brought to mind. I had not guessed the solution, I knew what the risk was and that it should be removed. I had not made any attempt to analyse the problem and assess the options as would have been the case had I used either the programmed or non-programmed decision making. I was making decisions using heuristics of which I was not fully aware and it seemed to me that so were my colleagues because they also did not demonstrate, unless I insisted on a full option appraisal, the elements of programmed or non-programmed decision making. They seemed to be able to quickly identify both the problem and solution and only when pushed did they present alternatives.

However, because we were making the decisions within a group the alternative view did come forward. Group decision making appeared to me to be a process in which individual heuristics were presented to others who had a different set of heuristics. This provided us with a range of options and a point at which we could debate the relative merits. The debates however could not be described as very analytical, there was no time in the meeting to do this. Rather the debates seemed to be more about gaining consensus which satisfied us all as far as possible. If consensus could not be reached then a team would be set up to analyse the problem more formally and the elements of non-programmed decision could be seen but I cannot recall an example of programmed decision making being made.

Though the group seemed to broaden the range of possibilities considered and is known under some circumstances to result in 'higher quality decisions' and 'greater commitment' to the solution (52) there is also evidence that groups can have negative effects on good decision making. Group arguments create stress leading to 'groupthink' - that is the need for consensus results in suppression of any disagreement, reduces the search for information and complete analysis. In addition, there can be a failure to re-appraise conclusions in the light of new information.

2.3.5 Risk control

It was rapidly dawning on me that it was not going to be possible to have a few simple criteria by which I could be certain that a risk management decision was a good one. There were going to be many factors to consider and they were going to interact in a complex way. According to the

Association of Anaesthetists of Great Britain and Ireland, it is important to distinguish between risk analysis and risk assessment.

Risk analysis is:

> 'the estimation of the probability, likelihood and severity of possible loss.' (53)

as opposed to the more overarching term of risk assessment which includes:

> 'the careful examination of what could cause harm, its significance and what precautions are needed to eliminate the risk, or reduce it to an acceptable level.' (54)

One Health and Safety discussion document attempted to gain some consensus on the use of terms related to risk management, of particular value was the attempt to define negligible, acceptable, tolerable and unacceptable risk (55):

> 'Negligible risk refers to a level of risk, usually presumed to be below 1 in a million per annum and perhaps much lower, of seriously adverse consequences occurring, where no thought is given to their likelihood in the conduct of normal life, though precaution (as against lightning) may have been taken as a prudential measure and will almost certainly be taken in case of peril.'
>
> 'Acceptable or "broadly acceptable" risk is normally taken to be a risk, perhaps in the region of 1 in a million of a seriously adverse occurrence, where the conduct of life is not affected provided that we are in fact satisfied that reasonable precautions are in place.'
>
> 'Tolerable Risk...a range of risk that we do not regard as negligible or as something we might ignore, but rather as something we need to keep under review and reduce it still further if and as when we can'

> 'Unacceptable Risk is a risk which is beyond (above the region of tolerability and unless there are special reasons a risk regulator will demand control to bring the risk below this level, or will refuse the activity.'

What is significant about these definitions is that even though they accept that some aspects of risk, such as 'likelihood' can be specified in terms of numbers, it is clear that other dimensions such as 'seriously adverse' and 'reasonableness' are not as easy to define mathematically. Le Guen accepts this and suggests that these subjective judgements are made by society through its judicial processes on the basis of what society considers to be the overall benefit to society of living with the risk (56).

However, even the laws related to risk management such as the Health and Safety at Work Act (1974) include the need for subjective judgements to be made in recognising what is reasonably practical when making judgements as to what risk is acceptable and which are not. In addition the "precautionary principle" states:

> '...where the analytical basis for assessment or risk is weak, the lack of full scientific certainty should not be used as a reason for postponing cost effective measures particularly where there are threats of serious or irreversible damage.' (57)

Dickson offers another way of analysing risks in order to identify those which require risk control measures and which do not. He uses the idea of assessing the financial consequence of controlling a risk with the potential financial consequence of not controlling the risk. Dickson, argues that risks can be classified as belonging to various 'layers'. The bottom layer Dickson calls the 'pound swapping layer' as these losses are frequent and therefore predictable. While in the top layer are losses which if they

occurred could cause so much damage to the organisation that it may cease to function, however, they are also relatively rare events. In the middle layer are losses which occur with intermediate frequency and result in moderate financial consequences. (58)

However, even here subjective judgements are required and expected. The Health and Safety Executive expect the BATNEEC principle to be applied when deciding on safety expenditure. BATNEEC stands for:

'Best available technique not entailing excessive cost'.(59)

Subjective judgements therefore play a central part in risk analysis and prioritisation. Subjective judgements are based on the way a particular risk is perceived and perception is even less amenable to mathematical modelling than the likelihood of a particular risk is.

> 'What is clear is that risk perception cannot be reduced to a single subjective correlate of a particular mathematical model of risk, such as the product of probabilities and consequences, because this imposes unduly restrictive assumptions about what is an essentially human and social phenomenon.' (60)

The realisation that I could not effectively study risk management as a disembodied entity outside of my own perceptions strengthened my conviction that my research would have to be essentially reflective on what I did and why I did what I did. Through such reflection I expected that I would identify what worked well and what did not work well and I would be able to use this learning to answer the research questions posed. Action learning would therefore be the heart of my research.

Once the risks have been perceived three risk control options are available to the decision maker. Firstly, to take action which reduces the likelihood or seriousness of the risk either prior to it becoming an event, or after it has become an incident. This type of risk control measure also could include increasing the risk's prodromal visibility. The second risk control measure would be to transfer the risk to others through buying insurance or participating in a risk pooling scheme. The final risk control measure is to accept the risk and not take any further control measures than are already in place. (61).

Documentation is considered to be key to the effective management of risk and organisations with more that five employees must keep records of risk assessments which they are also obliged to carry out (62). In health care wide variation in clinical practice and outcomes has led to increasing specification of standards to ensure better decision making and thus better risk management.

> ' In recent years, medical specialty groups in the US and the UK have issued multiple sets of standards designed to provide clinicians with guidance in treating a host of common medical problems. Clinical practice standards, referred to as practice parameters, clinical protocols, pathways, etc area attempts to offer physicians and nurses frameworks for decision-making which ought to diminish some of the variability in health care delivery.' (63)

The problem for hospitals is that there is so much advice and guidance in so many different forms and sources that some have argued that a system of accreditation of hospitals could provide a documented solution.

> 'Directives, legislation, inspectors and guidelines arrive at regular intervals and in many forms. Some advice never reaches the targets; some does, but is not implemented. Health service management seems to share with clinical practice the challenge of diffusing proven processes and research based evidence into everyday use. The propagation and cross-pollination of good practice requires active and integrated effort , which may be provided through a programme for independent accreditation...Guidelines on good

> practice defined from literature, empirical research and expert opinion provide the basis for hospitals to assess themselves prior to a one-day visit by an external team of surveyors...The self-assessment questionnaire and surveyors' report and recommendations are reviewed by Board of clinicians, managers and users.' (64)

This Board may grant accreditation for a period of time and the process is claimed to improve the likely implementation of good practice. However, the danger is that such approaches can lead to a false sense of security in the mistaken belief that because the correct procedure has been documented, that these procedures are also known by all the staff and that the staff put such procedures into practice. Even audits which check whether staff know what they should do cannot guarantee that it is what they really do when they are not being audited.

The fundamental importance of culture as opposed to procedures and systems in achieving effective risk management control has been suggested by Smith et al (65) and Zohar (66). Safety culture is defined as:

> '...the product of individual and group values, attitudes, perceptions, competences, and patterns of behaviour that determine the commitment to, and the style and proficiency of, an organisation's health and safety management' (67)

The key role of organisational culture adds further complexity to the nature of effective risk management which is summarised by the 1992 Royal Society Study Group which concluded:

> 'Risk management cannot ordinarily be conceived as a single-seated goal-setting process. Indeed the nature of the appropriate management structures, their purposes and, especially, their design are the subject of a debate whose structure we have tried to elucidate.
>
> These debates have as their significant underlying issue the need to bring together natural science expertise and knowledge about human behaviour and the operation of human institutions.' (68)

These debates have not yet been concluded but Warner has helpfully identified the following key areas of disagreement about the principles of risk management:

> 'Seven contested areas are identified and examined involving such disputed topics as the degree of anticipation that should be adopted, the extent to which management systems should be 'blame oriented', the contribution of quantitative-assessment techniques, feasibility of institutional design, the cost of risk reduction, desirable level of participation and the regulatory target... (69)

2.4 In what way is 'Risk Management' different from risk management carried out daily by all grades of health service staff?

As was previously stated, risk management is used by people to denote different things and even within the profession of risk management the concept has been changing over time. Originally the term was used to denote the process by which risks, which could lead to physical harm, were managed. Such physical risks included potential causes of work related injury, property loss or damage and any of the related legal liabilities. Others have now started to include financial techniques used to reduce the risks associated with investments in stocks and shares and other commercial activities. There is as yet no common agreement on the strict definition of the term.

Risk management as an identifiably separate field of management practice can trace its early development to the period just after the second world war when the increasing complexity of company insurance needs led to the employment of insurance specialists. Developments in management science and increasing competition led to an extension of the insurance

managers role from assessing insurance needs to that of assessing risks and the value of insurance in the management of those risks.

In addition, developing independently of the above type of risk management, was treasury risk management which is concerned with achieving the best investments. Such risks were described earlier as speculative risks as opposed to pure risks.

The scope of risk management today is very wide being concerned not just with the management of risks to avoid losses in particular organisation but now also includes consideration of risks to local, national and international communities.

However, the health service has only just started to be concerned formally with risk management as developed in the commercial world and the lack of research in this area reflects the lack of risk management in the field of health care.

A survey of 20 NHS Trusts found that 55% employed a full time risk manager, 20% had none, a further 20% added this to the health and safety manager's function and 5% added it to staff with other functions. Only one Trust had employed risk management staff prior to 1990. Only half had received formal training in risk management. (70)

In health care the role of the risk manager is at an early stage of development but this is not so outside of health care. When bodies of new knowledge develop, those with a key stake in that knowledge tend to come

together in order to share, define, develop and protect that new knowledge and the roles associated with it. But, as often is the case when new fields of knowledge are being defined, there are fundamental disputes as to what that knowledge should consists of and how it is to be appropriately used.

Risk management associations started to form in order to support and develop practitioners in various specialist fields of risk managers. An attempt to unify them under a single organisation for all aspects of risk management was made by the Risk and Insurance Management Society (RIMS) but over time it became dominated by the large corporate risk managers.

Specialist risk management groups for health care also developed. The most notable in the United States were the American Society of Hospital Risk Managers (ASHRM) and the Public Risk Management Association (PRIMA). In the United Kingdom there is the Association of Litigation and Risk Managers (ALARM) which is trying to establish itself as the key specialist risk management group for health care risk management.

A more established and the most widely recognised body for professional risk managers is the Institute of Risk Management (IRM). It is concerned with risk in its widest sense but does have special interest groups including one for health care.

Having considered the available risk management associations I decided that the most academic was the Institute of Risk Management (IRM). I thought that its qualification course would be the best source of knowledge as to what was currently considered to be the field of risk management

knowledge. In addition I expected it to be able to define the role of risk management and risk managers.

The IRM would also be able to provide the programmed learning element of my developing action learning research approach

The Institute of Risk Management was founded in 1986 in order to:

'(a) To provide an organisation for Risk Managers, and to promote and protect the interests of the profession of Risk Management.

(b) To provide means for testing the qualifications of candidates for admission to the Professional Membership of the Institute by examination or by any other tests, and to grant Certificates of Qualifications to the successful candidates provided that no diploma, certificate or similar document or award issued by the Institute shall state that it is issued by or under the sanction or authority of the Department of Trade and Industry or any other Government Department or Authority.

(c) To hold conferences and meetings for the discussion of professional affairs, interest and duties, the reading of papers and the delivery of lectures; to compile and revise lists and registers of Risk Managers, to issue copies of papers, lectures, and professional records from time to time to Fellows and members of the Institute, and generally to collect, collate and publish information of service or interest to the profession of Risk Management.

(d) To issue an Official Journal or Journals; to compile and issue any other handbook or paper.

(e) To ascertain and notify the law and practice relating to all things connected with the profession of Risk Management.

(f) To exercise professional supervision over the Fellows and members of the Institute and secure for Risk Managers such professional standing as may assist them in the discharge of their duties.

(g) To act as treasurer and distributor of any funds contributed by members of the Institute or others for the purpose of assisting necessitous members and relatives of deceased members but so that

no payment or contribution out of assets or income of the Institute shall be made to such charitable or benevolent fund or funds.

(h) To act as a means of communication between Associates or others seeking engagement as Risk Managers and employers desirous of employing them, and generally to assist members of the profession of Risk Management in obtaining desirable positions.

(i) To form a library for the use of Associates and others.

(j) To encourage and hold Students' Examinations in commercial and professional subjects and subjects akin thereto, and to issue and award Diplomas and Certificates of Proficiency on and to successful candidates provided that no diploma, certificate or similar document or award issued by the Institute shall state that it is issued by or under the sanction or authority of the Department of and Industry or any other Government Department or Authority.

(k) To promote and to join any other relevant body in promoting any Act of Parliament or Royal Charter with a view to the attainment of the above objects or any of them.

(1) To purchase, take on lease or in exchange, hire or otherwise acquire any real or personal property and any rights or privileges which the Institute may think necessary or convenient for the promotion of its objects, and to construct, maintain and alter any buildings or erections necessary or convenient for the work of the Institute.' (71)

At the time of joining the Institute, in 1995, as a Student Member there were:

'Honorary Fellows	3	
Fellows	249	
Associates	66	
Graduates	54	
Retired Fellow	36	
Affiliates	157	
Students	477'	(72)

Entry to each category of membership is by fulfilling specific requirement set by the Institute. In late 1995 a new entry route was created and given the title Member, while the Graduate group was amalgamated into the

Associate grouping to designate those who had gained membership through qualifications based on examinations.

Non-examination entry is now either via the Member or Affiliate route but such membership does not allow voting rights at Institute meetings. Affiliate membership is for those who wish to participate in the Institute's activities but do not wish to become qualified through the Institute's examinations. The Member category is for those who can show that they have at least 15 years experience in the field of risk management, together with a relevant professional qualification and a position of responsibility within an organisation. They must also be willing to take part in the Institutes continuing professional development programmes and agree to be active members of the Institute.

Fellows are restricted to those who have had at least five years relevant work experience as a risk manager, participated in the Institute's continuing professional development programmes, produced an original dissertation on risk management and have completed the Associateship examinations.

Associateship is given to those who have completed five compulsory core subjects by projects and written examinations in the following core subjects:

1. Business Organisation and Finance
2. Risk Analysis
3. Risk Control
4. Risk Financing
5. Corporate Risk Management

In addition, a further subject must be taken and passed by both project and written examination. The options include: Occupational Health and Safety, Insurance, Liability Exposure, Local Authority Risk Management, Health Sector Risk Management.

I decided to do the core five subjects and the Occupational Health and Safety optional additional subject in order to gain Associateship. I decided not to take the Health Sector Risk Management Module because I felt that the key learning of this topic would come through this research and the action learning element. In addition, having examined the syllabus and text books on the health sector component, it was clear that this area of knowledge was comparatively underdeveloped for my requirements. I wanted to be exposed to leading edge practice in risk management which I could then transfer and test using action learning in my field of health care risk management. The other topics in the optional programme were mainly concerned with insurance. I considered the insurance option would add little to the research area that I was concerned with because the data used for insurance is based on large numbers of incidents which was amenable to statistical modelling, while risk management of a hospital had to be based on relatively small numbers of incidents and therefore not amenable to the statistical modelling used by insurance companies.

I used this programmed learning over the next 3 years as the basis for my questioning about my risk management practice and also used my increasing theoretical knowledge to question the relevance of risk management's core knowledge to the practice of health care risk management faced by me. I took and passed Business Organisation and Finance in June 1996 winning the 'Zurich Municipal Public Sector Prize' of

Finance in June 1996 winning the 'Zurich Municipal Public Sector Prize' of the Institute. In June 1997 I completed Risk Analysis, Physical Control of Risk and Corporate Risk Management. I completed and received my Associateship in June 1998 when I passed the final two examinations in Risk Financing and Occupational Health and Safety. The core knowledge of risk management examined by the Institute's examinations is given in Appendix 8.

It was clear from the course that the risk manager's role was hidden in a number of different titles used in industry and commerce. Many titles are related to insurance or health and safety management but increasingly the title of risk manager itself was being used. At the heart of the risk manager's role is that of a specialist advisor to the top management team as to what risks the organisation faces and what are the most cost effective solutions to protect the organisation and people from these risks. The risk manager is not concerned with the detailed day to day delivery of services and products of an organisation, this is the role of the operational manager. However, the risk manager is concerned with the overall policies, strategies and systems of work which make possible the continued existence of the organisation in an ever more complex and risky world but the risk manager is not responsible for the final decisions made. This responsibility belongs to the Board of Directors. The risk manger is there to help the Board make the right decisions on risk management and to assure the Board that the agreed actions have been implemented by the operational managers to whom the risk control has been delegated by the Board.

2.5 Conclusion

Three key questions developed during this phase of the research:

- What is the meaning of the risk?
- What constitutes a good risk management decision as opposed to a bad risk management decision?
- In what way is 'Risk Management' different from risk management carried out daily by all grades of health service staff?

Faced with a confusing array of definitions of risk found in the literature, I narrowed these down to a number of key dimensions. The major dimensions of likelihood and seriousness were found to be too limited when they were applied to help make a decision about a face mask risk. However, the introduction of the dimension 'prodromal visibility' helped to resolve, to everyone's satisfaction, the problem being faced.

Exploring the origins of risk management provided an historical explanation for the key role of mathematical models in risk management decision making but lack of data and the key role of subjective criteria in health care risk management made such models of little use. Exploration of programmed and non-programmed decision making was also found to be of little use in the way real risk management decisions were made in a hospital and together with a third option 'guessing' were rejected.

However, Kahneman's idea of 'heuristics', simple rules of thumb seemed to best explain the way risk management decision making seemed to be made. Key heuristics included the 'Availability', 'Representative', 'Over-confidence', 'Confirmation' and 'Commitment'.

- The role of the risk manager was also explored and found to mean different things to different people but concluded that the risk manager provides expertise in the management of risk and supports operational managers to manage their risk and to assist the Chief Executive and the Board to be assured that risks are being managed properly

The interaction between the elements of programmed learning provided by the Institute of Risk Management, the growing literature and action learning within a research framework progressively clarified my initial research questions. By the end of phase one, I had further refined the original key questions into a clearer set of specific questions which my research would try to answer and these are discussed in the next chapter.

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Chapter 3

Phase 2 - Pilot Phase: Identifying and refining the research approach (April 1996 - August, 1996)

3.1 Introduction

From the initial literature review in Chapter 2 it became clear to me that risk management was not about the avoidance of risk but was more concerned with the calculated taking of risks. Ideally that risk taking should be based on careful assessment of the options, potential consequences and the likelihood of those consequences occurring. Ritchie and Marshall summarise the main issue faced by risk management as:

> '...what is a risk and when is it acceptable to take that risk.'? (1)

3.2 Purpose of the study

Traditionally, risk management has been concerned with the minimisation of direct and indirect economic risks to the organisation but when health care decisions are made on mainly economic grounds, there can be profound public and professional outrage. Even when clinicians have attempted to base their decisions on the statistical probability of a required outcome occurring, for example, in helping to make decisions about when to switch off life support machines, there can also be an equal release of public and professional approbation. In health care, good risk management decision cannot be judged by simple profit and loss indicators, there are also major ethical and public relations factors to consider. These ethical and public relations issues are also now increasingly important factors in private sector risk management.

The complexity of factors which need to be considered in health care risk management conspire to make it unlikely that there is a single dominant factor, for example, economic consequences, that will always be the most important factor to be weighed in the decision making process. Situational variants are likely to produce different types of risk and different factors such as legal, ethical, public relation and political considerations will from time to time take the dominant position over the economic consequences.

In addition to these variables, psychological factors will influence the decisions reached by decision makers. These individual psychological differences are also affected by the social context in which the decision is made. Differences in decision outcomes have been demonstrated in research comparing decisions made alone compared to decisions made within a group. For example, the so called 'risky shift' results in a tendency for more risky decisions to be made by people in groups compared to decisions made by individuals.(2)

However, in spite of the complexity of real decision making, much research has been concerned with the rare situation in which decision makers are faced with clearly defined outcome possibilities and perfect information. As a risk manager I found that there were hardly ever any risks which fitted into this category of decision making. I found the comment by Bettis summed up my research problem at this point in my research development:

> 'The problem is to match the research to the reality of decision making...many studies have sought to make use of primarily normative models which: 1. employ restricted alternative outcome decision situations ; and 2. assume perfect information availability and rational decision taking behaviour.' (3)

However, risk management decision making is about dealing with uncertainty. It is not possible to be sure to what extent the alternative

outcome decision situations are restricted, nor whether the information is perfect. Neither is it is wise to assume rational decision taking behaviour is being used when decision have to be based on such degrees of uncertainty about the consequences.

However, in the literature it is generally agreed that the right decisions are those which economically reduce or eliminates pure risks. Such a concept, however, cannot be separated from the particular context in which the risks and the decision maker exist. These include the political, legal, resource/financial, ethical and public relation context. These conclusions together with my early research questions helped me to develop a provisional theoretical framework (Fig 3.1) of how these variables might relate to each other within the risk management process. I recognised that this was a simplistic model, representing more my limited understanding of how these variables might relate to each other but I was confident, that if I found the right research approach, I would be able to describe how they really related to each other.

Within the NHS, research into risk has tended to be focused on individual events rather than how the corporate entity manages the risks facing it.

> 'One-off accidents have also been researched extensively both in medicine and elsewhere. However, no overall theoretical and practical guide to risk management in healthcare have been available in the UK.' (4)

This gap in the research was a primary driver for my research. The lack of an overall theoretical and practical guide to risk management in health care was particular missed by me as a health care risk manager. A focus on one off incidents was seen, by me, as not only narrow but also of little practical use in terms of the generalised conclusions which could be reached about the proper management of risk. My focus would thus be on the development of a theoretical and practical guide to the management of health care risks.

It became clear, very early on in my research, that programmed models of decision making would not reflect the reality of risk management decision making in health care. However, Kahneman's work with heuristics seemed to provide a powerful but under researched conceptual framework on which to explain risk decision making in the complex world of health care risk management.

Conceptualisation of the risk management decision process (Version 1)

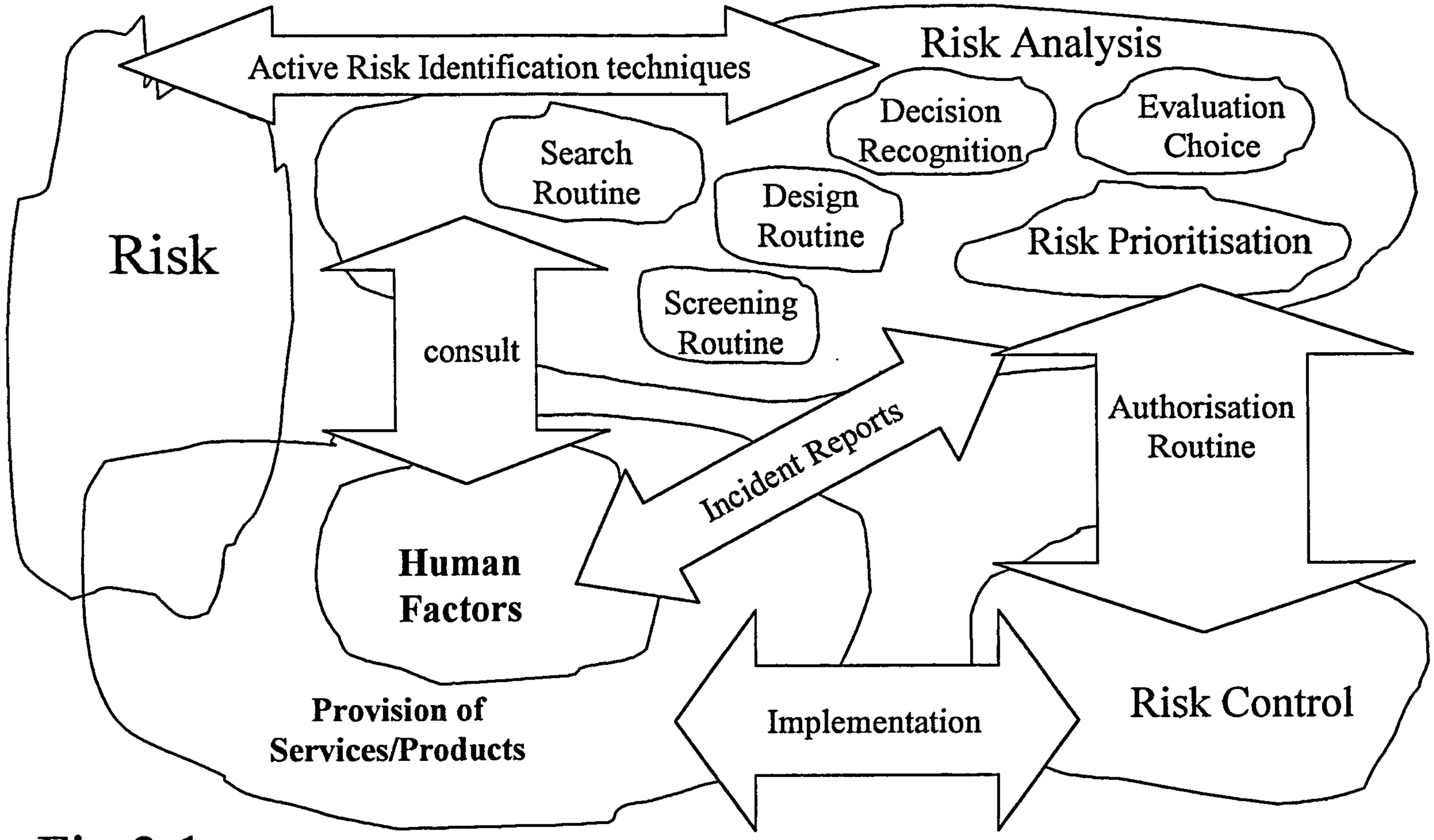


Fig 3.1

Experience of the risk management process demonstrated to me that most decisions which were being made seemed to be more easily explained in terms of Kahneman's concept of heuristics than by the other decision making models which I had explored. Kahneman's warning that such decision making, based on heuristics, was prone to error led me to raise the question whether systems could be developed which could control out the errors made by people using their own heuristics in the decision making process. This led me to further clarify the purpose of this study as:

A study into the types of heuristics used in health care risk management decision making and how these could be influenced by organisational systems in order to make it more likely that the right decisions are made.

After a long period of questioning and reflection with my research advisor, research supervisor and action learning set I had focussed the three general questions raised in Chapter 2 into the following:

1) What is the nature of risk within a hospital context?

2) What types of systems and heuristics are used when making and implementing risk management decisions within a hospital?

3) What systems and heuristics are needed in order to assure high quality risk management decision making is achieved and implemented within a hospital?

3.3 Principle research objective

Having clarified my research questions I defined my principle research objective as follows:

To describe the most effective systems and heuristics for use within the corporate risk management processes of acute teaching hospitals.

3.4 Specific research objectives

The specific research objectives which developed out of this principle research objective were to:

1) Describe the nature and characteristics of risk faced by acute hospitals.

2) Specify the parameters of risk management decision making as distinct from other management decisions within an acute hospital.

3) Describe and evaluate the systems and heuristics which are used when making of risk management decisions making within an acute hospital.

4) Describe the system and heuristics needed to assure high quality risk management decision making is made and implemented within the acute hospital.

3.5 Philosophical basis of the study

Having clarified the objectives of my research I had to identify the most appropriate research approach to achieve those objectives. The problem faced by all researchers is to understand what is the nature of the thing they are researching. Understanding is mediated by symbols and rules for the way in which these symbols can be combined in order to represent meaning. Those symbols are particularly critical when the researcher's understanding has to be communicated to others. As a researcher I was interested in the psycho-social world of risk management. In order to understand the nature of this psycho-social world I turned to philosophy to see if it could help me clarify the nature of the thing I would be researching and to understand what constitutes knowledge of that world.

The earliest philosophers were not interested in the psycho-social world of risk management, they believed that the unknown was to be managed by not offending the Gods.

> 'The philosophers of Miletus (the Milesian School) were mainly concerned with the physical world and their speculation revolved around the substance or substances which made up the world.' (5)

At that time there was no simple distinction between the religious mythical explanations of the world and other explanations based on logical reasoning from sense experiences. For example, Pythagoras was concerned with the purification of the soul which he thought could be achieved through the practice of philosophy. This led him to believe that there was a rational mathematical structure to the world he

observed, and which could be represented by mathematical symbols and the rules of logic which are associated with it.(6)

I found myself reflecting on how strongly the Pythagorean assumption of the superiority of mathematical explanations over other explanations was still dominant in research today. Reviewing the approach to risk management, as taught by Institute of Risk Management, demonstrated their emphasis on the central role of mathematics in order to assure rational decision making. However, reflecting on how useful such mathematical models were for me as a risk management decision maker led me to the conclusion that mathematical models would be of limited, if not of no use, in the problem situation I found myself.

However, I could find many examples of decisions which I made which could be explained in terms of heuristics as Kahneman had described them. These heuristics worked more on a human psychological level which was less amenable to mathematical descriptions. At this stage I was wondering whether my research was concerned with understanding some reality external to me or was it just about my own experiences. All that I really had direct access to was my own experience but no-one else did.

The tendency of early philosophy to try to explain a reality outside of sense experience was challenged by the Sophists.

> '...they simply denied the gap between the way the world appeared to common sense and the way the world really was-the appearance/reality gap that the philosophical method was employed to bridge. There simply is no hidden world that needs to be uncovered.' (7)

However, Plato attacked these Sophist ideas arguing that reality had an ultimate existence which he called Universals. We perceive instances of these Universals for example circles. Since we can all point to examples of circles even though we have never experienced a perfectly circular object, we must have something inside of us from which that concept originated. Plato concluded that since we have no direct experience of a Universal they must originate within the person themselves. (8)

Aristotle, agreed that knowledge consisted of knowledge of Universals but challenged the idea that this knowledge was innate. He believed that Universals existed within the external matter itself and that knowledge of them could be gained through the use of rules of logical deduction starting on the foundation of self-evident truths (9). This concern with the basic nature of reality is called metaphysics and developed by the 18th century into the discipline of ontology - the rational analysis of the essence of being.

Aristotle's and Plato's original ideas developed progressively into a fundamental distinction between the empiricists and the rationalists. For the empiricists there is a world out there that we detect through our senses and out of which we develop our knowledge.

> 'Empiricism tries to provide beliefs that are based in a reasonable way on evidence, while keeping the risk of error at a minimum. It does this by considering only evidence which concerns what we perceive and allowing only belief that use concepts based on perceptions.' (10)

However, for rationalists that knowledge is already held within the mind as a set of fundamental concepts which we recognise imperfect examples of in the real world.

> 'The view that some basic facts can be proved beyond doubt is called rationalism. Rationalism has a great faith in the power of reason; it takes reason to be the main source of certain belief.' (11)

These philosophical arguments about the source of true knowledge continue to the present day. However, René Descartes turned his attention from arguments about whether ultimate knowledge resided inside of people or outside of them, onto what the proper process of gaining scientific knowledge should be. Descartes believed that all knowledge, no matter what its ultimate nature, could be derived from pure reasoning based on deductive logic (12). Deduction is defined as:

> 'a kind of reasoning in which you begin with assumptions and show that conclusions follow logically from them, so that the conclusions have to be true if the premises are. A deduction often goes from a general assumption to a particular instance, as when someone reasons "everyone can be bribed, so there must be some way I can be bribed.' (13)

Descartes use of logic demonstrated how doubts can be raised about everything with one exception, that he existed, a conclusion he summarised with the words ' I think therefore I am'. He also preferred mathematical explanations of the world rather than empirical explanations. The role of experience for Descartes was to confirm the conclusions of reasoning by identifying examples from the real world. These examples from the real world can also lead to logical conclusions by using so called inductive logic.

> '...reasoning which goes from particular instances of a pattern to the general pattern..' (14)

Inductive logic is the key process at the heart of the scientific method and later developed into logical positivism which considers all valid explanations to be those

which are able to reduce complex wholes into a basic set of causally related parts.

The method used is that of the hypothetico-deductive method:

> ' ...a way of getting sound scientific beliefs by first making hypotheses to explain available evidence and then deducing predictions from them. If the predictions from them are true then we have evidence for the hypothesis and if they are false we have evidence against it.' (15)

The power of this approach started to blossom in the 17th century with the surge in discoveries made in the natural sciences. Explanations were developed in terms of natural laws of how causally related elements worked together in order to make the natural universe work using metaphors based on machines. Galileo was the first to use the experimental approach, while Newton demonstrated the power of systematic observation and testing of hypotheses within a controlled experimental structure.

In the twentieth century Karl Popper challenged the earlier philosophers who had focussed on the role of evidence to support theories. For Popper this approach could not lead to a conclusion that was beyond doubt. He thought that all that could be proven beyond doubt was that a particular theory was untrue. He therefore argued that the procedures of science should be designed to refute theories. In order to achieve this, all true research questions should be stated in such a way that it would be possible to refute them. (16)

The influence of logical positivism has been far reaching and became the standard by which the value of research approaches were compared for nearly three hundred years. However, the debate about the nature of knowledge became stronger and epistemology, the theory of knowledge, became a central debate within philosophy. However, not even the power of natural science, as a way of explaining the natural world, helped to bring to a conclusion this debate between the empiricist and

rationalists. In fact science made the debate more difficult as the fundamental laws of physics were shown not to hold true in the field of quantum mechanics. Even the once pre-eminent belief that mathematics could eventually provide a complete understanding of the natural world was shattered with the development of Chaos Theory. (17)

However, in the 19th Century the pre-eminence of the natural sciences led to the hope that the same approaches could be used to explain the social world and August Compte founded the science of society, sociology. (18)

My introduction to research was through my first degree in psychology after which I followed a traditional management Master of Science research degree. I was therefore well grounded in logical positivism and felt comfortable with it until this point in my research. I started with the assumption that the aim of my research was to carry out research which met the standard of logical positivism but I had no clear idea how that could be applied, in any helpful way, to the research problem which I was now faced with. I had a feeling of uncertainty and tension due to the lack of a clear way forward. I felt like Descarte that the only thing I could be certain of was that I existed because I was aware of my self and my own thoughts. Debates around ontology and epistemology continued to rage but with no clear conclusion. The debates held within my learning set however finally destroyed my confidence in logical positivism as a way forward but they had not yet helped me to find an alternative way forward.

I found that Kant's distinction between phenomena and noumena initially helpful. Noumena is what a thing is actually like while a phenomena is what it is perceived to be. According to Kant it is only possible to know of phenomena which is produced by an interaction between the mind and the sensations provided by the outside world. The mind is not a passive recipient of these sensations, it has a priori knowledge

which it uses to shape the knowledge generated a posteriori by experience (19). Developments of Kant's ideas by the Neo-Kantian school starting in the 1860's stressed a fundamental distinction between the natural and the social sciences.

> 'For all Neo-Kantians a fundamental division is drawn between the natural sciences, on the one hand, and the spiritual, human and cultural sciences on the other...Man and the animals are distinct from the rest of nature in their sharing of a reflexive "life experience" - an inner life.' (20)

For Neo-Kantians like Dilthey it was possible to have knowledge of this inner life which others had.

> '...our sharing of "life experience" enables us to infer from the outward expressions of others their inner states on the basis of an analogy with our own inner states. It is 'imaginative identification' or understanding (verstehen) in this sense which distinguishes the type of knowledge proper to the "spiritual sciences" from the natural or physical sciences.' (21)

Husserl however does not accept the separation of noumena and phenomena arguing that all we are aware of are objects of consciousness. Knowledge does not consist of the accurate description of the world out there but consists of the accurate description of the objects of consciousness. This approach is known as phenomenology.(22)

By this stage my concept of the nature of good research progressively moved from considering that good research has to be objective, to realising that, in terms of risk management research, such an objective reality may not exist because risk is essential a human concept which is influenced not only by the actual threat but by the way it is perceived. Assessing what is good and poor management of risk will be influenced by how the actions taken are perceived by fellow human beings, who will, in their turn, be affected by these decisions in different ways. For example, is a decision to take part in a clinical research trial a good risk management decision? For the

researchers the use of multi-centre, double-blind experiments is a good decision because it is the only way to be sure that a new drug actually works. For a patient, taking part in that trial, a good decision depends on a personal judgement of the balance of risks between traditional treatment with moderately good outcomes, or new treatment which could bring them significant improvements or worse, a serious deterioration due to unexpected side effects. I felt myself asking the question, can there be a judgement of a good risk management decision which does not take into account the personal values and judgements made by those involved in taking that risk?

However, qualitative research has its critics:

> '...the data and findings it produces are "subjective", mere idiosyncratic impressions of one or two cases that cannot provide a solid foundation for rigorous scientific analysis.' (23)

The response to these criticisms by enthonographers was the development of the concept of 'naturalism' as the proper field of study for qualitative social researchers.

> 'Naturalism proposes that as far as possible, the social world should be studied in its 'natural' state, undisturbed by the researcher. Hence, 'natural' not 'artificial' settings, like experiments or formal interviews, should be the primary source of data. Furthermore, the research must be carried out in ways that are sensitive to the nature of the setting. The primary aim should be to describe what happens in the setting, how the people involved see their own actions and those of others, and the contexts in which the action takes place.' (24)

Such an approach was of no use to me, I did not have the luxury of being an observer, I was involved and had to act. In addition, it was clear that I could make no progress by taking the position of an individual researcher because all I would have access to

was my personal observations and reflections. I needed others to provide their perspective and I also needed them to have an opportunity to challenge me.

The possibility of some form of neutral researcher, objectively describing a reality existing independently of the researcher's own knowledge, value systems and rules of logic, was challenged by Kuhn. According to Kuhn, researchers function within a particular paradigm, which is an accepted model of the nature of the world in which they operate. This constrains their thinking within the limits of what is acceptable at a particular moment in time. This continues until there is a fundamental shift in the paradigm and a new field of knowledge is created with its own model of the world and what constitutes evidence and explanations of it.(25)

Challenges to naturalism in ethnography, have been taken on board by many ethnographers who have recognised that:

> '...social researchers are part of the social world they study...What this represents is a rejection of the idea that social research is, or can be, carried out in some autonomous realm that is insulated from the wider society and from the particular biography of the researcher...Also, it is emphasized that the production of knowledge by researchers has consequences...' (26)

My own changing paradigm resulted in my acceptance that research could not be objective and operate in some neutral form. Legitimate research had to include an honest acceptance that as the researcher I was going to influence the knowledge I generated. I also accepted that changing the world in which I operated was a legitimate function of the researcher. I also recognise that the research approach which I was going to use had to be one in which the research was done as a collaborative enterprise between me and my colleagues whose role was to manage the Trust's risk management activities. Reason explains that in such a research approach:

'...the distinction between researcher and subject disappears, and all who participate are both co-researchers and co-subjects. Cooperative inquiry is therefore also a form of education, personal development and social action.' (27)

3.6 Type of study

It was at this point that I realised that if I was going to make progress in the field of research I would have to break out of the constraints imposed by my research training in psychology and management which was based on guidelines developed for traditional research and exemplified by Sekaran (28):

1. "Clearly identify the purpose of the study.
2. Define the principle and specific research objectives,
3. Select the appropriate type of study to achieve the research objectives set.
4. Specify the unit of analysis and the time horizon.
5. Describe the researcher involvement and study setting
6. Determine the appropriate level of measurement and data analysis techniques.
7. Specify the validation methods"

Sekaran guidelines are heavily influenced by the methodologies of natural science. The spectacular success of natural science methodologies in explaining the laws of the physical universe led many within the social sciences to recommend the same approach but having now recognised the philosophical problems with this approach, I was now ready to examine more closely the limitations of the approach when applied to the field of research which I was undertaking.

Checkland provided a powerful argument on the limitations of the natural sciences as an approach to understanding social phenomena. Those difficulties may be summarised by the following key issues which a researcher must deal with when doing research on the social world:

'1. Science tends to be less effective when trying to deal with complex interrelationships of the social world compared to simple cause and effect relationships within the natural world.

2. The emergent properties of the social world are not simply the sum of the parts from which it is made.

3. Human beings attribute and are influenced by their interpretation of the meaning of events and the values that they possess - without understanding the meanings attributed the actions observed cannot be explained.

4. The heart of the scientific method lies in its ability to predict but the actions of people result in both intended and unintended effects which makes prediction more problematic.

5. The control of confounding variables required by the scientific method distorts the ecological validity of the scientific method because in the real world those confounding variables are not controlled.' (29)

When examining the purpose of my research in the light of these problem areas in using natural science methodologies, it became impossible for me to justify using the scientific approaches with which I was most familiar. Risk and risk management are complex human phenomena which do not have a simple cause and effect relationship and are more than the sum of their individual components. Risk and effective risk management events cannot be explained without understanding the human beings involved and the interpretation, understandings, motivation and values which they have placed upon those events. Central to the scientific process is testing of theory through the development of testable predictions which, if correct, confirm the theory

developed. Such predictions are not possible in the current state of our knowledge of risk and risk management because risk management decisions are mediated through a myriad human minds operating within a social context which is continually changing. I could not control out the many potentially confounding variables without destroying the purpose of the study. As the person responsible for risk management I could not ignore these variables but had to act on and change them in a way that made the risks more manageable to me and my employers. In such circumstances I could not claim to be an objective observer. I was very much involved. If I made a mistake, which had serious consequences, I could not treat the event as an interesting intellectual point, it would have serious personal consequences - I could lose my job, someone else could lose their life.

Since I was the key change agent in the management of risk and I had access to my own thoughts and learning, I could at least share these with others in the hope that they could learn from my successes and failures. I could also describe what I did and what effect it had on the real world. I could describe my observations of how others acted and share my interpretations of why they acted like that. I could also describe how I reacted to their actions in the light of my interpretation of their motivations and share what then happened and what further learning had been gained.

I was becoming more comfortable with the idea that research and learning can be brought together. My own learning and thoughts would be one of the key sources of data for the research. In addition, the method would have to allow me to collect and codify the risks which the Trust faced and to describe the complex inter-relationship between those risk and the organisation, its people and the social and political context in which it operated. Since I was also concerned with identifying what a good risk management decision was and how organisational structures affected those decisions, I had to be able to change those structures in order to test out whether this had advantageous or detrimental effects on the management of risk.

Action Learning appeared to provide an approach that could meet my needs.

3.7 Action Learning

Unfortunately the founder of Action Learning, Revans, never provided a simple definition and this has led to differing interpretations as to what Action Learning is and what it is not. Pedler offers three interpretations as to what Action Learning is:

The first is concerned with changing the external world.

> 'Here Action Learning confronts the person with a "stern external reality...(which) ...implies a very realist stance and an empiricist/logical positivist faith in sense data breaking through the conceptual framework that we use to interpret experience..." The world is real; it is the individual's perception of it which needs to change - and for the better - for the problem to be resolved.' (30)

Pedler points out that this interpretation was emphasised in the earlier Action Learning programs of Revans. However, even the earlier externally orientated work was still concerned with inner learning of the participants. However, the emphasis on personal development became stronger in later work and provides the second interpretation of Action Learning.

> 'Although the scientist/operational researcher is still strongly present in the most formal and "scientific" account he ever gives Action Learning, Revans now raises the profile of what has been a lesser theme, looking for "a general theory of human action, for a science of praxeology" [added emphasis]. Here Action Learning rests fundamentally upon the discovery and clarification of the person and of their values...' (31)

However, Pedler notes that Revans view is that both are needed, while in practice, keeping the right balance is difficult.

The third interpretation is that Action Learning is a form of collaborative enquiry because:

> '...(1) the difficulties of taking individual and personally authentic action in work organisations; and (in any case) (ii) the problematic nature of individual action in organisations; and (iii) that Action Learning as collective meaning-making provides a bridge from individual to organisational learning.' (32)

However, there are many ways in which to act on the external world, to personally develop and to carryout collaborative enquiry. Revans recognised this when he described what Action Learning was not. The first thing that is not Action Learning is job rotation:

> 'job rotation, in which the learning vehicle is a series of differing functional tasks carried out under the tutorship of a local expert (manager, specialist, head of functional branch) in the mysticisms traditionally practiced by that expert; while sitting next to Nelly may give one the most vivid impression of what Nelly firmly believes herself to be doing, it may also be necessary to ask from time to time whether Nelly's practice is sound.' (33)

Neither is it project work:

> '...in which higher management set up a working party to make recommendations about some trouble it has detected; the composition of the team is not likely to match that of the client group, is usually the outcome of negotiations by interested parties and its terms of reference are generally (but not exclusively) limited to making recommendations for others to implement. (34)

Neither are:

> '...case studies, business games and other simulation, based upon edited descriptions by unknown writers of inaccessible conditions for which the participants can never be responsible, neither for diagnosis not for therapy.... (35)

Neither in general are:

> 'group dynamics and similar task-free exercises...Such exercises as sensitivity training, non-directive counselling and other excursions into group psychotherapy are usually not anchored to the here-and-now demands of business...' (36)

Nether is it 'business consultancy', 'simple commonsense' or 'operational research'.(37)

Mumford summarises the essentials of Action Learning as:

> '1. Learning for managers should mean learning to take effective action...
>
> 2. Learning to take effective action necessarily involves actually taking action, not recommending action or undertaking analysis of someone else's problem.
>
> 3 The best form of action for learning is work on a defined project of reality and significance to the managers themselves.
>
> 4 Whilst the managers should take responsibility for their own achievements on their own project, the learning process is a social one: managers learn best with and from each other.
>
> 5 The social process is achieved and managed through regular meetings of managers to discuss their individual projects; the group is usually called a "set". The managers are "comrades in adversity".
>
> 6 The role of people providing help for the members of the set is essentially and crucially different from that of the normal management teacher. Their role is not to teach (whether through lecture, case or simulation) but to help managers learn from exposure to problems and to each other.' (38)

A relook and review of the problem situation I was faced with and the complexity and underdeveloped state of risk management knowledge together with my awareness of the gap in my personal knowledge led me to finally conclude that Action Learning would be my preferred research approach because it would allow me to:

a) Solve a real organisational problem (Action) -How best to ensure that the right risk management decisions are made and implemented efficiently

b) Increase personal knowledge and skills in risk management (Learning)

c) Add to the sum total of knowledge both within the group of staff with whom I worked (Learning) but also to the developing academic field of risk management within health care (Research).

These needs to manage risk well together with the lack of research based guidance on what that means in terms of corporate systems and decision making heuristics within the acute hospital setting confirmed that Action Learning was to be my primary route to develop my knowledge and skills in risk management and also to be the route through which I could develop new knowledge which was generalisable outside of the problem situation in which it had developed.

3.8 The Action Learning process

Revans considered that the distinction made between learning and research was false.

'The distinction drawn by scholars between:
(a) research, or inquiry into the nature of the previously obscure;
(b) Learning, or the acquisition of knowledge about the previously obscure ; and
(c) action, or success in changing the previously obscure; are illusory.' (39)

Revan's added to the challenges of others, previously discussed, that there could be an objective knowledge because researchers had to first learn the knowledge generated themselves before they could communicate it to colleagues in the scientific community. The Action Learning process is therefore also the research process.

At the heart of the Action Learning process is the questioning process called Q by Revans and contrasted with P programmed knowledge. Morris points out the though Q has been neglected within traditional education it is important to recognise the importance of P within the Action Learning process.

> 'Having stressed the vital importance of Q, as discriminating questioning, to Action Learning, it is necessary to refer to the indispensability of P as the context of Q. No one faced with a challenging situation, and hard pressed to find a way of coping with it, is likely to ignore P in the form of wise guidelines, useful know-how, and good practice...it also contains the wisdom of the past, which we ignore at our peril' (40)

I recognised the need for P to help me with my problem situation, risk management, and I turned to the programmed knowledge available within the Institute of Risk Management, the risk management literature, together with the available NHS guidelines and standards. I was also aware that relying on such knowledge, by itself, was also a sure way to error as Morris went on to explain:

> 'P may have much that is out of date, or downright misleading...' (41)

However, the role of P within the process of Action Learning is different from how it is used in traditional academic practice in three key ways:

> 'First the most effective practitioners are strongly biased towards using any form of P that seems to work in the challenging situations confronting them.' (42)

Secondly:

> 'P is seldom if ever rigorously organised into the intellectual discipline so dear to academics. Rather it is part of an organic network that relates to personal experience, and to the key events, incidents and episodes that have become, as it were, nodes in that network.' (43)

Finally:

> '...effective practitioners display remarkable skill in balancing Ps and Qs that are constantly arising...not only different requirements and options that must be balanced...but those that are apparently incompatible and contradictory...'(44)

These key lessons on the most effective use of programmed learning, which I had already embarked upon as part of the research, was to provide the basic framework upon which my programmed learning would take place within the overall research process.

I now turn my attention to the most effective use of Q.

> 'Q refers to the acquisition of the ability to ask fresh questions - of learning how to cope with new problems and new situations.' (45)

The way questions are asked will impact on the answers received and therefore it is important to know what is the most effective questioning approach. According to Bourner et al. good questioning involves:

> ' ...opening up the problem owners's own view of their situation.' (46)

They offer a range a questions that can achieve this requirement:

'The "open" question is one which cannot be answered in a word or two but require discussion and explanation...Questions which ask for specifics can be helpful in putting the problem owner in touch with the realities of the problem...Another effective type of question ...requires a reiteration and explanation of parts of the previous response...Yet another question that can be helpful if used sparingly is the question "why?"...Most statements contain various shades of meaning. Questioning that start with "Do you mean..." can be an effective way of discovering meanings that the speaker is unaware of.' (47)

Questioning leads to reflection and further learning. New insights can be tested through action in the real world problem situation in which the researcher finds themselves. This is the way new knowledge is generated, this is research in practice.

However, Revans objected to the use of the third person common to research papers because he felt it falsely asserted that the research had an objective existence independent of the researcher who had generated that knowledge. Research should be reported in the first person because it is the researcher's learning that is being communicated not an objective reality independent of the researcher.

Revans thought that the most effective learning and research is done as part of a small group learning together and from each other's questions and reflections, (48) However, Sutton points out that each action learning set is composed of different members dealing with different problem situations and will thus operate in different ways. (49)

My research was concerned with resolving to a particular level of satisfaction the problem situation in which I found myself. The learning process was being driven by my own desire to understand and manage the situation which I was in.

The programmed learning element of this learning was to be provided by participation in the Institute of Risk Management's membership qualification programme and reading the literature related to risk management which was growing apace in health care. The value of the programmed learning in relationship to the research was that it would provides a provisional theoretical framework and accepted best practice in risk management. This would be used as the basis for acting on the real world and then reflecting on the learning and new knowledge so generated. This should lead to insights and new theories which could be tested within a questioning framework. Of central importance in the development and testing of these new insights would be the research supervisor, advisor and action learning set, which would provide the opportunity to review progress together with the provision of motivation and psychological support.

Further reflection and questioning would lead to deeper insights and the development of new knowledge.

3.9 Conceptual research framework of the research approach

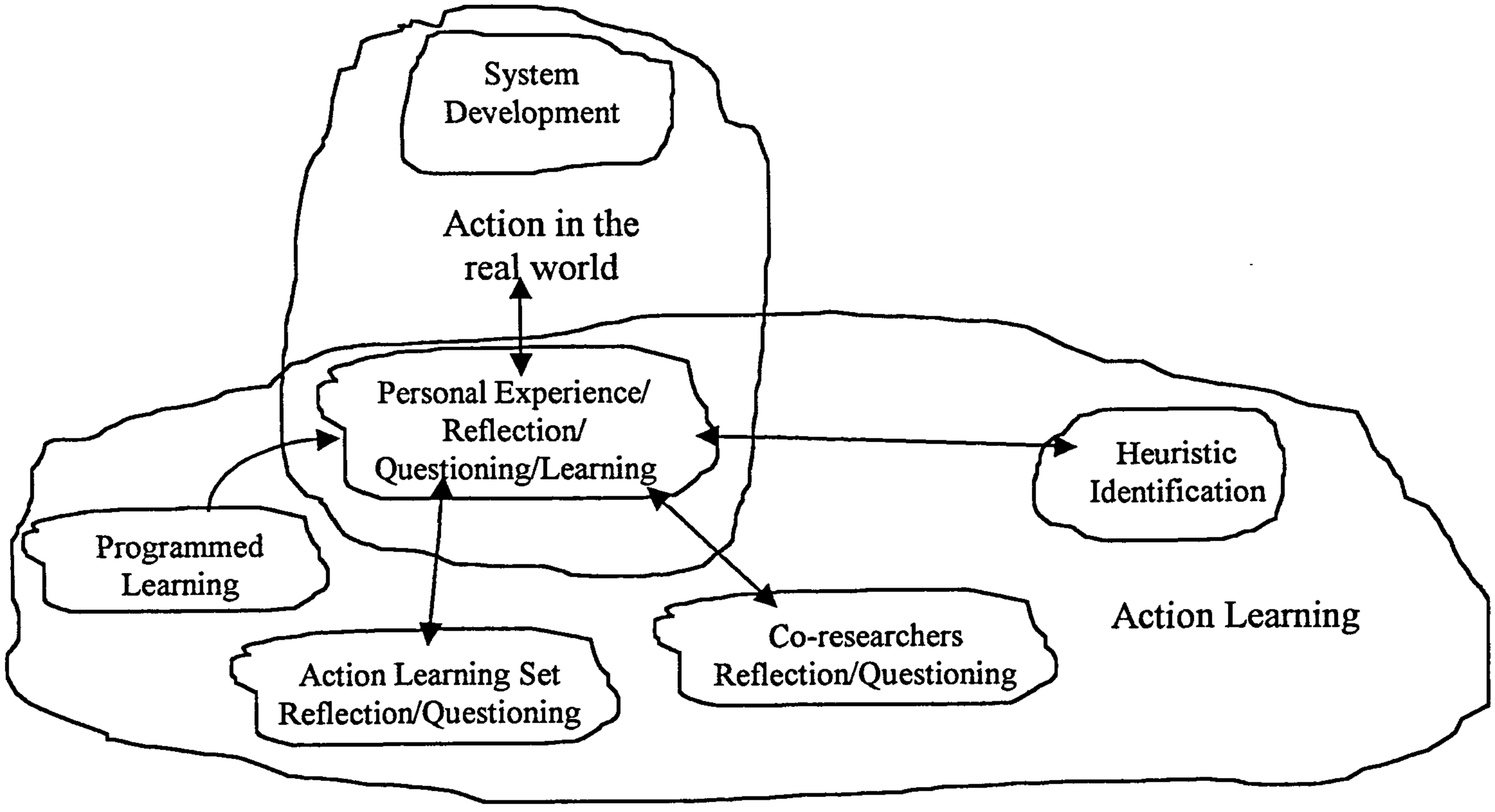
Below is shown a summary of my conceptual framework of the research process (Fig 4.3) which I had developed by the end of this phase of the research.

At the centre of this process is me the researcher who is the person most intimately involved in the research. The knowledge generated and shared is mediated through my mind. There is no pretence that research can be a disembodied and objective reality independent of that human mind. Rather

it accepts that science uses the human mind to generate concepts and models to make sense of the world being experienced. Such models and concepts are limited by the constraints imposed by the human mind and the language which it uses to communicate that learning to others.

Research and personal learning are therefore intimately interrelated and the changes in the researcher brought about by that learning provide the opportunities for further questioning and reflection. Such questioning and reflections is helped by learning from the insights and concepts developed by others and which have been documented in the literature or programmes of formal teaching. Programmed learning will therefore be used as a source of knowledge for the research process and as a way of questioning both the new insights gained by me as researcher and to help me challenge the received wisdom provided by others and described in their literature.

Conceptual framework of the research approach (fig 3.2)



Another rich source of questionning, challenging, reflection and new insights will be provided by colleagues in my Action Learning Set. They are also on a quest for new knowledge in their chosen field of research and the opportunity to share with these colleagues my own insights, concepts and models will help to refine my understanding further.

Not only will my research be refined by programmed learning and my Action Learning Set but also it will be refined by my work colleagues. They share with me a similar problem situation and will be a rich source of questionning, challenging, reflection and new insights. They will be my co-researchers. They will have to put into practice and experience the real effects of risk management decisions made and will thus form a key elements of my validation framework.

Finally, the experienced eye of my research supervisors will provide a further rich source of questions, challenges, reflections and new insights. Not being part of the action learning set, or the people who have to use and test the findings in the real world, will allow them to bring to bear the strength of a dispassionate view of the research findings and approaches chosen. The supervisors will thus also be a key, though not exclusive, element of the validation process.

The main test of the validity of the research will not be in the elegance of the theory, or the precision by which a particular research method is used, but will be the extent that the research and its findings work in the real world. My actions and the reflections with my action learning set will be the key to generating new knowledge and testing its validity. Research findings need to be communicated through some human conceptual medium for others to be able to share. The key medium will be that of descriptions of the

systems which are used and developed to optimise the use of appropriate heuristics for the management of risks.

3.10 Time horizon

As the approach chosen will be based on Action Learning it is not possible to map out a simple linear path as could be done if , for example, a classical experimental design had been chosen. New knowledge will have to be generated through systematic action, reflection, testing and learning in the real world situation in which the researcher exists.

Some elements of the research process are likely to continue throughout the whole period of the study, while other will come and go as the demands of the real world context interact with the researcher, yet other elements of the research will work in parallel with each other. However, all the elements developed within the broad general phases shown below:

Phase 1	Clarification of the problem situation and literature review (October, 1995 - March 1996)
Phase 2	Pilot Phase - Identifying and Refining the Research Approach (April 1996 - August, 1996)
Phase 3	Testing of the Research Approach and Initial Conceptual Model Building (March, 1996 – December 1996)
Phase 4	Refining, Heuristics and Gaining Control (January, 1996 - July, 2000)

3.11 Conclusion

The purpose of the study has now been clarified and summarised as:

A study into the types of heuristics used in health care risk management decision making and how these could be influenced by organisational systems in order to make it more likely that the right decisions are made.

In addition the specific research objective were defined as:

1) Describe the nature and characteristics of risk faced by acute hospitals.

2) Specify the parameters of risk management decision making as distinct from other management decisions within an acute hospital.

3) Describe and evaluate the systems and heuristics which are used when making risk management decisions making within an acute hospital.

4) Describe the system and heuristics needed to assure high quality risk management decision making is made and implemented within the acute hospital.

An exploration of the philosophical basis on which this research could be based concluded that at the centre of the process was me the researcher. As a researcher, the struggle to understand the nature of health care risk and how to manage it was a process of learning which when tested against real world experience and challenged by colleagues could be the source of new and

generalisable knowledge. Research and personal learning was therefore intimately interrelated within an overall Action Learning approach.

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Chapter 4

Phase 3 – Testing the research approach and initial conceptual model building (March, 1996 – December 1996)

4.1 Introduction

During this phase of the research the literature on risk management related to health care grew significantly. I searched this literature and analysed it in order to identify views related to the three broad research questions specified in Chapter 3.

1) What is the nature of pure risk within a hospital context?.

2) What types of systems and heuristics are used when making and implementing risk management decisions within a hospital.?

3) What systems and heuristics are needed in order to assure high quality risk management decision making is achieved and implemented within a hospital?

The growing literature and the teaching I was receiving from the Institute of Risk Management provided part of the programmed knowledge (P) which I used in order to provide an initial theoretical framework of best practice in risk management.

During this period the Department of Health progressively issued more and more guidance on risk management practice and this was also treated as P. All programmed knowledge which offered a way forward in the management of risk was used as the basis for implementation action within the Trust. My intention was to note the effects of such action and to reflect on this with my learning set and research advisors in order to identify those elements of P which were effective and those which were ineffective. This led to proposals, generated by questioning from my learning set

and work colleagues, as to how the ineffective actions could be turned into effective actions. Once agreed, these actions were implemented and the effect noted. This cycle was repeated during the research period. In addition I attempted to describe the generic elements of an effective risk management system in order to develop a conceptual model which could answer the three key research questions stated above.

4.2 What is the nature of risk within a hospital context?.

In Chapter 2 version 2 of the conceptual model of the nature of risk was described in Fig 2.2 and reproduced here Fig 4.1. But what is the nature of risk within a hospital?

For some, risks can all be boiled down to financial consequences.

> 'Given that risk management is ultimately about reducing financial losses, identifying and quantifying losses is therefore an essential step.' (1)

This view is not uncommon even in health care. It is interesting to note that the formal management of risk started after Crown immunity was removed and people could inflict financial consequences on the health care service through litigation.

However, the real cost of failures in risk management need to include (2):

- Compensation
- Fines
- Legal Fees
- Time spent with legal officers
- Time spent managing the media
- Cost of replacing the injured person and associated recruitment and training costs

- Costs of investigating the accidents and revising procedures
- Reduced efficiency and morale
- Cost of property damage and interruptions to normal working

The quantification of even large medical claims is a complicated and highly skilled procedure. An example of what is involved to complete a structured settlement for a serious medical accident demonstrates this:

'1 detailed appraisal of the plaintiffs current and future financial needs;

2 formulating a financial package best suited to meet those needs;

3 broking the markets to identify the most appropriate and the most effective annuity and assurance products;

4 meeting and liaising with the parties to assist in reaching agreement as to the form of the structure;

5 assisting in drafting the various orders and agreements for consideration by the lawyers;

6 preparation of Value for Money (VFM) reports required for the approval of the Department of Health and HM Treasury etc;

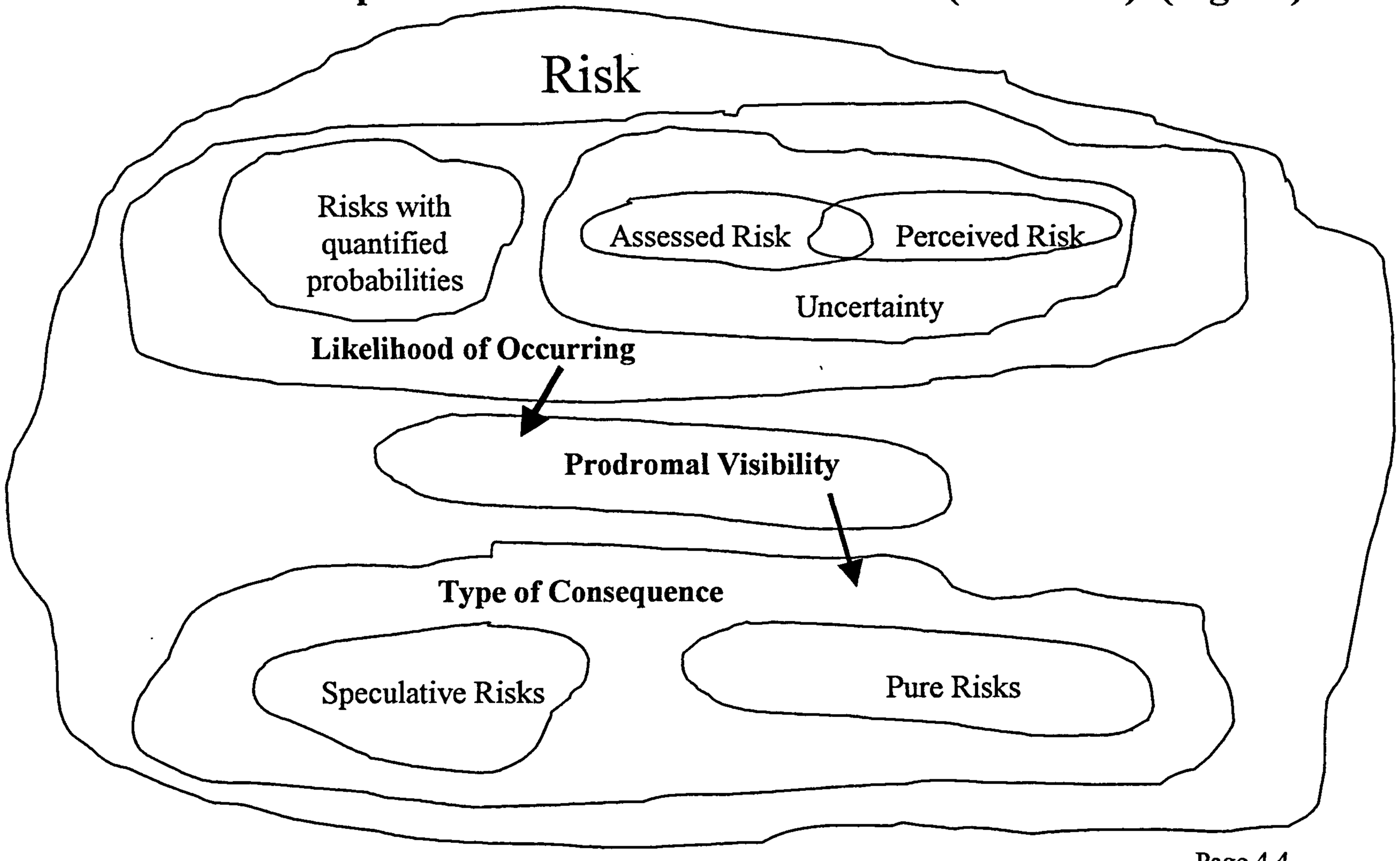
7 preparation of all reports required for the approval of the Inland Revenue, the Court and the Court of Protection;

8 attending at conferences and at Court and advising as necessary and appearing in court to give expert evidence;

9 if appropriate, preparation of all documentation required for the purchase of the annuity package by the health authority;

10 monitoring , post implementation, the actual working of the structure which has been put in place.' (3)

Initial Conceptual Model of the Nature of Risk (Version 2) (Fig 4.1)



Attempts to get accurate measures of all of the costs which are the result of even a single serious incident is problematic and in particular it is problematic in terms of the time it takes to collect and analyse all of the data needed. As the risk manager, I would like to have had this information but it was not available to me. Neither were resources available in order to carryout the detailed analysis and investigation required to get to a useful estimate of these real costs of risk.

Having realised that I did not have the resources to get this information, I was challenged with the question as to what use it would be if I did have the information. Reflections on this resulted in the conclusion that it would make it possible to use the techniques of risk management decision making based on formal decision making because the risks could be reduced to numbers. Techniques such as 'Expected Monetary Value' in which the monetary value of specific outcomes can be combined with the probability of its occurrence in order to calculate the value of different risk control decision.(4)

However, we have already rehearsed in Chapter 2 the problem of trying to simplify risks into a single numerical value. Given that neither was the information on costs of incidents readily available and that such information would be insufficient to use as the basis of risk assessments, I was confronted with the question as to why financial consequences are so commonly used, in documents and speeches, to implore better risk management in the health service.

Langlands summarises one reason why cost is so often cited at the same time as calls for better risk management:

> 'It is unacceptable that substantial sums of money, money which might otherwise be used on patient care, are being soaked up by patchy health and safety management and practice.' (5)

Similar, reasons are given by others imploring clinicians to take account of the financial consequences of poor clinical risk management:

> 'First there is the need to protect assets...Secondly, there are financial risks inherent in an organisation's activities and products...Thirdly, there is a need to provide a hedge against external change...' (6)

Considerable effort has now started within the NHS to calculate the cost of claims made against it. The newly established Clinical Negligence Scheme for Trusts (CNST) has started a database and requires reporting of two types of information.

> 'These are facts and opinions. We do not believe that there are any facts asked for which a good claims handler should not have on file already when the time comes to report the claim to the CNST...We realise that opinion data asked for - estimate, share, probability- will be more difficult for people to complete, but we have made these items mandatory because they are essential to the operation of the scheme...The multitude of differing estimates are expected to even themselves out over time...' (7)

The fact that the CNST considered probability to be an opinion rather than a precise mathematical statement reassured me that I was not the only one who could not produce accurate probability estimates of the risks my Trust was facing. However, they did report:

> 'As expected, obstetrics and gynaecology is responsible for the major share of liabilities. However, we believe that, although obstetrics and gynaecology will always account for the predominant share of liability, the current breakdown does not represent the true situation due to the keenness of Trusts to report the potentially large obstetric disaster cases at a very early stage.' (8)

The amount of claims for obstetric claims is greater than for any other specialty. A single incident can result in a lifetime of difficulties for the injured child and parents. For the hospital claims for damages could reach £2,000,000.

A major risk in obstetrics is that interventions are not being taken early enough to prevent cerebral palsy in the new born. However, the causes of cerebral palsy are not always easy to attribute to specific actions with certainty and indeed it may take months to reveal itself in symptoms within the child.

There is also the danger that doctors may resort to cesarian sections more often than is necessary in order to reduce the risk. This is a classic case of the risk management dilemma between controlling a risk in such a way that it creates other unacceptable consequences. The cesarian section is a good example of such a clinical risk control technique. The technique can result in unnecessary surgery for the woman in order to reduce the risk of cerebral palsy in the child. A certain proportion of women will need this operation but others will not. Exactly when a cesarian sections is needed is decided by a clinician on clinical grounds but there is some evidence that they are resorting to too frequent cesarian section in order to avoid the rare event of cerebral palsy due to not carrying out the caesarian section early enough.

Samrai reports that:

> 'Accurate figures are difficult to obtain but the rate currently stands at about 15%, four times what it was twenty years ago.' (9)

The complexity of risk taking made by clinical professionals in their everyday practice together with the way such risks have been managed in the past has led to the separation of clinical negligence risks from other health care risks.

Prior to 1885 claims for damages against medical practitioners were made against them directly. They had to carry the costs of defending these claims and even if the claim was unfounded there could have been significant financial losses for the defendant. With the number of claims increasing, medical defence organisations were established. The major medical defence organisation in the United Kingdom is the Medical Defence Union Ltd which was established in October, 1885 (10). Following disputes over the introduction of a new constitution in 1892 another defence organisation was established , the Medical Protection Society.

At the start of the NHS in 1948 medical staff rejected the opportunity to have NHS indemnity because they were concerned to emphasise that their clinical autonomy made them have a relationship to management unlike that of master and servant.

> 'There has always been confusion as to whether a doctor's contract really constituted a contract of service, since a clinicians medical expertise meant that managers could not tell them what to do in the same way as they might tell an ancillary worker what to do. Thus the concept of a 'contract for services', as opposed to a 'contract of service', was born. (11)

In the 1970s the frequency of claims for clinical negligence started to increase significantly and by the 1980's higher differential rates were applied to practitioners in high risk specialties like obstetrics. Increasingly, this became unacceptable to the medical profession and on 1st January 1990 NHS indemnity was introduced and all outstanding claims were taken over by the NHS. The NHS indemnity scheme is only concerned with clinical negligence risks and has defined clinical negligence as:

'a breach of duty of care by members of the health care professions employed by NHS bodies or by others consequent on decisions or judgements made by members of those professions in their professional capacity in the course of their employment, and which are admitted as negligent by the employer or are determined as such through the legal process'. (12)

The NHS and Community Care Act 1990 started a series of reforms which led to the creation of Trusts. Claims for negligence prior to 1 April, 1991 or the establishment date of Trusts were dealt with by District and Regional Health Authorities. Claims now have to be borne by the Trusts who can borrow money, at a rate of interest, from the Department of Health or Regional Health Authority if the claim is large. The effect of this is that Trusts became responsible for the actions of their staff including their clinical staff. The earliest Trusts recognised the threat that a large claim for negligence posed them and joined the newly established Clinical Negligence Scheme for Trusts. This provides a pool of finance from which a Trust can draw should a claim be made which exceeds its chosen excess.(13)

In April 1995 the split between the role of 'providers of services' and the 'purchasers of services' was completed. The Regional Health Authorities ended in April 1996 and Trusts are now free to adopt the protective arrangements they feel fit to cover the cost of claims against them.

By 1993 the NHS had started to formulate a classification of risks within health care. The NHS guidance at the time grouped risks faced by the National Health Service as Direct Patient Care Risks, Indirect Patient Care Risks, Health and Safety Risks, and Organisational Risks(14). Direct Patient

Care Risks covers clinical risks which could lead to claims for clinical negligence as defined above.

Indirect Patient Care Risk covers risks to patients from other activities of the health service which is not part of the patients direct treatment and clinical care. An example would be the risk to patients due to fire. Fire is a serious risk in any public building and in hospitals, where the public are particularly vulnerable, fire is a serious threat. All NHS Trust's are subject to the requirements set out by NHS Estates under 'Firecode' (15). This sets the standards on design, construction and fire safety management. Section 60 of the NHS and Community Care Act removed Crown immunity from April 1991 and all NHS premises are required to comply with Firecode. Other indirect patient care risks include risks to the security of the patient and their property from both internal threats (such as dishonest staff) to external threats such as thieves wandering through the hospital or targeting it specifically.

The third key area of risk, according to NHS guidelines, is that related to health and safety. The duties, roles and responsibilities of NHS organisations for these risks are well articulated in Health and Safety at Work Act 1974 and its associated regulations.

The Act places duties for health and safety at work on employees, employers and the self-employed. It requires that the place of work has safe working practices and safe premises. There must be safety policies known by staff. A safety committee must be established with employee representation, if so requested by the employees. Employees have a duty to take reasonable care to avoid injuring themselves or others and to cooperate with their employers

in implementing the requirements of the Act. The Act establishes the Health and Safety Executive and the Health and Safety Commission. The Secretary of State is given the power to make associated regulations and gives the Commission the authority to specify 'codes of practice' related to health and safety at work.

The Act establishes the role of inspectors and defines their powers to monitor and enforce the requirements of the Act and the issue of 'improvement notices' and 'prohibition notices'. It also deals with how to appeal against these notices. The Safety Representatives and Safety Committee Regulations 1977 amended 1992 enables recognised trade unions to appoint safety representatives with the ability to investigate potential hazards in the workplace. It specifies the duty of employers to support this activity and to keep them informed of steps being taken to meet the requirements of the Management of Health and Safety at Work Regulations.

However, the Health Service was originally cushioned from the full affects of this legislation because of Crown immunity but this was removed by the National Health Service (Amendment) Act 1986 which now means that the health service is now subject to the full weight of the law if it does not manage health and safety risks in line with the requirements laid down in legislation.

Finally, the NHS guidelines identifies a group of risks that it calls organisational risks. These risks relate to the Trust as an organisation which provides goods and services, such as specially produced pharmaceuticals. In addition the Trust depends heavily on information and information systems

to work effectively. These and their security is a further example of organisational risk.

At this point in the research I started to question the value of this health care classification of risk in comparison to the classification of risk as developed in Chapter 2 from the general literature on risk management. The conclusion of Chapter 2 was that risk was classifiable along two major dimensions, likelihood and consequences. Within the dimension of likelihood there were risks which had quantifiable probabilities of occurring and others which did not have such clear probabilities which could be further divided into those which had a likelihood assessed by an expert group and those others which had certain levels of perceived risk. In terms of the consequence dimension there were the sub categories of speculative risks which are those which have a potential for gain as well as loss and those risks which only have a potential for loss, so called pure risks.

The classification of risks used by the NHS guidelines seems to give recognition to clinical patient care risks as being qualitatively different from other risks to the patient. We have seen the origin of this difference in the nature of the historical relationship between clinical professionals and health care manager's responsibilities for the management of clinical risks. Progressively, clinicians have been offloading the consequences of their negligent actions as the cost of bearing them has progressively increased. At the same time managers are becoming more interested in how clinicians manage clinical risks as the organisations for which they have responsibility, increasingly suffer the consequences of negligent clinicians. I started to wonder whether I was observing an artefact of history in the separation of clinical from other risks within the NHS guidelines.

I also wondered why health and safety risks were classified as separate from indirect patient care risks. There are many examples of indirect patient care risks such as dangerous floors which are both health and safety and indirect patient care risk. The key argument for the separation of indirect patient risk and health and safety risk was that the latter is covered by specific legislation related to the Health and Safety at Work Act (1974) while other indirect risks such as theft would not be covered by that specific Act and its associated regulations. I concluded that the reason for this separate classification related to the additional risks associated with failure to comply with the requirements of the Health and Safety at Work Act and its interpretation by the Act's enforcing officers. Such additional risks, over and above those consequential to the health and safety incidents themselves, include closure of services, fines and potential imprisonment.

Organisational risks, as a group, could be thought of as similar to clinical risks but this time the responsibility for them is directly the responsibility of management. The role of the manager is to deal with risks which threaten the ability of the organisation to function. These again are wide ranging and include dealing with the risks associated with delivering the contracted activity to making the right capital investment decisions.

However, though some of these are clearly not also health and safety risks, some are both. For, example, efficiency gains required to meet contract activities my result in working practices which are also in breach of health and safety legislation and this in turn may also result in indirect patient risks and even clinical patient risk.

The NHS guideline grouping of risk was understandable but I could not really see the value of the separation in the way that I could see the value of separating pure from speculative risks. The value of separating pure from speculative risk is that it provides the general direction of risk control that needs to be taken. Since pure risks can only result in loss, risk control is about avoidance while, with speculative risks, risk control is about weighing up costs and benefits. The NHS guidelines grouping does not help to determine the general risk control direction to be taken.

If we ask the question...

Should I be trying to avoid this risk or should I be trying to determine what the cost benefit of taking this risk are? When we ask this question about direct patient care risk, indirect patient care risk, health and safety risk and organisational risk then I cannot come to a single conclusions about them because the answer depends on whether the specific risk is a pure risk or a speculative risk.

Take a direct patient care risk such as that associated with having an anaesthetic. This is really a speculative risk. The decision is dependent on the cost benefit of having an anaesthetic. If I need to have major surgery in order to save my life then the risk of the anaesthetic is outweighed by the pain associated with surgery without an anaesthetic. However, if we take the risk due to a clinician accidentally giving a patient an overdose of a drug then this is a pure risk. This type of risk needs to be avoided because the consequence can only be loss should the risks associated with the drug overdose occur.

If we take a health and safety risk such as leaving floors wet with no warning signs, then this is a pure risk and thus needs to be avoided. However, if a rehabilitation patient is being helped to start walking again and a judgement is made that two nurses would be sufficient to safely support the patient then a speculative risk has been taken. The benefits of helping a patient to walk, is being judged against the risk of him falling and injuring the supporting nurses' backs.

4.3 Initial steps taken to identify risks within the hospital context.

At this stage of the research I had no real idea of the type and nature of risks facing the hospital. I did recognise that what risks there were had not been systematically identified or defined but there was a feeling that the range and complexity of those risks must be significant and difficult to manage. The risks faced by health care is increasing recognised as particularly complex to manage. Pincombe summarised my feelings when he wrote:

> '...healthcare providers face risks peculiar to them. For example, the introduction of new technology into medical diagnosis and treatment is in itself creating new areas of risk, such as faulty calibration of radiotherapy equipment and mistaken interpretation of data... hospitals are also particularly susceptible to hygiene problems and cross-infections... frequently have employees working under intense pressure and more prone to run of the mill risks such as accidents and to the consequences of stress... plus back and needle stick injuries... Managers are also having to face the requirement to comply with an increasing volume and complexity of health and safety legislation with more onerous penalties for failures.' (16)

The need for a formal Trust wide route for the identification of risk was identified, not by the clinical community, but by the Health and Safety Manager who had carried out a Trust wide Health and Safety and Fire Risk Assessment. The main conclusion of this assessment was that there was a need for a central register of adverse incidents in

order to identify the risk faced by the Trust. A single Adverse Incident Report (AIR) Form was produced and was intended to be used for both clinical and non-clinical risks. As I took charge of the Trust's risk management approach I had great hopes of this adverse incident reporting system.

The reporting form had to be completed in black ballpoint because it was a legal document and it was emphasised on the form that only facts, not judgements or opinions, should be stated. The form had to be filled in as soon as possible following the incident or identification of the hazard. If the incident/hazard occurred elsewhere than in a ward or department (ie hospital corridor, car park etc.) then the report had to be completed by the nearest department or by the department to whom the incident/hazard was first reported.

The person completing the report had to take time to examine the scene whilst contributing conditions still existed. Names and addresses of witnesses had to be taken as well as a brief statement. In case of serious incidents the scene had to be preserved and equipment maintained until further examination by senior staff, or the police, had completed any necessary enquiries. If possible photographs had to be taken of the relevant area. The person completing the form had to specify the immediate action taken to safeguard others and prevent recurrence. A copy of the form was kept in the ward/department as a record for at least 10 years. The other copies were to be sent immediately to:

- Health & Safety Advisor
- Head of Department

The copy which was sent to the Health and Safety Manager was checked by him in order to ensure that the action taken had been reasonable and complied with health

and safety regulations and the Trust's policies. Once satisfied the incident was transferred onto an adverse incident database.

Any risks fulfilling the RIDDOR requirements were reported to the Health and Safety Executive who would decide whether or not there was a need for a further enquiry.

Incidents requiring specialist review such as medical equipment, clinical practice, infection, radiation or human resources for example, were sent to the appropriate clinician or manager to be followed up so that specialist advice was available to the local clinician or manager.

Anything which was considered to be very serious was also reported to the Chief Executive and me as the Risk Manager. At this time we thought that this database would provide us with a source of data from which we could identify the risks facing the Trust and would be the principle source of data out of which I could identify the key risks facing the Trust.

The category of risks which the form contained had been developed prior to this research project by the Health and Safety Manager on the basis of his experience of incidents reported to him. These incidents were classified under the following categories:

The consequences were classified as:

- Non-injury incident
- Injury incident
- Property Damage/ Loss

In addition, for staff the amount of time off sick was noted in the following groupings:

- None
- Less than three days
- More than three days

The causes were classified as:

- Assault/ verbal/ physical abuse
- Vandalism/ criminal damage
- Accidental property damage
- Break in/ theft
- Intruder
- Fire
- Contact electricity
- Contact with machinery/ equipment
- Hot/ cold contact
- Striking object
- Struck by object
- Exposure to harmful substance
- Needle-stick/ sharp object
- Manual handling
- Patient handling
- Slip/ trip/ fall
- Clinical incident
- Other (please specify)

A review of the incidents reported on this database was carried out in March, 1996 and found that most incidents involved patients with the next most affected group being staff.

1/4/95 - 31/3/96 Total Adverse Incidents Reported (TABLE 4.1)	Number
Staff	301
Contractors	27
Sub-Contractors	1
In-patients	810
Out-patients	40
Visitors	22
Others	72
Total	1273

Table 4.2 shows the reported causes of accidents and injuries. The differences between the total figure given in Table 4.1 and Table 4.2 was due to a number of adverse incident forms not having a 'cause' recorded.

Serious incident reported to the Health and Safety Executive under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) are given in table 4.3 below.

TABLE 4.2 REPORTED CAUSES OF ACCIDENTS/INJURIES

	TRIPS/ FALLS	STRIKING OBJECT	FALLS FROM HEIGHT	PATIENT HANDLING	NEEDLE STICK	SHARP OBJECTS	ASSAULTS	HOT/ COLD	MANUAL HANDLING	HARMFUL SUBSTANCES	UNKNOWN	TOTAL
STAFF	37	31	2	41	36	23	18	10	25	11	-	234
RESIDENT CONTRACTOR	2	5	-	-	5	2	3	-	2	1	-	20
VISITING CONTRACTOR	-	-	-	-	-	-	-	-	-	-	-	-
INPATIENT	655	25	50	2	2	6	6	20	-	-	8	774
OUTPATIENT	20	4	3	2	-	1	2	-	-	-	-	32
VISITOR	11	1	-	-	-	1	2	-	-	1	-	16
OTHER	1	-	-	-	-	-	-	-	1	-	6	8
TOTAL	726	66	55	45	43	33	31	30	13	13	14	1084

1/4/95 - 31/4/96 **Causes of Accidents Reported to HSE (Table 4.3)**	Total Number	Nurses /midwife	Other Staff	Patients
Manual Handling (Patient Handling)	13	12	1	
Manual Handling (Other)	8	1	7	
Slips/falls	24	4	3	17
Other	7	4	3	
Dangerous Occurrence	1			
Total Reportable to HSE (RIDDOR)	53	21	14	17

The major cause of incident to patients were those related to slips, trips and falls and reflects the number of elderly and frail patients which the hospital has. Staff injuries were more variable, with the majority related to slips trips and falls, handling of patients and being stuck by needles. Serious injuries, RIDDOR reportable for staff and patients were mainly due to slips, trips and falls followed by patient handling for staff groups.

Table 4.4 shows the number of fire related incidents recorded. Fire and security remained the responsibility of the Facilities Directorate. The majority of these incidents were related to staff residences in which cooking fumes were activating the fire alarms. The second were due to false alarms. There were no serious fires but I was concerned that the best estimate of numbers of staff attending the mandatory annual fire training was only 50%.

1/4/95 - 31/3/96 Total Fire Related Incidents Reported (TABLE 4.4)	Number
False Alarms:	
- Cooking fumes activating detector	41
- Faulty firm alarm system	14
- Faulty smoke detectors	13
- Correctly initiated by staff	12
- Caused by contractor during work	12
- Mobile phones/radios activating detectors	6
-Steam from iron/kettle activating detectors	3
- Caused by disturbed/confused patients	2
- Caused by toaster	1
TOTAL	104

Fires - Discarded cigarettes operating detectors	6
- Electrical fault causing fire	4
- Arson	2
- Patients clothing	1
TOTAL	13
GRAND TOTAL	126

Table 4.5 shows the number of security incidents reported. The majority of incidents related to crimes against the motor vehicles parked within the hospitals car parks. The rest related to thefts of various sorts.

SECURITY INCIDENT 1/4/95 -31/4/96 (TABLE 4.5)	
BURGLARY	27
THEFT	76
CRIMINAL DAMAGE	51
THEFT/TAKING MOTOR VEHICLE	45
ATTEMPTED THEFT &/OR DAMAGE TO MOTOR VEHICLE	82
THEFT FROM MOTOR VEHICLE	15
TOTAL	296

There were few clinical incident claims so I asked for an analysis of clinical negligence claims in terms of percentage of the total claim by specialty. This was only meaningfully available for the year 1989 as claims for each year can take years to be filed and therefore we concluded that the 1989 figure reflected the most complete set of claims information available in 1996. The analysis of the claims made for alleged clinical negligence is shown in Table 4.6 below:

Table 4.6 Clinical negligence claims by specialty		
SPECIALTY	**PERCENTAGE OF TOTAL CLAIMS PAID 1989**	**PERCENTAGE OF TOTAL CLAIMS FILED IN 1989**
Obstetrics & Gynaecology	29.4%	23.7%
Trauma/Orthopaedic Surgery	16.7%	19.8 %
Anaesthetics	13.3%	10.3 %
General Surgery	13.0%	12.4%
Accident & Emergency	5.3%	12.7%
General Medicine	4.2%	3.9%
E.N.T.	3.8%	2.5%
Plastic Surgery	3.7%	3.1%
Urology	3.2%	2.2%
Others	7.4%	9.4%
TOTAL	100.0%	100.0%

In terms of clinical negligence the area of greatest risk is obstetrics both in terms of damages awarded and length the of time which it is allowable for proceedings to start. The percentage of total claims filed is an indicator of the claimants view of negligent treatment while the claims paid reflects the views of independent expert opinion as to which claims are actually negligent. From the perspective of the Trust claims which are filed, whether or not subsequently found to be justifiable by the courts, still has significant costs associated with it. These unsubstantiated claims still have to be investigated, solicitors appointed, cases presented in court etc. Risks which are assessed or just perceived still have significant costs associated with them

and is a good example and confirmation of the importance and differences between these two risks within the conceptual model of risk Fig 4.1.

However, this example, in support of the conceptual framework, also initiated a discussion about whose perspective of risk was this research to be focussed on. Was it the Trust, its staff, the Health Service, the patient or legal enforcement officers.

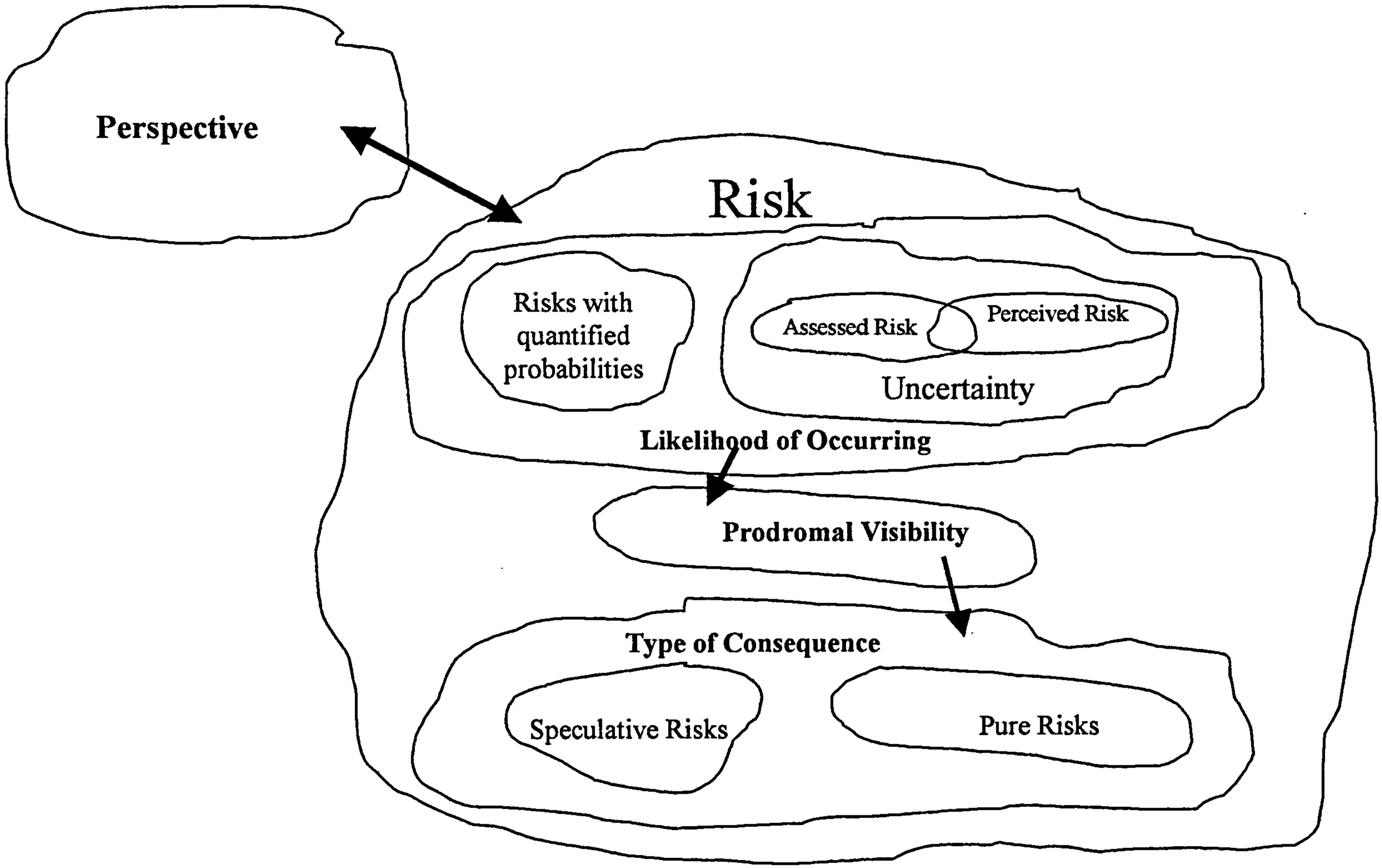
Discussion about the meaning of this data led to an important development in my concept of the nature of risk described in Fig 4.1. Take for example, the risk of clinical litigation. From the Trust's perspective the risk is dependant on the mix of specialties which it has. Trusts without high risk specialties such as obstetrics are less risky in terms of clinical risk than are those with obstetric specialties. The main consequences, from the Trust perspective, will be financial and possibly damaging publicity.

From a clinicians point of view the risk to them depends on the specialty in which they work and the skills which they and their team have. The consequences for them, is theoretically financial but this is unlikely as now the Trust will carry this loss. The most likely consequences are stress related to the investigation, publicity and court action.

From the patient's perspective the risk depends on their perception of the skills and competence of the clinical staff. The consequences are personal injury and its effects on their financial position.

Therefore, the conceptual model of risk needs to have the dimension of perspective from which a risk is being viewed added Fig 4.2.

Conceptual model of the nature of risk (Version 3) (Fig 4.2)



4.4 Perspectives and risks within health care

The number one clinical risk was that of obstetrics claims against the Trust and this is reflected in the findings of other studies:

> 'In 1989, 20% of claims settled by the Medical Defence Union occurred in the field of obstetrics and gynaecology (24 per cent of the settlements being attributable to doctors working within the NHS hospital service). The average value of an obstetric case was just under £44,000, 66% higher than the average for all the other specialties taken together. Ten of the high value settlements (over £150,000) were for obstetric cases, including the most expensive example for that year; £650,000 (the 'value' of a brain damaged baby case has risen markedly since, to around £1m or more in 1995). (17)

While obstetric risks are the leading clinical risk, clinical risks are the largest group of risks facing the hospital. However, clinical care and treatment risks were not being reported through the adverse incident reporting system. Analysis of the hazard/incidents filed found only 12 had been reported through the adverse incident reporting system. With clinical risks being both high risk and under-reported I decided to explore the clinical and patient perspective as to what constitutes a clinical negligence risk in order to see if it could throw any further light on my developing understanding of the nature of health care risks.

In order to practice medicine risks must be taken. The complexity of people, their illnesses and treatments available results in there being no simple programmed decision making process by which clinical risks can be effectively taken.

Clinical treatment and care, because it is risky and requires high levels of skills to be provided effectively, has developed into a profession which has mechanism to control

those risk. Central to the clinical profession's mechanism to control risk is training. As a corporate Trust manager my concern was not with how clinicians made their speculative risks as part of their clinical practice but I was concerned with how the Trust could ensure that they do not act in a way which could be classed as negligent and thus put the Trust at risk through its vicarious liability for those actions.

The legal system continues to develop ways of determining the presence of clinical negligence whether it be due to malevolent acts or failure to practice to the standards expected by the specific clinical profession. The central legal test for clinical negligence is the Bolam test.

> 'The *Bolam* test is a rule both of substantive law, asserting the standard expected of professionals, and a rule of evidence, telling judges how they are to approach the question of whether professionals have reached that standard.' (18)

The Bolam test is that:

> A doctor is not guilty of negligence if he has acted in accordance with a practice accepted as proper by a responsible body of medical men skilled in that particular art.... Putting it the other way around, a doctor is not negligent, if he is acting in accordance with such a practice, merely because there is a body of opinion which takes a contrary view' (19)

In the Bolitho v City & Hackney Health Authority case there has been a further clarification of this test with a clearer definition of what is meant by responsible. The background to this case is that Bolitho was a child suffering from breathing difficulties. The nurses caring for him called Dr Horn, the paediatric registrar, who did not attend. Later the patient had suffered a further attack of his condition which resulted in brain damage due to lack of oxygen to the brain.

This case introduced the additional requirement, to the test of accepted medical practice, of accepted medical practice which can stand up to logical scrutiny.

> 'A defendant will not necessarily succeed if supported in court by senior consultants who have managed to remain on the medical register throughout their professional lifetimes. A defendant will succeed if the supportive opinions of those experts stand up to logical scrutiny.' (20)

However the key test will remain accepted practice.

> 'The reality is that only rarely will negligence be established if there was compliance with an accepted practice.'(21)

Never-the-less the test does not allow lack of knowledge or experience to be used as a defence against negligence:

> '...it is not a defence to a claim in negligence to say that a doctor did as well as could have been expected of an inexperienced person in the circumstances. The courts consider the standard appropriate to be that of a post occupied by the individual concerned. Thus a junior doctor who is seconded to a special unit cannot plead lack of experience... A medical practitioner should not undertake work beyond his or her competence and will be judged by the standard of any specialisation which he or she purports to profess.. The state of knowledge will be considered by reference to what was known at the time of the alleged negligence rather than by the time the case reaches trial.' (22)

It is interesting to note that acceptable can also mean acting in way in which the results are within some unspecified range of outputs from the mean of other clinicians or hospitals practice.

> 'Increasingly, if a particular practice is to be endorsed as legally responsible, it will be necessary to show that its performance by individual clinicians or by particular hospitals is statistically defensible in terms of clinical result...It will be particularly interesting to see how the courts approach economic justifications for the adoption of objectively less effective techniques. Would hospital A...escape legal censure because technique B costs half of what technique D would have cost, and as a result of that saving, more patients in other parts of hospital A were kept alive?...There are clear (and horrific) consequences for the discovery process in medical litigation if clinical audit materials arc to be the stuff of routine debate.' (23)

Two key concepts seem to be at work here, the first is that of 'acceptable practice at the time of an incident' and the other is 'unacceptable practice' . Unacceptable practice is further subdivided into reasons for the unacceptable practice which includes: 'lack of competence', 'malevolent acts' and 'accepted practice which does not stand up to logical scrutiny'. These then are the key factors which are taken into consideration when determining whether or not a clinical negligence risk exists.

Fig 4.3.

Factors used to determine whether a clinical practice risk exists

(Version 1)

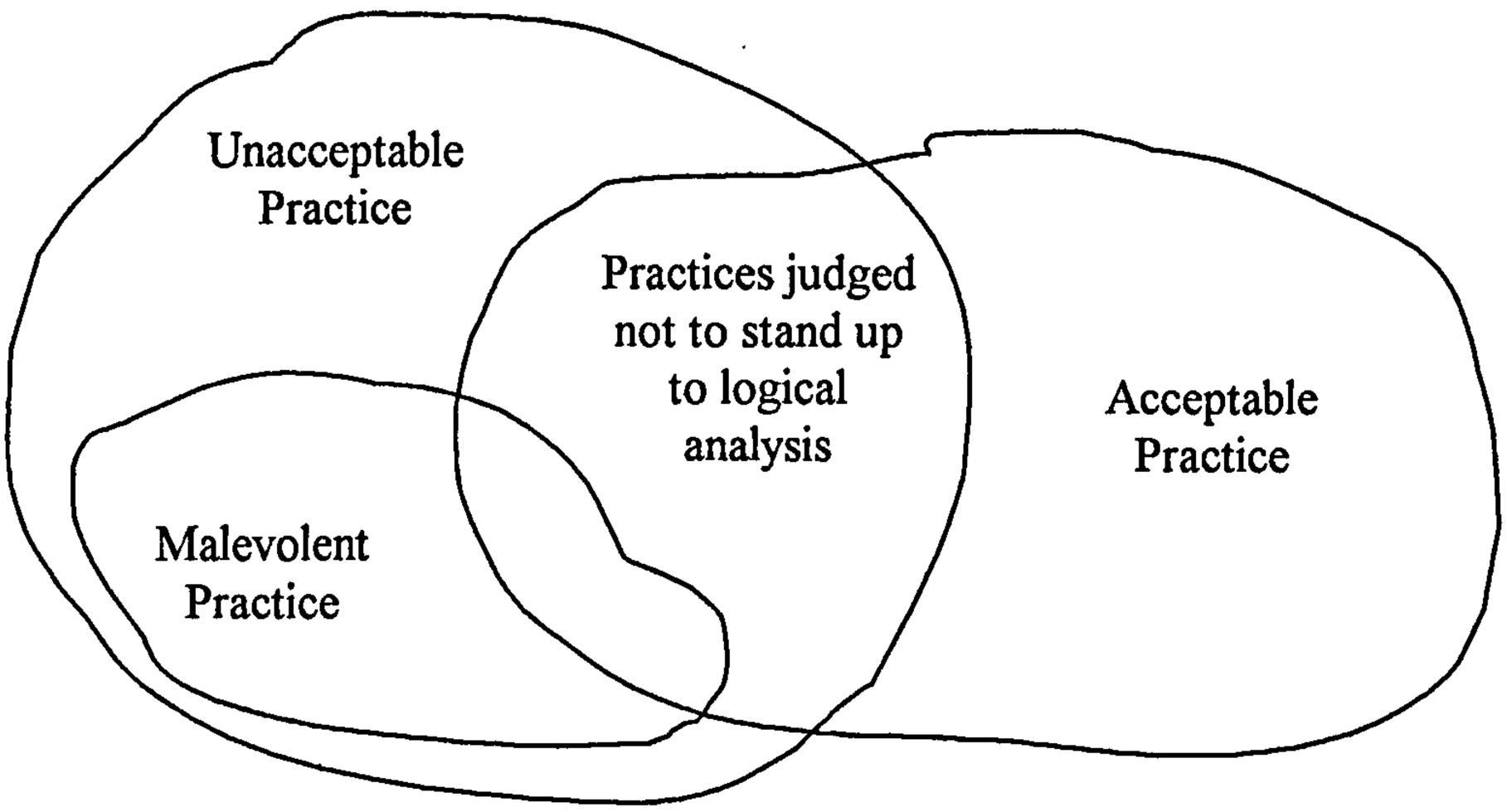


Fig 4.3

Errors of judgement, however, are not in themselves negligent acts.

> '...it is now clear that an error of judgement may or may not be negligence... The position was put clearly by the House of Lords... 'No matter what profession it may be, the common law does not impose on those who practice it any liability for damage resulting from what in the result turn out to have

> been errors of judgement, unless the error was such as no reasonably well-informed and competent member of that profession could have made'.' (24)

However, some acceptable practice may not be classed as negligent but may also not be practice which is of benefit to patients in which case:

> '...an agent may expose another person to the risk of serious harm in so far as the act which creates the risk is performed for a good reason, for example to avoid some more certain harm.'(25)

Progress in medicine is dependent on moving beyond what is currently acceptable practice. Such progress if not made leads to further risks to patients as a result of inhibiting the development of new, more effective practices. The important of taking risks to progress clinical practice is recognised in the law. The law seems to allow for departure from accepted practice but demands that all the circumstances be taken into account before a judgement in a particular case will be considered to be negligent.

> 'Where a medical practitioner uses some new technique or treatment which proves to be unsuccessful, or worse, there can be no prospects of a defence based on compliance with an accepted practice. The position would be different if a new form of treatment had won the approval of a respectable part of the profession. But the mere departure from an established practice would not of itself lead to a finding in negligence; although there would be a practical burden on a defendant to show that a decision to embark on a new form of treatment had been fully explained to the patient and was justified in all the circumstances.' (26)

However, the level of considered argument which can be used in the processes of a legal judgement is very different from the decisions being made daily by clinicians in the field and there is evidence that fear of complaints can make clinicians practice defensive medicine .

Defensive medicine is defined as:

> '...ordering of treatments, tests and procedures for the purpose of protecting the doctor from criticism rather than diagnosing or treating the patient...' (27)

Examples of defensive medicine include:

> '...skull X-rays for every head injury, or clinically unnecessary blood tests. Clearly such actions cannot be justified.'(28)

Clinicians may also not get involved in high risk but potentially effective treatments because no one is willing to take the risks associated with it. Therefore, from the clinical perspective, a further type of risk needs to be added when determining whether a clinical practice risk exists, that is the practice of defensive medicine. Therefore, the clinical perspective needs to includes the risk of defensive medicine being practised Fig 4.4.

Factors used for determine whether a clinical practice risk exists (Version 2)

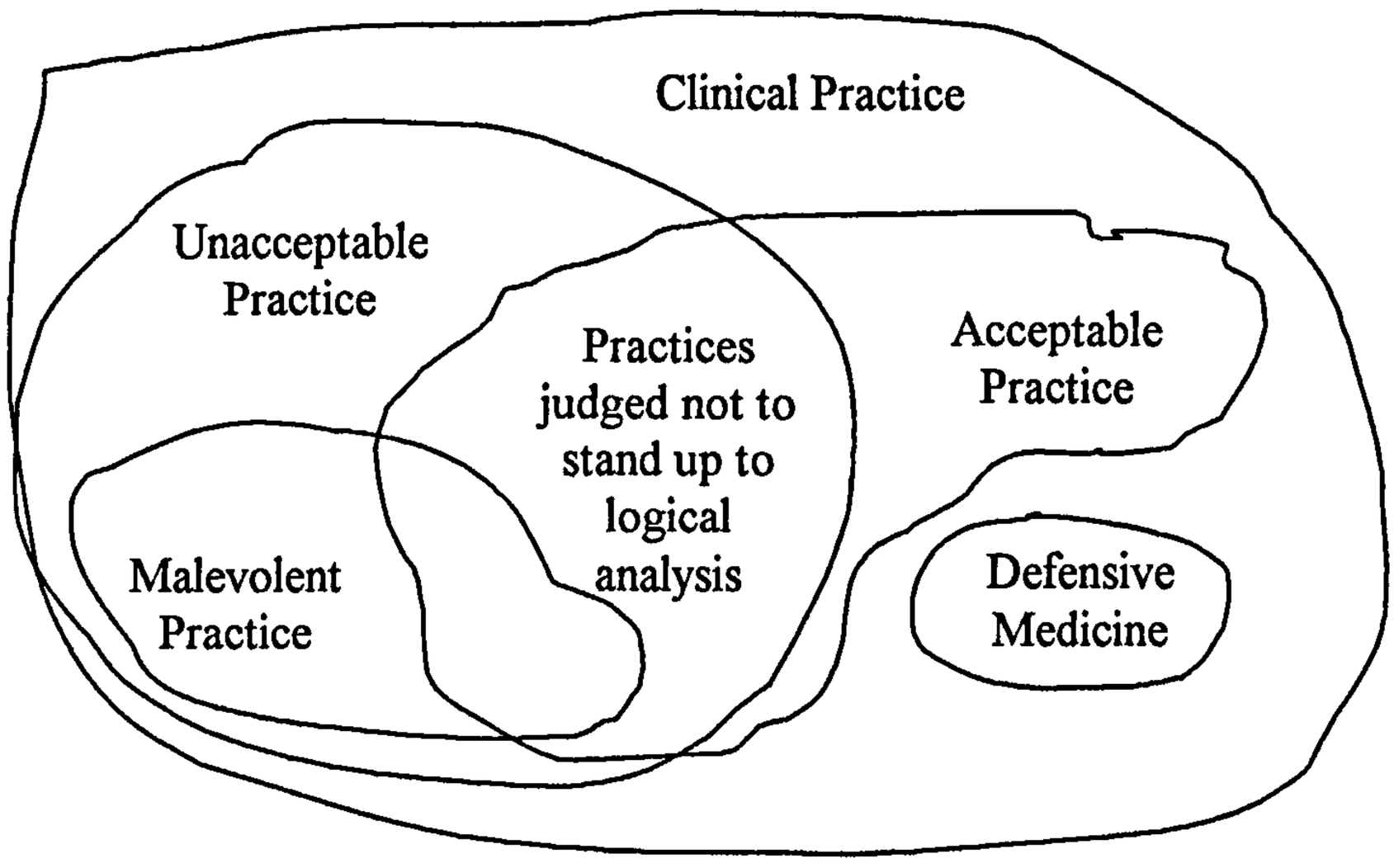


Fig 4.4

Clinicians, when worried about the risk of being charged with negligence, tends to employ negative defensive practices, ordering more test and referrals than is necessary, rather than positive defences, such as better documentation and the

provision of better information to patients. (29) This seems to suggest the existence of a 'Personal Consequence' heuristic. This heuristic, which I postulated, is a rule of thumb which states that if faced with a risk which can affect oneself, then the priority for action is to protect oneself even if this increases the risk to others.

In the example above, the increased use of tests and referrals does little for the patient. In fact, the increased use of X-rays may even be harmful and from the point of view of the Trust the inappropriate use of resources results in decreased efficiency and an overall reduction in the organisation ability to treat and care for patients. From the perspective of the clinician, however, positive defences, such as better documentation and information to patients, can be seen as more likely to protect the organisation and patient rather than the clinician.

At this stage in the research the critical importance of an understanding how the 'Personal Consequence' heuristic contributed to the likelihood of defensive medicine occurring became an important aspect of my research. The risk of being the subject of litigation is not simply down to committing negligent acts. An understanding of the nature of risk therefore cannot simply focus on clinical practice and the heuristics used by clinicians. There is also a need to understand how the clinical perspective interacts with those subjected to clinical practice, that is the patient, their relatives and friends.

The importance of understanding this perspective is highlighted by the advantage that the patient's perspective has in law over the clinician's perspective.

> 'Defendants are always at a disadvantage against legally-aided plaintiffs. An unsuccessful legally-aided plaintiff will not, unless he comes into colossal funds, have to pay any of the defendant's costs. Medical negligence cases are particularly expensive to prepare and fight. The defendant is unlikely to get any of those costs back, whatever the outcome. The advent of conditional fee

> agreements, where the plaintiff is backed by an insurer, may well force more medical negligence cases to trial.' (30)

There is some research which gives the reasons why people sue and it seems that this is only partially related to negligent acts themselves. A common factor for litigation being taken has been sited as poor communication.

> 'A common theme is poor communication between doctor and patient.[5] It has been demonstrated that a prompt and adequate explanation of a medical mishap may reduce the number of complaints leading to litigation.' (31)

But there are other motives found in the literature and these include:

> 'A belief that all wrongs should be rectified, a pervasive 'lottery mentality', the inability of individuals to take responsibility for themselves and a genuine increase in negligent doctors have all been offered as explanations. ... In a survey of 227 patients and relatives taking legal action,' four main themes emerged as reasons for litigation:
>
> - standards of care;
> - the need for an explanation;
> - financial compensation;
> - accountability of the main defendant.
>
> This study had a fair (49%) response rate and represents the most comprehensive survey of litigants. However, it suffers from the problem that none of the respondents is likely to volunteer negative reasons such as vindictiveness, greed or revenge as the motivation behind the action.' (32)

However, there seems to be other factors at work in encouraging litigation, a survey of potential complainants calling an American law office found that:

> '...poor pre-incident relationship with the doctor was significant in 53% of cases; 48% were driven by financial considerations, and 73% of callers had been encouraged by law firms' advertisements. The problem with this paper is that it identifies the motivation of potential, rather than actual litigants, with less than 3% of the individuals surveyed actually filing suits.' (33)

The difficulty in identifying what litigant's motivations are, led to a survey of consultant staff and lawyers in order to get their perspective as to why clients sue:

> '...of the consultants taking a view, a clear consensus arose on four of the questions relating to litigants' motivation:
>
> - 67% attributed it to long-term financial support;
> - 73% thought litigants wished to establish true facts;
> - 86% thought that litigants were trying to apportion blame;
> - 73% thought vindictiveness an unlikely motive.
>
> A smaller number (63%) regarded litigants as motivated to change medical practice.' (34)
>
> 'Of the 16 lawyers replying, 14 were solicitors and two were circuit judges. Most of the solicitors had been selected for their reputation in medical litigation (both for plaintiff and defendant) although one of the solicitors practised as a litigation manager in a hospital Trust....
> - 86% did not believe cynical financial gain motivate clients;
> - 87% attributed the motive to long-term financial support;
> - 82% thought clients were trying to change medical practice;
> - 86% thought litigants wished to establish true facts;
> - 87% thought vindictiveness an unlikely motive.(35)

Based on these pieces of research, I postulated that patients were using a set of heuristics to determine whether or not to initiate legal proceedings for clinical negligence Fig 4.5. The first heuristic seems to be that the clinicians treating the patient either get it right or get it wrong. It is at the point when the patient perceives that something went wrong that a series of other heuristics come into play.

These include the heuristic that it should be possible to explain why something has gone wrong. However, not all clinical outcomes are explainable. Another heuristic is that someone must be responsible for the outcome even though, in some instances such as unexpected allergies to drugs, no one is responsible for an unpredictable drug reaction in a particular patient. Another heuristic is that someone should be punished for the harm caused to them even if the punishment is unlikely to correct the personal

consequences of the harm caused by a particular clinical intervention, or is unlikely to prevent others suffering a similar fate. A related heuristic is the 'Punishment' heuristic, that financial resources should be transferred from health care to the patient if the service gets it wrong. This heuristic does not consider the impact of such a transfer on the ability of the service to treat other patients, or on the ability of the organisation to put in place mechanisms to prevent others suffering the same harm as that of the patient suing the health service. Finally, there appears to be a heuristic which is that a personal experience of harm should be used as a learning opportunity to prevent the same thing happening to others. Though in itself apparently a reasonable expectation, such a demand can distort the overall focus of clinical education on that which is currently in the public eye rather than what is the most significant risk to patients.

The nature of risk faced by the Trust is therefore dependent on how clinical practice and the clinician's heuristics interact with the patient's experience and their heuristics Fig 4.6. Often this interaction takes place through various communication channels, verbal and non-verbal, and this is possibly why the effectiveness of communication is considered to be an important factor in determining whether a patient will initiate litigation or not.

Proposed heuristics used by patients in determining whether to act in cases of alleged negligence (Version 1)

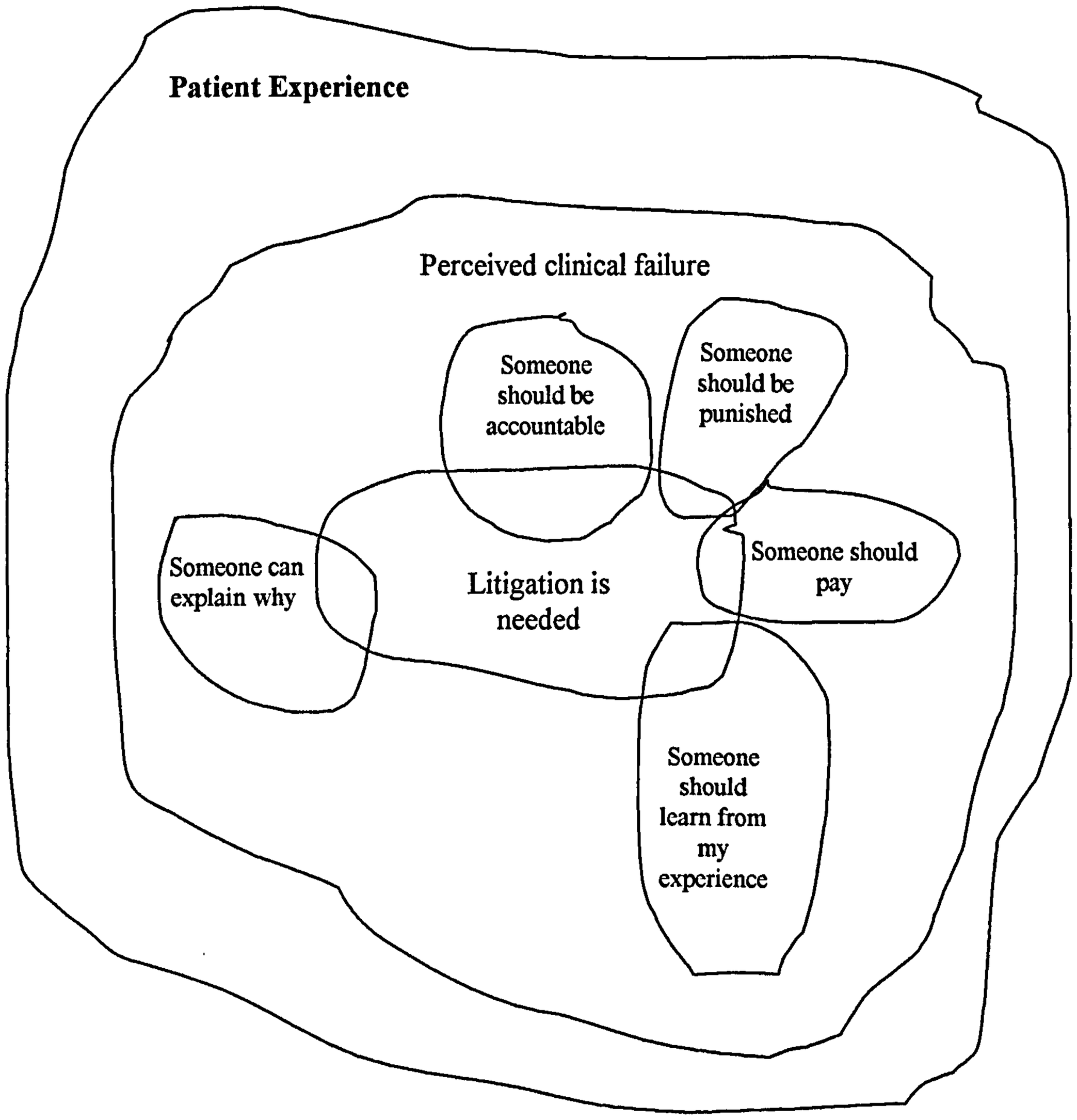
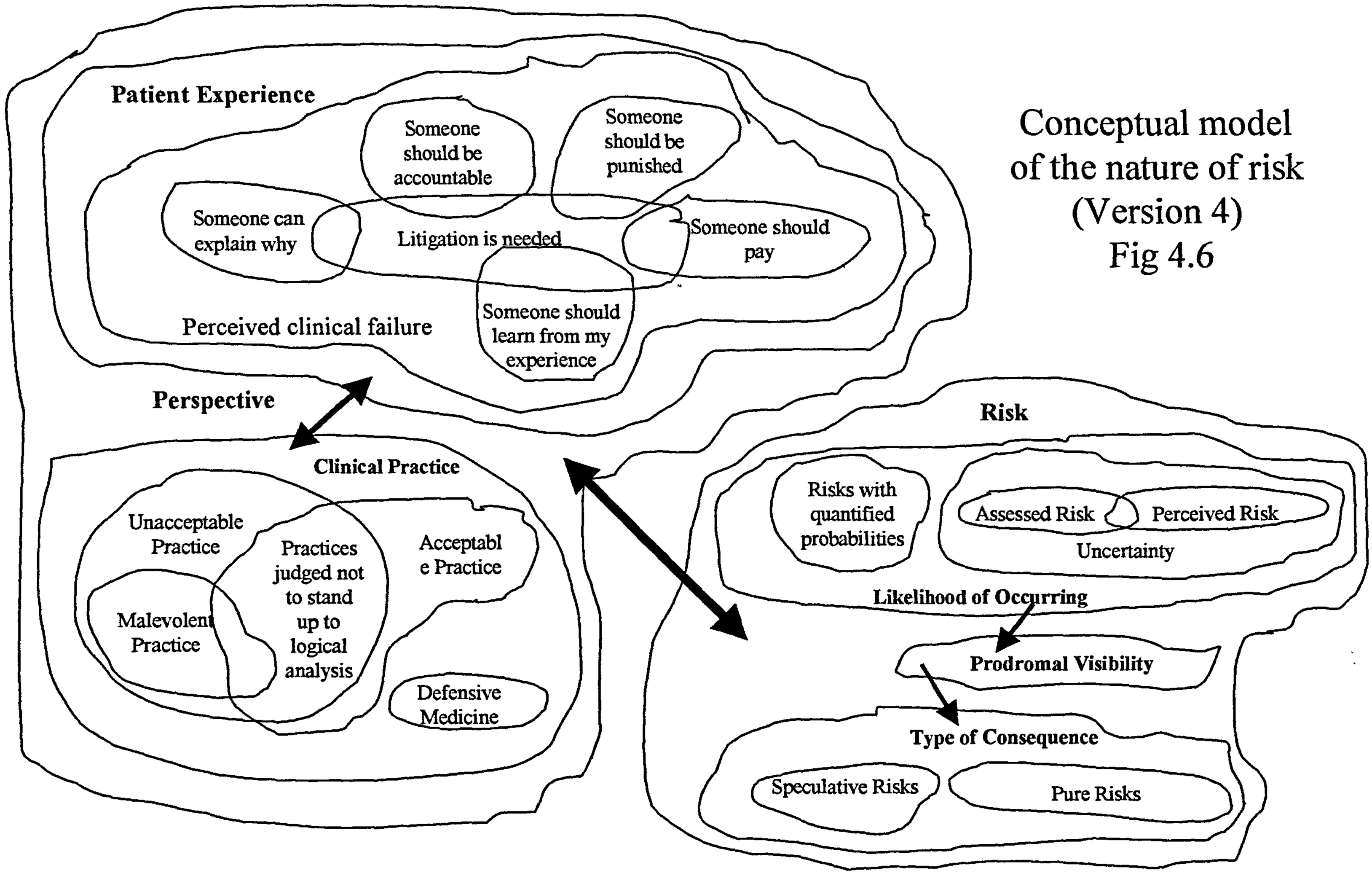


Fig 4.5



Conceptual model of the nature of risk (Version 4) Fig 4.6

4.5 Initial Reflection on Action Learning as a research approach

At this point I decided it was time to reflect further on my use of Action Learning as a research approach. I felt that I had learnt a great deal about risk and research but was I also being an effective researcher? What was being effective and what was not? How could I improve what I was doing?

My conceptual framework of the research approach is given in Chapter 3 fig 3.1. I had accepted that the knowledge to be generated through the research approach was first to be learnt by me before I could share it with others. The process of creating that knowledge was to record my experiences and my learning. That learning would come from the literature and the challenges to it brought about by testing it against real world experiences though a process of reflection and questioning with my colleagues. The source of this questioning would come from my action learning set, my co-researchers, the people I worked with in the field and my research advisors. The product of this process would be the development of conceptual models which reflected my growing understanding of health care risks and how to effectively manage it.

This conceptual framework would be further developed and tested within the field and this would confirm the value of the framework or would identify its weaknesses. A series of iterations, following the same cycle of Action Learning would progressively develop this conceptual framework until it produced a generalisable framework for understanding risk and its control.

At this stage of the research, the programmed learning element (P) and questioning (Q) was dominant. I had done little to test the ideas against real world experience but

this was acceptable to me because my understanding of risk and risk control was still at an early stage of development.

I was of course acting in response to various demands from the service but that action was not yet well structured in terms of a logical framework. However, I was reading the literature with the benefit of the experience of action in the real world and I was selecting my reading to help me make decisions as to what was the appropriate action I needed to take. I was recording all this but not in the way I could once my conceptual framework was more developed. There was lots of action but little shape to it.

The strength of the approach that I was using was that it was producing a conceptual framework which I was finding more able to satisfy my needs to make sense of the confusing array of definitions and perspectives on risk found in the literature. The weakness was that the richness of the questions from my learning set varied over time. Much of the questioning was based on short points of clarification about what I was doing rather than open, challenging and deeper questioning.

During this period there was also friction within the action learning set. There were clashes of personality which resulted in a great deal of the group's time being concerned with patching each other up psychologically, rather than being focussed on helping each other learn and research.

However, my research supervisors did provide a rich source of questions, challenges, reflections and new insights. Other challenges came from my colleagues in the field as I shared with them my understanding of risk and risk management. They were able to bring their perspectives together with mine and because we had a common agenda, the management of risk, were more like colleagues in adversity with a focus on the

aim of developing new knowledge through the process of Action Learning than was my learning set in the early days of the research.

I also found that the struggle to produce diagrams to represent my developing concepts was a powerful means of clarifying and challenging my own understanding of the concepts which I was acquiring. I also hoped that these diagrams would also help to communicating my developing concepts to others.

The second approach, which I found a powerful way of refining my thinking, was to try to postulate the heuristics which people seemed to be using. At this point, the need to explain how I was doing this became very important in order to ensure that the nature of the heuristics which I was conceptualising was made clear and secondly, to ensure that the approach for identifying heuristics was going to remain consistent throughout the research process. If I did not do this, then I would be using the same label 'heuristic' to describe different things.

This point became clear to me when I was attempting to understand the heuristics being used by clinical practitioners and patients when determining their perspective on risk. What did I mean when I used the term heuristic?

Within this piece of research I define a heuristic as:

A simple rule of thumb which people use to help them come to a conclusion in a relatively quick and easy way, they provide answers as to

what is going on and how to react to what is going on without the need to guess nor analyse the issues being faced.

Heuristics are of the form:

If x happens then do y.

The following uses Kahneman's 'Availability' heuristic, in which people make judgements according to how easily instances come to mind, as an example of how my definition could be used to specify the key elements of a risk management example:

'If this risk is easy to recall then it is a priority for action' .

Within this sentence x happens is the phrase 'If this risk is easy to recall' and do y is the phrase 'it is a priority for action'.

The 'Representative' heuristic is about making judgements based on typical cases.

In terms of a risk management example this heuristic is

' If that medication suits everyone I know that it will suit me' .

Within this sentence, x happens is the phrase ' If that medication suits everyone I know' and do y is the phrase ' then it will suit me (implied give it to me for my problem)'.

Using the above to increase the clarity as to what I meant by heuristic I decided to re-examine the heuristics tenatively identified while building up my initial conceptual model of risk.

If we examine the concept of clinical negligence to see if it fits my definition of a heuristic then we find that this could be stated as:

'If my actions are not malevolent, and supported by a responsible body of medical opinion and stand up to logical scrutiny then it is OK to do.'

Though this conforms to the form of a heuristic it does not meet the requirements of the definition in that the elements of x would need some detailed analysis in order to make the judgement that x exists. It is not immediately recognisable whether an action is malevolent, or supported by a responsible body of medical opinion or stands up to logical scrutiny. Much more thinking is needed before these questions can be answered. This is quite different from a heuristic which requires relatively little thought. Heuristic thinking is much more like a reflex - if I perceive this then do that and being a reflex it is much faster than non-programmed decision making.

However, if we look at the prostulated 'Personal Consequence' heuristic in order to explain why clinicians might practice defensive medicine then this could be stated as:

'If I feel I might be sued, then carryout all the tests and treatments which would protect myself no matter what the consequences are for others.'

This is of the form if x then do y and it complies with the definition in that it is a simple rule of thumb which helps to come to a conclusion without the need to guess or do detailed analysis. All that is required for the decision is the perception (feeling in this case) that 'I might be sued.'

The patient perspective examples also seem to fulfil the requirements of a heuristic. For example they all start with:

If I feel something went wrong...

and are followed by, ...then someone must:

...explain why.

...be held accountable.

...be punished.

...pay compensation.

...learn from my experience.

The implication of this reflection is two fold. The first is that I had not clearly enough defined what I meant by heuristics in the early stage of my research. The second, was that there existed an important distinction between a heuristic, simple rule of thumb and the more thorough analysis of many experts reviewing and analysing arguments until there developed a consensus as to what should be done. A court judgement is much more like non-programmed decision making than it is like heuristic decision making.

This was an important distinction because, my literature review and experience suggested that people generally use heuristic rather than thoughtful analysis when faced with risks and there are real dangers in using heuristics to make decisions.

It also confirmed to me that the other key research objective, a search for a way in which the risk management system could act as a corrective to the inappropriate use of heuristics, was vital for effective risk control. At this point I decided to review and specify the way that I would describe that system.

During this period I had to act in response to demands placed upon me by the risk management situation in which I was operating. I had to set up systems to help me manage the risks and those systems were based on what I had learnt in the literature and the advice I had received from colleagues in the field.

The Action Learning process also helped me to reflect on these systems but I was describing them in terms of management structures and flow charts. However, these did not seem to adequately represent the way that the system was working. The clear lines of communication and action implied in the flow chart were really much more blurred and flexible than the flow chart implied. For this research I needed to find a way of describing the risk management systems which reflected more closely the reality of my experience of them. Eventually, my literature search found an approach which seemed to meet my needs. That approach was Checkland's Soft System approach.(36)

The attractiveness of Checkland's approach to me was that it made it possible to describe human systems which have no hard and fast boundary but which never-the-less interacted with each other. The principles of the approach outlined by Checkland and which I intended to use, fitted well with the Action Learning approach which was at the heart of my research approach, for example.

Checkland requires that the specification of the areas of study and issues concerning methodology are clarified. This involves the definition of the research questions and

objectives. This has already been done through the process of Action Learning. In addition the selection of the parameters of the study and most valid and reliable methods for gaining new knowledge are to be developed. This has also been done by reviewing the literature on philosophy and methods and which led to the conclusion that Action Learning was the most suitable way of dealing with the problem situation under study and faced by me.

The problem situation is:

> 'A real-world situation in which there is a sense of unease, a feeling that things could be better than they are, or some perceived problem requiring attention.'(37)

Checkland proposes the use of three areas of analysis, so called Analysis One ,Two and Three. Each specifies the intervention or interaction in terms of either roles (Analysis 1) social context (Analysis 2) and political/power (Analysis 3) in which risk management decisions are taken. Checkland defines these areas of analysis as:

'Analysis One

Examination of the intervention or interaction in terms of roles; 'clients' (caused the study to take place), 'problem solver' (undertakes the enquiry) and 'problem owner' (plausible roles from which the situation can be viewed, chosen by the 'problem solver').

Analysis Two:

Examination of the social (cultural) characteristics of the problem situation via interacting roles (social positions), norms (expected behaviour in roles) and values (by which role-holders are judged).

Analysis Three:

Examination of the power-related (political) aspects of the problem situation via elucidation of the 'commodities' of power in the situation.' (38)

Although Checkland's provides details as to how his approach can be used he also points out that it should not be followed slavishly because it is:

> '...not a method but a set of principles of method which in any particular situation have to be reduced to a method uniquely suitable to that particular situation.' (39)

This flexibility of the approach was also attractive to me as it allowed the principles of soft-system analysis to be used to structure the way that the risk management systems could be described without constraining the dynamic research approach provided by Action Learning. I would be able to use the principles of Checkland's approach and combine this as needed to ensure that action in the real world generated and tested new knowledge and insights gained through Action Learning.

Using Checkland's principles would provide me with the tools to structure my concepts about risk management systems in terms of soft-system holons.

Checkland describes holons as:

> '...a set of activities so connected as to make a purposeful whole, constructed to meet the requirement of the core system image (emergent properties, layered structure, processes of communication and control.'. (40)

These holons would help me share my developing concepts of the risk management system with others and thus provide an opportunity for questioning and reflection as required by my Action Learning approach.

> 'Holons are constructs which are used to describe the ideas making up a soft system and can be used as the basis for questions about the real world in order to identify changes which are required and possible.' (41)

The power of holons as a way of describing systems is that they allow different levels of analysis with high level holons describing high level general elements together with lower level holons providing more detail of specific elements of the system.

> 'Each higher level activity can be the source of further, greater resolution, lower level Holons until to hierarchy of related Holons describe the soft system to the level of detail required '(42).

Checkland describes the way holons are developed out of 'Root Definitions' and 'CATWOE'.

Root definitions are:

> 'Concise verbal definitions expressing the nature of purposeful activity systems regarded as relevant to exploring the problem situation. A full RD would take the form: do X by Y in order to achieve Z.' (43)

While CATWOE stands for:

> 'Elements considered in formulating root definitions. The core is expressed in T (transformation of some entity into a changed form of that entity) according to a declared *Weltanschauung*, W. C (customers): victims or beneficiaries of T. A (actors): those who carry out the activities. O (owner): the person or group who could abolish the system. E: (the environmental constraints which the system takes as given).' (44)

This results in the production of 'Rich Pictures' which are:

> 'Pictorial/diagrammatic representations of the situation's entities (structures), processes, relationships and issues.' (45)

And descriptions of the soft-system in terms of a modelling language:

> '...based on verbs related to the minimum necessary activities needed to achieve the transformational process required.'(46)

This in turn helps to produce the research conceptual models which are tested against real world experience and questioning and reflections of the learning set. These conceptual models are defined by Checkland as:

> 'The structured set of activities necessary to realise the root definition and CATWOE, consisting of a operational subsystem and a monitoring and control subsystem based on the Es.'(47)

These E's provide a series of key questions by which the system can be reviewed:

> 'Efficacy (does the means work?); Efficiency (are minimum resources used?); Effectiveness (does the T help the attainment of longer term goals related to O's expectations?); Ethically (is T a moral thing to do?); Elegance (is T aesthetically pleasing?).' (48)

These questions are answered by the evidence from the real world experience.

The real world is defined as:

> 'The unfolding interacting flux of events and ideas experienced as everyday life.' (49)

I as the researcher will be understanding that world in terms of my developing conceptual model which can be tested by real world action to bring about change to improve the problem situation I was facing. Such action has to be 'Desirable and Possible':

> 'Desirable and Possible changes which are (systematically) desirable on the feasible changes basis of the learned relevance of the relevant systems, and (culturally) feasible for the people in the situation at this time.'(15)

Holons and heuristics will be shared with my Action Learning set in order to raise further questions and challenges which will provoke further learning and theory development. This learning and theory will be then tested by further action in the real world by me as the risk manager. This will provoke further interactions within the real world which will stimulate further learning and holon development. These new insights will allow my Action Learning set to develop further challenges and questioning which, in turn, will start a further, deeper, cycle of understanding.

This will provide a structured iterative process of learning and research based on comparisons of the conceptual model with real world experiences. Comparison is:

> 'Setting the conceptual models against the perceived real world in order to generate debate about perceptions of it and changes to it which would be regarded as beneficial.' (51)

In this way I hope to be able to build up a rich picture of the risk management system under study and also provide a framework to help my understanding of it. I also will use it to share my conceptual models with others, in order to enlist their help in reflecting on and improving it. The rich picture will also provide a way of communicating the key learning of this new knowledge and insights gained through this research.

4.6 Conclusion

The complexity and meaningfulness of attempting to summarise risks as a financial value was shown to be of little practical use. In addition the complexity of risk management decision making, for clinicians, threw into sharp focus the range of issues which need to be considered when assessing a risk.

The first attempt to document the number of incidents within the Trust showed that the range of hazards facing health care was large. However, the most serious risks facing the Trust, those that related to clinical practice, were hidden by clinical professionals themselves.

A review of the definition of risk, developed earlier in the research, required the addition of 'perspective' from which the risk was viewed to be added to any definition of risk. An exploration of the meaning of clinical negligence helped to identify a number of proposed heuristics used by clinicians and patients, both of which seemed to demonstrate a new heuristic, the 'Personal Consequence' heuristic.

Further reflections on the research approach tightened the definition of heuristics as:

A simple rule of thumb which people use to help them come to a conclusion in a relatively quick and easy way, they provide answers as to what is going on and how to react to what is going on without the need to guess nor analyse the issues being faced.

The need to ensure that there was a system which could help mitigate the worst effects of heuristic decision making was confirmed and a soft-system approach to

describing the nature of such a system, which could be tested by the use of the Trust's risk management system, was outlined.

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Chapter 5

Phase 4 - Risk, heuristics and gaining control of non-clinical risks (January, 1996 - July, 2000)

5.1 Introduction

Having developed an initial conceptual model of health care risk management decision making during Phase 1 of the research Fig 5.1, I now wanted to test and develop it, in the light of real world experiences, into a conceptual model, holon, of the risk management soft system used by the Trust. This development phase should also help to refine that risk management process in the light of how heuristics were being used by participants in that system.

During this phase of the research I also wanted to test out theories developed by reading the literature and knowledge gained through my Institute of Risk Management Membership course (P). This testing would be further enhanced by reflections, questioning and challenges raised within my learning set. My initial insights would now be tested in the fire of reality and I would return regularly to my learning set to ensure that the developing theories, derived from my experiences, could stand up to the set's critical examination, reflections and challenges (Q). In this way I would develop a deeper understanding of my second research question.

What types of systems and heuristics are used when making and implementing risk management decisions within a hospital.?

Conceptualisation of the risk management decision process (Version 1)

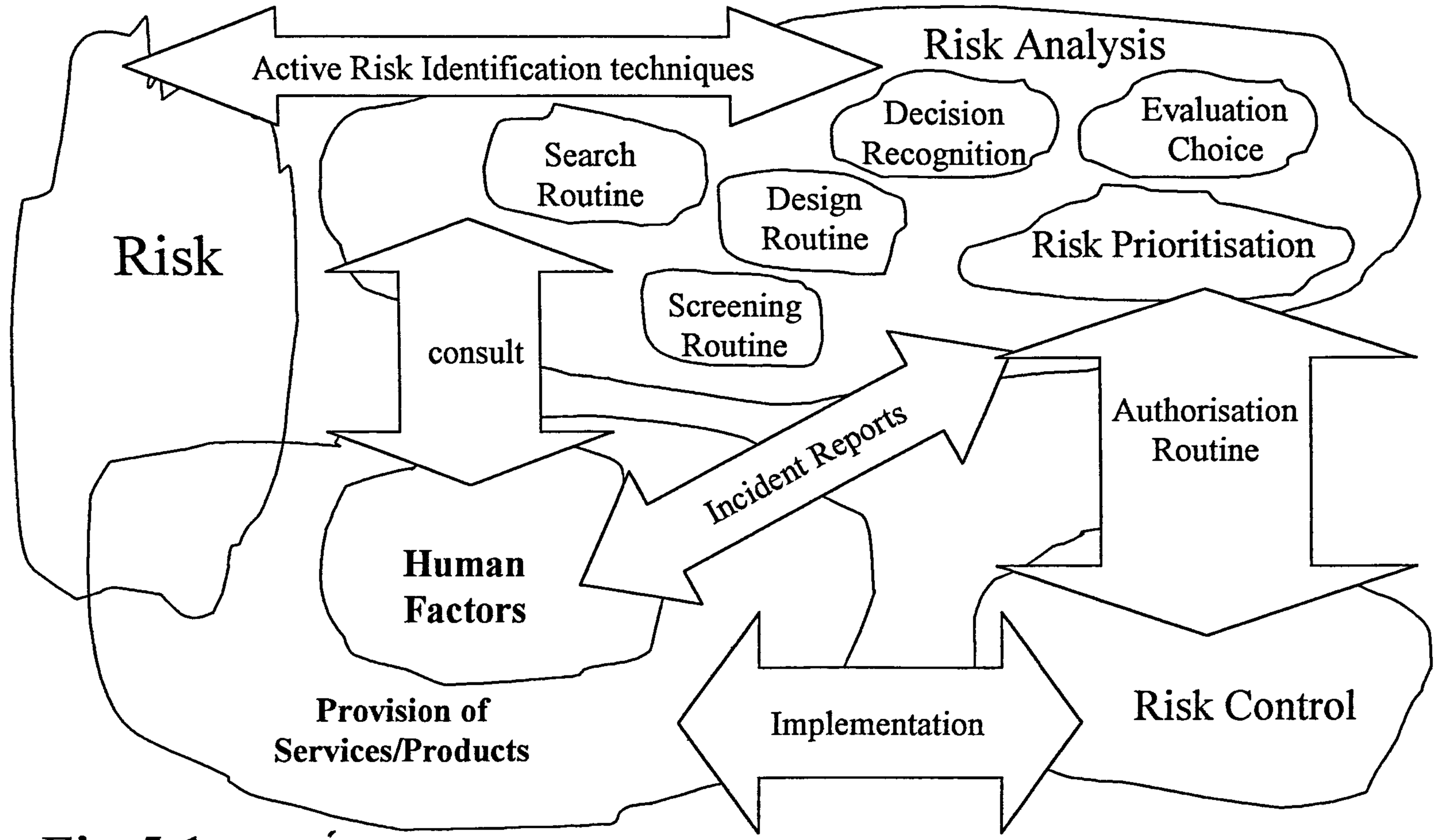


Fig 5.1

5.2 Systems and heuristics used to make and implement non-clinical risk management decisions within a hospital.

In order to use Checkland's key principles to examine my theoretical holon Fig 5.1 in the light of real world experience I needed to develop a root definition of the risk management activity system which it was to represent. A root definition provides a definition of the nature of a system or sub-system in terms of what actions are taken by whom to achieve what.

Provisionally, I developed the following root definition.

Risk management actions taken by corporate management to achieve improved risk control.

I would also use Checkland's three areas of analysis: 'Analysis One' will examine the roles of those involved in the system. 'Analysis Two' will examine the social (cultural) characteristics of the system by examining the social positions, norms and values of the key participants in that system. 'Analysis Three' will examine how power is exercised by these participants in order to achieve their desired outcomes. However, I also needed to add a further area of analysis if I was to be able to throw light on my key research questions and that analysis I have called 'Analysis Four'. 'Analysis Four' will examine the heuristics which appear to be being used by these participants in order to make their decisions.

In order to make the analysis manageable I decided to carefully document all risks which were brought to my attention as the risk manager and then to try to examine that experience using the above analytical structure. One of the most significant and revealing for me was the Glutaraldehyde experience.

5.3 The Glutaraldehyde experience

The management of the Glutaraldehyde (Cidex) risk by the Risk Management Team was one of the key Action Learning events in the early stages of this research. From its initial identification, by the Health and Safety Manager in 1994, as a risk that needed to be removed it took until late 1996 for the risk to be fully controlled. This experience formed the basis of the Risk Management Team's and my initial learning of the complexities of managing risks within health care and led to the identification of key roles and responsibilities, cultural characteristic, how power was exercised and also confirmed the central role which heuristics play in the decision making process.

Glutaraldehyde is a chemical used to sterilise equipment which cannot be autoclaved because of the damage this may case to the equipment. It is known to have a number of harmful properties to those exposed to it. These harmful properties include:

- Skin irritation
- Sensitisation leading to allergic dermatitis
- Sensitisation leading to occupational rhinitis and asthma.

People who are harmed in this way can take legal action for damages against the Trust. The Health and Safety Executive could close the department in which this risk was being poorly controlled and the Trust could be fined for breaches of health and safety legislation.

The Health and Safety Executive had originally visited the Hospital during November and December, 1992 and requested that air monitoring of specific departments be undertaken to assess risks under the (COSHH) Control of Substances Hazardous to Health Regulations (1988).

All substances monitored at the time, including Glutaraldehyde, were found to be below the recommended maximum level of allowable exposure. However, a number of practices were identified which could lead to unnecessary exposure in a number of departments. Further, some staff had made complaints of rhinitis, headaches, eye irritation and noticeable tastes at the back of the throat particularly when filling trays and emptying sterilisation troughs and during extensive operating lists. The managers of these departments however, did not considered that the working practices were exposing their staff to unacceptable risks and so decided not to take any further risk control actions.

At the first meeting of the Risk Management Team a whole series of risks which had been outstanding for many years were considered, the Glutaraldehyde risk was one of them. Options for the removal of this risk had not been fully developed and the issue had dropped off the management agenda both locally and at senior level. The Health & Safety Manager was caught between pressure from the Health and Safety Executive who wanted their recommended actions implemented and local managers who felt that they had done all they could within the resources available. There was no mechanism by which demands for resources for the removal of risks could be formally assessed and resources allocated to areas with the greatest need.

I noted that risks were not ranked by anyone in terms of likely damage. Prioritisation consisted mainly of action to remove the risks in which an obvious solutions was easy to implement. Where the associated risk control method involved more complex issues, or when there was resistance to the solutions suggested, a second stage process began. This second stage process was described by managers as assessing and evaluating the options available but the reality was that most of the difficult actions were being retained and even where options were evaluated these appeared to be done at a very superficial level and based primarily on the criteria of an estimation of affordability within the manager's present budget ('Affordability' heuristic)

At first, the newly established Risk Management Team reported to the Management Board through a subgroup of the Management Board called the Executive Group. The Executive Group contained some members of the Management Board, notably the General Managers, Executive Directors and two people not on the Management Board at that time, they were the Facilities Director who had the Health and Safety Manager reporting to him and myself who was in charge of Corporate Development and Risk Management.

The Trust did not have a documented management structure so I interviewed staff, starting with members of the Management Board, asking them to describe the management arrangements. From the committees and their descriptions of the way they were related to each other I produced a number of drafts until the following was finally agreed to represent the structure at that time.

At the top of the management structure was the Trust Board with responsibility for the Trust on behalf of the Secretary of State. Below it, there was the Management Board which was composed of Executive Directors of the Trust Board, General Managers and Medical Directors. This Board coordinated the operational activities of the Trust with the strategic requirements of the Trust.

The General Managers and Medical Directors had their own management structure composed of Clinical Directorates, made up of wards/departments and their staff providing a specified clinical service. These Clinical Directorates were headed by a Clinical Director and a local management team.

The non-clinical support services was headed by a Director of Facilities who was not a member of the Management Board but was a member of the Executive Group.

I as the Corporate Development and Risk Manager was also on the Executive Group but not on the Management Board. The Health and Safety Manager originally reported to the Director of Facilities until I took up the post of Risk Manager when that person became a member of my staff. By the middle of 1996 I became a member of the Management Board and later that year the Director of Facilities was replaced by a General Manager for Facilities who also became a member of the Management Board and the Executive Group disappeared.

There were in addition many other committees which had specific responsibilities and these reported to various managers who in turn reported to General Managers of Directorate groupings on the Management Board. My main committee was the Risk Management Team

The newly established Risk Management Team provided a forum through which risks from different perspectives could be evaluated, appropriate action agreed and responsibility identified. It's enthusiastic members determined to control the long standing Glutaraldehyde risk, mainly because of the energy and commitment of the Health and Safety Manager who found a new vigour once moved out of the management control of the Facilities function.

The Risk Management Team decided first to try to find safer alternatives. A safer alternative was identified but would have significantly increased costs past the point that the Trust could afford and was thus rejected. Following this, working practices across the Trust were reviewed and a number of dangerous working practices identified and brought to the attention of the local managers.

An option appraisal was carried out by a sub-group of the Risk Management Team and it reported that there was no economic alternative to the use of Glutaraldehyde and the controls required included changes in local working practices and the allocation of specialised equipment which could be funded by local budgets.

Poor working practices were progressively removed by local managers. Some acted quickly while others only found the time to eliminate these practices after considerable pressure from the Risk Management Team and its officers.

I noted that these changes could have been implemented when the risk was originally identified in 1992 but it required a risk focussed Risk Management Team to make it a priority for local managers. At this point, the attention of the Risk Management Team had brought this risk to the forefront of the decision making local managers' minds and the result was that they now saw it as a priority and thus acted ('Availability' heuristic).

But why had this not been the case when the Health and Safety Manager reported to the Facilities Director? I discussed this with the Health and Safety Manager. We concluded that there seemed to be two key reasons.

The first was that the Facilities function is regarded as a lowly support function compared to the highly regarded clinical functions in which the risk resided. With a 'Facilities hat' on, the Health and Safety Manager's advice was not considered to be high 'status advice'. He noted that since reporting to the Risk Management Team, which had a high status because it reported to a sub-group of the Trust Board and had a clinical risk as well as a health and safety risks control function, his increased status had made it easier to ensure that his views of risk priority were more easily brought to the forefront of the local manager's minds.

The second factor was related to the fundamentally different perspectives from which the Director of Facilities and the Health and Safety Manager viewed risks. The Director of Facilities had to balance operational decisions required to ensure efficient provision of services and products with the control of risks. While the Health and Safety Manager just had to satisfy himself and the Health and Safety Executive that health and safety risks were under control. There had been a number of occasions when there was a difference of opinion as to whether the appropriate risk control

decision had been made and no independent forum, until the Risk Management Team was formed, for such a difference of opinion to be examined impartially

A review of progress in February, 1996 found that only six high risk Glutaraldehyde areas remained. In the high risk areas it was impossible to eliminate the dangerous working practices without the purchase of specialist equipment. In three of these areas the equipment could be acquired within local budgets but in three other areas Theatres, Day Surgical Unit and the Out-patient Department this could not be funded from local budgets and there was a need for a significant resource input.

A formal option appraisal was carried out and submitted to the Trust Board Risk Management Steering Group. The decision there was critical and it accepted that the risk needed to be removed and the lowest cost option, which could achieve adequate control, was approved at its first meeting on 22nd July 1996. The Director of Finance wanted the decision to be agreed subject to 'finances being available'. It was at this point that my awareness of heuristics made me examine whether there was evidence here of another heuristic which was over-riding his 'Availability' heuristic. The 'Availability' heuristic should have operated here since the Trust Board Risk Management Steering Group had just discussed and agreed expenditure to control this risk, but why did it not?

I concluded that this was further evidence of the 'Personal Consequence' heuristic proposed to explain why in the literature there was evidence that clinical staff would practice defensive medicine if they felt at risk, no matter what the consequence is to others. In the case of the Finance Director, his priority was to 'balance the books'. Controlling this risk would mean expenditure which had not been budgeted for and therefore potentially putting at risk the ability of the Trust to balance its budget with the attendant risk to the position of the Finance Director. He seemed to be putting the control of risk to himself before controlling risks to others. This appeared similar how some doctors use defensive medicine in order to protect themselves at the expense of the organisation or patients.

The Finance Director was over-ridden by the Chief Executive and as a result it was agreed that decision made by the Risk Management Steering Group could not be subject to the Finance Directors veto. Decisions made at this level of the Trust had to be implemented and resources made available. Option 4 (the least cost equipment which was able to adequately remove the risk) was chosen for the removal of the Theatre and DSU risk and the level of funding agreed and allocated on 22nd July 1996 . An instruction to the responsible managers to implement the action agreed as Option 4 was issued to the appropriate managers who implemented the decision.

The success of the Risk Management Team in controlling this long-standing risk led onto a further interesting phenomena. Risks identified from various sources started to stream into the Risk Management Team from all over the organisation. These had often by-passed the line managers responsible for the area in which the risk had been identified in the hope of getting that risk controlled. This led to an initial conflict between operational managers and the Risk Management Team. The conflict led to the development of an agreed set of criteria for reference to the Risk Management Team and was formally accepted in September, 1996.

Discussions at the Risk Management Team tended to result in one of three decisions:

Decision 1

A specification as to which level the risk should be controlled and therefore who was the responsible manager/clinician. If this decision was made, then the Risk Management Team would monitor the risk control measures agreed and keep track of them until the risk was resolved to the Risk Management Team's satisfaction.

Decision 2

Further risk analysis and prioritisation needed to be carried out before a decision was made. These risks would be passed to an appropriate group, or the Risk Management Team would establish such a group, to carryout the analysis and prioritisation. Again these conclusions would return to the Risk Management Team and once it was satisfied would pass it to either decision number 1 above or decision number 3 below.

Decision 3

The risk was serious and the solution was outside of the risk control capabilities or authority of all management levels below that of the Trust Board. The Risk Management Team would provide an option appraisal and recommendations as to the preferred course of action and the Trust Board would either accept this, or would require further option appraisal before a decision was made. Again these conclusions would return to the Risk Management Team which would pass the decision to an appropriate lead manager/clinician to implement. The Risk Management Team would monitor the risk control measures agreed and keep track until the risk was resolved to its satisfaction. The Risk Management Team would also report progress periodically to the Trust Board.

5.4 Reflections on the Glutaraldehyde experience and analysis 1,2,3 and 4.

Table 5.1 below summarises my analysis of this experience in terms of analysis 1, 2, 3 and 4. The analysis is based on both my own direct experience supplemented with the wider experience of other colleagues in the field and within the learning set. The Gluteraldehye experience provided an initial list of key actors within this soft-system:

Members of the Health and Safety Executive

The Health and Safety Manager

Risk Manager (me)

Staff

Operational Managers

Chief Executive

Executive Director

5.4.1 The Health and Safety Executive:

At this stage I had not any direct experience of the Health and Safety Executive so I decided to supplement my knowledge of them, gained from the Glutaraldehyde experience, with the views of the Trust's very experienced Health and Safety Manager. I asked him to summarise for me what he knew of the Health and Safety Executive and how it was operating within the health care sector. I also wanted to know what he thought mattered to the people who worked for it in terms of their roles and responsibilities. Below is his report:

The Health and Safety at Work Act (1974) made the protection of employees by successful health and safety policies a statutory responsibility. It was not until NHS Amendment Act (1986) and Section 60 of the NHS & Community Care Act (1990) that Crown immunity for NHS employers was removed leaving them subject to the full force of health and safety law. A further set of regulations designed to implement respective EC Directives came into force in January 1993 and are known as the 6 pack:

Management of Health and Safety at Work Regulations 1992 requires all employers to carry out risk assessments and to take all reasonable steps to eliminate identified risks.

* Workplace (Health, Safety and Welfare) Regulations 1992 sets minimum requirements in respect of equipment, ventilation, temperature, lighting, cleanliness, work space, windows, traffic routes, sanitary conditions, eating facilities and changing areas.

* Manual Handling Operations Regulations 1992 deals with risk associated with lifting and handling.

* Display Screen Equipment Regulations 1992 requires the modification of work stations, equipment and working practices to eliminate risks associated with display screen equipment.

* Personal Protective Equipment at Work Regulations 1992 requires employers to provide protective equipment if the risks cannot be eliminated.

* Management and Use of Work Equipment Regulations 1992 specifies requirements for cleaning and maintenance of machinery and minimum standards for emergency procedures and stop controls.

The Health and Safety Executive has also issued approved codes of practice for each regulation.

Employers therefore must:

- Carryout risk assessment which are documented in sufficient detail to satisfy visiting health and safety inspectors
- Appoint competent persons who has adequate knowledge, experience and trained on health and safety issues who will advise and assist in the strategic development and management of health and safety policies.
- Introduce and review written health and safety arrangements
- Ensure all employees have sufficient information about health and safety issues.
- Organize to involve and motivate staff to work safely.
- Set standards and measure performance
- Systematically review the effectiveness of the overall policy to ensure it fulfils all the legal requirements and offers a high standard of protection to employees.

The Construction (Design and Management) Regulation 1994 was introduced in March 1995. This requires that people they appoint to manage the construction procurement process comply with health and safety law. Responsibility on site for managing health and safety remains the principal contractor but designs must avoid foreseeable risks. All clients must appoint a planning supervisor, track the design stages, prepare document and expert advice. Clients must define and achieve and maintain competence in both themselves and those they appoint to manage. Competence means keeping abreast of legislation which is constantly changing. These regulations require a 'health and safety plan' and the 'health and safety file':

The health and safety plan:

Must be issued with tender documents with a key section on design hazards prepared by the designers. The principal contractor then produces a developed health and safety plan showing how it will manage the risks in the schedule of design hazards. The client must ensure that the work does not start until the plan has been developed and there are sufficient resources to allocated to health and safety.

Failure to comply with the regulations could incur fines of up to £20,000, prison for up to 2 years and civil actions for damages which could be hundreds of thousands of pounds.

It appears that the role of the Health and Safety Executive is to help ensure that organisations follow the requirements laid down in health and safety legislation. They therefore contribute to Fig 5.1 in terms of 'active risk identification' and 'risk analysis'. However, Fig 5.1 does not include a role which was identified here and that is the role of 'enforcement of health and safety legislation and its related regulations'.

Its norms (behaviour in the role) from the Glutaraldehyde experience is to carry out thorough inspections of organisations in order to see how well it is complying with this legislation. They also provide advice and

recommendations as to how to improve this compliance. Its values (how they are judged within the role) are how well their recommendations are accepted and turned into practice - how fully their interpretation of the legislation is complied with.

The Health and Safety Executive also has teeth because it has the power to close down organisational functions which are not complying, it can also initiate legal action for the criminal offence of breaching the legislation which can result in fines and imprisonment. More often this is not used as their position as experts in the field is enough to achieve compliance.

5.4.2 The Health and Safety Manager:

The Health & Safety Adviser, is a post which the Trust must have under by Regulation 6, Management of Health & Safety At Work Regulations, 1992, which requires the Trust to appoint a "Competent Person" for health and safety.

The role of the Health and Safety Manager is to provide advice and guidance on matters relating to health and safety to all staff within the Trust and particularly to provide advice and guidance on how to comply with the complex array of legal requirements related to health and safety. He achieves this through his role in 'active risk identification' , 'risk analysis', and 'consultation' as to what is a practical way of meeting the legislative requirements, within budgetary constraints and service delivery demands.

The way he carries out this role is through inspection of working practices, monitoring and reviewing of incidents, reported and providing advice and recommendations. He did this mainly though calling on his expert knowledge of health and safety though he also used check lists to structure his assessments, he did not seem to do a great deal of formal problem solving. Only on rare occasions did he use detailed option appraisal methodologies. Instead he seemed to be able to spot a breach of health and safety law and was also able to offer advice as to how this could

be corrected. He seemed to be using heuristics but they were of a specialised form and only held by people with a great deal of experience in a particular field. I called this proposed heuristic, 'Expert Check-list' heuristic as it was similar to a paper check-list but was carried out without the need for paper lists as a reminder because the list was now firmly embedded in memory. He also displayed evidence of the 'Availability' heuristic, as issues seemed to be raised according to how well they were recalled from his memory. He did not seem to use any formal ranking of risk, rather risks were presented in order of an importance reflecting events prompting improved recall, such as an incident which had occurred recently, or a note from the Health and Safety Executive.

This 'Expert Check-list' heuristic was of a different form from the 'Availability' heuristic. The former rule of thumb had to be learnt through experience while the later seemed to be more related to the way that the mind works. It is known that the mind is only able to focus on a narrow set of issues at one time and this is probably related to the limited capacity of short-term memory now better described as working memory, for it is here that a key part of the thinking processing of information takes place (1)

My conclusion at this stage was that heuristics should be grouped into two types: B-heuristics, or 'Basic' heuristics, in which the rule of thumb can be summarised as a single simple sentence and E-heuristics, or 'Extended' heuristics, which can be summarised as a related list of rules of thumb.

The way that the Health and Safety Manager would be judged by colleagues, within the field of health and safety, was the degree to which he could ensure compliance with his recommendations and avoid the consequences of failure to comply with legislation. This value resulted in conflict, when in his original role as a person reporting through the Director of Facilities, for he felt that too often his health and safety recommendations were not fully accepted because of service delivery constraints.

The Director of Facilities not only had to ensure compliance with legislation but also deliver a service within a tight budget. This conflict of values had real consequences and the lack of progress in controlling the Glutaraldehyde risk was just one example of this. I shared my concern, with the Chief Executive, over the potential conflict of interest being created by having a risk advisor, with a Trust wide responsibility, also having to deliver according to the agenda of an operational manager. As a result, the Health and Safety Manager was moved to the risk management function which had no operational service delivery role.

The Health and Safety Manager also is a key member of numerous committees and groups within the Trust including the Health & Safety Committee, COSHH Group, Manual Handling Group, etc. When necessary he liaises with the Property Services Directorate relating to new building work and the supplies officer regarding purchase of equipment. He is therefore able to use these groups in his 'consultation' role in which other experts and operational managers come together to develop workable solution which are operationally practical and complied with legislation.

His power lies in his expertise in the field of health and safety. He uses this through persuasion based on expert argument and evidence. He is also able to make the risks which staff and managers are running more visible to them and thus contributes to bringing health and safety issues to the forefront of their minds ('Availability' heuristic). He can also report his concerns, about unacceptable risks which he feels are not being reasonably well controlled, to the attention of more senior managers and especially me the Risk Manager.

5.4.3 The Risk Manager (me the researcher):

As Risk Manager of the Trust my role was to develop and manage the risk management system. I report directly to the Chief Executive and reach out to the

Trust through a number of key management groups which I chair. The most important of which, in relation to this research study, is the Risk Management Team.

My key task was to find a way in which the myriad of responsibilities for risk management could be coordinated and focussed on the Trust's priorities and to provide an overall sense of the risks facing the Trust (active risk identification and risk analysis). To support me in the role of Risk Manager is the Risk Management Team which was established before the beginning of this study but which by 1996 had the following membership:

- Corporate Development & Risk Manager
- Executive Medical Director
- Corporate Development & Risk Manager
- Health and Safety Manager
- Risk Manager - Surgical Specialties
- Risk Manager - Medical Specialties
- General Manager Facilities
- Claims Manager
- Training and Development Manager
- Management Accountant

This Risk Management Team identified its role as follows:

- Develop a culture of risk avoidance across the organization.
- Bring to the attention of the Chief Executive and responsible manager/clinician potential risks identified via the risk management system.
- Ensure the implementation of Health and Safety Policies across the organization.
- Ensure the implementation of Clinical Negligence Scheme for Trust standards across the Trust.
- Help the Human Resources Director promote learning of how best to avoid risks across the organization
- Ensure that systems provide early warning of potential risks
- Facilitate system changes which improve performance and reduce risk.

- Ensure coordination between systems of insurance and claims management's, complaints handling, litigation, hazard, occurrence and adverse incident reporting and managerial/clinical decision making.

- Help the Management Board ensure that operational systems exist to prevent or at least reduce identified risks.

- Provide reports to the Management and Trust Boards on risks identified and good practice implemented.

- Ensure risk management forms a central part of the corporate performance review system

As the Risk Manager my role was to chair this group and ensure on behalf of the Chief Executive that it efficiently and effectively carried out its role, (Develop and manage the Risk Management System) a role not identified in Fig 5.1 There was however confirmation of the following roles shown in Fig 5.1 'active risk identification', 'risk analysis' and 'consultation' However, this analysis revealed that I also had the additional roles of 'reviewing decisions made', by managers such as the decision of managers that no Glutaraldehyde risk existed and 'monitoring implementation of decisions made,' both to check that decisions made by the Management Board were carried out and in terms of whether the decisions made were effective.

'Referring upward, uncontrolled risks, which the Risk Management felt were unacceptable' was another role I found myself having to carryout. This was a surprising role as, theoretically, managers should be doing this through the line management arrangements but this process did not seem to work effectively. The effective way in which the Risk Management Team dealt with the Glutaraldehyde risk and other risks resulted in the team getting a reputation for getting things done. All sorts of risks started to be reported directly to the Team bypassing the normal line management arrangements. Both I and the General Managers were concerned about this as it was undermining the normal decision making process of the Trust. As a

result the Risk Management Team and General Managers developed the criteria for reference to the Risk Management Team previously discussed.

This led to a further role being identified for the Risk Manager and that was the role of 'ensuring that decisions were made at the right level in the organisation'.

The norms in carrying out this role were to 'coordinate' the Trust's risk management activities. To facilitate the development and functioning of the risk management system in carrying out its functions. To facilitate the prioritisation of the whole risk portfolio of the Trust and to identify any areas of concern and bring these to the attention of the Chief Executive. Such risk identification also required the making of recommendations by which achieving appropriate risk control could be achieved.

The values by which the Risk Manager is judged, included knowledge and understanding of risk and the risk management mechanism by which it should be managed. The Glutaraldehyde experience demonstrated how little knowledge most people had as to how to manage risks. They seemed to take up one of two positions: remove the risk at all cost, or ignore the risk because it is too difficult to handle. The ability to systematically understand and control the risk, while also balancing this risk control with operational requirements, was a key value by which the Risk Manager is judged. In addition risk management, even of what initially appeared to be a simple problem, was in fact very complex. The Risk Manager is expected to be able to handle complexity, find appropriate solutions and then be able to communicate these simply and clearly to decision makers and those responsible for implementing those decisions.

My power as the Risk Manager came directly from my direct responsibility to the Chief Executive. This communicated that risk management was so important to the Chief Executive that he had an officer reporting directly to him on this aspect of management. The moving of the health and safety function from operational

management also sent the same message about health and safety. The reality of the power was that unacceptable practices could be reported to more senior managers and ultimately to the Chief Executive. However, this use of this power was only rarely used, the power of persuasion and argument from an expert group, especially if there was a majority consensus on the Risk Management Team usually was sufficient to make a decision legitimate. The effect of the Risk Management Team making a particular risk a priority also made the risk more visible to managers themselves and helped to trigger the use of their 'Availability' heuristic.

Reflecting on the heuristics which I was using during the Glutaraldehyde experience I was able to confirm the use of the 'Availability' heuristic, the Health and Safety Manager kept this particular risk in the forefront of my mind. I was also aware of my using my own 'Expert Check-list' heuristic which was developing out of my personal learning about risk management. I was starting to use my 'Expert Check-list' heuristic to keep the discussions focussed on what I considered to be good risk management practices.

5.4.4 Staff:

In the Glutaraldehyde experience the staff are the potential victims of this risk and their role was two fold. The first was to deliver the services which they were employed to do. They were also expected to report any adverse incidents (incident reporting)

The norms for the delivery of the service are either set down in procedures, protocols or guidelines and or learnt during their training and experience ('Expert Check-list' heuristic). Incidents and near misses were to be reported using the Adverse Incident reporting system ('Availability' heuristic).

The values by which staff are judged in this role are their competence in delivering the service and their ability to recognise and manage local risks generated as part of the delivery of that service.

Their power, in the case of the Glutaraldehyde risk, was their ability to withdraw from work by leaving, going off sick or potentially taking industrial action. However, in terms of the Glutaraldehyde risk, there seemed to be little evidence that this was being done presumably because they were not aware of the risk, or they thought that it was being sufficiently controlled. They also had the power to take legal action for damages but since there was no evidence that any staff had been damaged, this potential power was not used.

Reflecting on this passive acceptance of the risk by the staff led me to propose that risk was not at the forefront of the staff's mind, ('Availability' heuristic). If someone had been injured, an event rather than a risk, then it is more likely that they would have used their powers. However, because risks are potential events, then the potential victims of those risks are unlikely to be fully aware of them and are lulled into a false sense of security. In most cases, a risk never becomes an actual damaging event and therefore does not trigger the 'Availability' heuristic. The result is that, from the potential victims point of view, risks tend not to be controlled until it is too late. The importance of the 'Availability' heuristic for risk management is again reinforced by this Glutaraldehyde experience from the potential victims perspective.

5.4.5 Operational Managers:

By the end of 1996 there were three General Managers: Surgical Specialties, Medical Specialties and Facilities. Their role was to ensure that the service required by the Trust were delivered. In risk management terms they also had a legal responsibility, under the Health and Safety at Work Act (1974), to carryout risk assessment and risk

analysis. Their role included consultation with staff and others to ensure that work processes were safe and they also had the role of authorising risk control measures within their span of management control.

The norm by which they fulfilled this role was to provide leadership to their teams in order to ensure that their services delivered the agreed contract to the specification required and all of this within a specified budget. They were assisted by more junior managers and by lead clinicians who were expected to provide clinical leadership of the professional group they represented. These clinical leaders included Clinical Directors who were doctors leading a clinical specialist team such as general surgery, neurosciences, pathology etc. In addition, a senior clinician took on the role of Medical Director which had the wider clinical management role of liaising between doctors and the Management Board in support of a particular general manager. As well as clinical leads for doctors there were clinical leads for nursing, midwifery and professions allied to medicine such as physiotherapy, occupational therapy etc. These tended to not only provide the general manager with professional advice but also took a more direct managing role of the groups they represented.

The Glutaraldehyde experience revealed that 'active risk identification' and 'risk analysis' was not a norm. They relied on the Health and Safety Manager to do this for them. They would however, take part in 'consultation' about the findings and retained the role of deciding whether or not to implement the Health and Safety Manager's recommendations.

The General Managers had extensive powers within their area of responsibility and were able to authorise expenditure within the budgets which they controlled providing that they followed the rules for expenditure contained in the Trust's Standing Financial Instructions. In practice, because their budget was very tight, with year on year so called Cost Improvement (efficiency gains) to be made, delivering the service within a specified budget dominated their thinking. Every month they had to present their budget position to the Management Board and had to

deliver changes in the service which would help them meet these budgetary demands. Delivering activity according to contract was their next priority as failure here could result in reductions in income. Such an outcome would result in them being viewed as poor managers. Standards of service such as the Patients Charter standards progressively became important as the government started to produce league tables of performance. Increasingly, managing the improvements to their service standards was added to their priorities for action. It is not surprising that risk management was not apparently a priority for them even though they did acknowledge its importance.

Never-the-less only one General Manager, the newly appointed General Manager for Facilities attended the Risk Management Team frequently. Although I had originally intended to get all the General Managers to attend the Risk Management Team, the Surgical and Medical specialties General Managers could not find the time to attend the meetings. Therefore, each of these General Managers initially designated one of their senior managers, as risk manager, to represent them at the meetings and to communicate any decisions made by the Risk Management Team. These designated risk managers, had no training or special skills in the field of risk management. Neither was risk management their primary task. Their role turned out to be one of liaison with the Risk Management Team rather than one of supporting the General Managers in their role as risk managers. The low status of risk management for some General Managers was revealed as they progressively started to designate their most junior managers to represent them on the Risk Management Team because they thought that it was 'good management development experience for them'.

The Glutaraldehyde experience revealed a number of heuristics which General Managers and their local managers seemed to use when managing their risks. There was confirmation of the 'Availability' heuristic. Unless constant effort was made to keep the risk in the mind of the General Managers and local managers then agreed action were not followed through. The long period of inactivity in terms of controlling the Glutaraldehyde risk could be seen as the result of this risk not being a

high priority to them. This is further evidence of the 'Personal Consequence' heuristic in which risk to staff took second place to risks to the manager of not balancing their budgets. The frequency with which a lack of a budget was cited as the reason for a particular control action not being taken led to the postulation of an 'Affordability' heuristic existing. The 'Affordability' heuristic is stated as: 'If I don't have a budget for this action then I will do nothing'. This is not the same as the way risk management decisions should theoretically be made when there are limited resources. According to risk management theory, limited resources should be used to control the highest priority unacceptable risk. When the 'Affordability' heuristic is used there is no relative priority for that risk, nor is there is any analysis about the true cost of controlling the risks compared with not controlling it. The decision using the 'Affordability' heuristic is the simple rule of thumb, 'if there is not budget to control this risk, then I will do nothing.'

5.4.6 Chief Executive:

The Chief Executive's role is that of the accountable officer for all activities within the Trust. This responsibility includes overall responsibility for risk management. He is also able to authorise the implementation of risk control measures and can instruct others to implement specific risk control measures. Without the support of the Chief Executive I do not think that the Glutaraldehyde risk would have ever been brought under control without compulsion by the Health and Safety Executive.

The Chief Executive is a member of and reports to the Trust Board which consists of the four Executive Directors plus five Non-executive Directors who are appointed on the basis of their ability to strengthen the range of knowledge and skills which the Board needs to discharge its responsibilities. The Trust Board is headed by the Trust Chairman appointed by the Secretary of State for Health. The Trust Board meets once a month to receive reports specified by the Trust Board

The Chief Executive manages the Trust on a day to day basis through additional officers who have corporate responsibilities. These meet together every fortnight as a Management Board. The Management Board's membership has varied over the time of this research study but has always had as a core membership the Chief Executive and Executive Directors, General Managers and a varying number (between 2 and 4) Medical Directors. I became a member of the Management Board in late 1996 but had always had direct responsibility, in my combined role of Corporate Development and Risk Manager, to the Chief Executive during the time of this research.

The overall responsibility for risk management had always lain with the Chief Executive and the Trust Board. Initially the Trust Board discharged this responsibility through its line operational managers. Key risk advisors for health and safety, fire, radiation protection etc also reported through their line manager to the Chief Executive and ultimately to the Trust Board. In 1995 I established a Risk Management Team, independent of operational line management, which reported to the Chief Executive through me.

The norms of the Chief Executive are to provide leadership, to communicate his performance standards and expectations and to delegate appropriately and ensure that he is in control of what is happening within the Trust. Up until my appointment as Risk Manager he discharged his duties for financial risk through the Executive Director of Finance, for medical risks through the Executive Medical Director, for non-medical clinical risks through various clinical heads such as the Executive Nurse, Head of Midwifery, Head of Physiotherapy etc. and for health and safety risks through the Facilities Director.

The values by which the Chief Executive is judged are, ability to deliver the service to contract, to specification and within the overall budget. The Chief Executive must also control the risks related to compliance with legislation, NHS policy and to social values.

The Chief Executive has the power to appoint Executive Directors who take on an area of responsibility defined by the Chief Executive within certain specified parameters. These parameters include a restriction on the number of Executive Directors that can be appointed to four. Of these four one must be for Finance, one must be a Nurse and one must be a Doctor. He also has the power to appoint, remove and promote senior managers of the Trust. In addition he can bring resources to bear within the overall budget and standing financial instructions.

The Chief Executive demonstrated the 'Availability' heuristics in that he would be concerned to get feedback on progress when particular issues made a particular risk more visible to him. For example, concerns raised by personnel over the possibility that some staff may have developed sensitivity to Glutaraldehyde or when questioned by the Health and Safety Executive about progress on their recommendations. However, he was a very thoughtful analytical person who was very perceptive and capable of asking very searching questions. In many ways this analytical process and questioning could be seen as a further example of the 'Expert Check-list' heuristic in action. His training and experience as a Chief Executive gave him the ability to ask key questions needed to make a decision or to confirm that the person, he had delegated an action to, was able to deliver it.

5.4.7 Executive Director:

Executive Directors within the Trust have two key roles. The first was that of collective responsibility for all the Trust's activity and performance including the overall management of risk as part of the Trust Board and secondly they had a portfolio of responsibilities delegated to them by the Chief Executive. The Executive Directors at the time of this study were:

Executive Medical Director - provided medical advice to the Trust Board and Management Board and liaised between these two boards and clinical colleagues within the Trust.

Executive Director of Nursing and Human Resources - provided nursing advice to the Trust Board and managed the Human Resources function of the Trust.

Executive Director of Contracting and Business Development - Negotiated the contracts for the Trust and managed the customer relations functions which included public relations complaints and claims management.

Executive Director of Finance and Information - Managed the finance function of the Trust and also the information, records and information technology services of the Trust. As far as the Glutaraldehyde risk was concerned he was the only Executive Director who played a key role in the decision making process. He took a key role in authorising the expenditure, though he displayed a classical example of both the 'Affordability' heuristic and the 'Personal Consequence' heuristic when acting out his role

Having implemented all the risk control measure we could, which did not required a significant investment of financial resources, it was clear that some dangerous practices could not be eliminated without an investment in some key equipment within Theatres, the Day Surgical Unit and the Out-patient Department. A formal option appraisal was carried out by the Risk Management Team and presented to the Risk Management Steering Group as an unacceptable risk which needed to be controlled but would require additional expenditure above what the local budget could stand. Following detailed discussions of the option appraisal and recommendation the Steering Group unanimously agreed to the additional expenditure and authorised the risk control measure to be implemented. At the end of the meeting I asked the Director of Finance what budget code I should use to provide this critical equipment. He said, 'I'll let you know...this decision is subject to

it being affordable'. Fortunately, the Chief Executive was present and I asked whether this was the case, he smiled and said no, the Director of Finance would find the money.

Here I could see the 'Affordability' heuristic in operation. In spite of a detailed and agreed analysis that a particular risk had to be controlled through the procurement of some equipment and a unanimous decision by the Chief Executive, Executive Medical Director and the Finance Director himself, the decision may not have been implemented because the Finance Director on his own may have used the 'Affordability' heuristic to justify no action being taken. This is entirely understandable when the Finance Directors priorities are taken into account and we see this as an example of the 'Personal Consequence' heuristic in operation. The Finance Director has to balance the budget and the personal consequences to him are more likely to occur if he doesn't balance the budget. The risk due to Glutaraldehyde affects others, such as staff who could be damaged by it, or to the Chief Executive who could be prosecuted for failure to comply with Health and Safety legislation. The 'Personal Consequence' heuristic works on the rule of thumb, ' if there is a risk to me I must avoid it no matter what the risk to others'.

The norms of the Executive Director of Finance are to agree a balanced budget for the Trust and to monitor the income and expenditure position to ensure that the Trust's financial duties are met. Within these responsibilities are those of managing the financial risk to the Trust.

The values by which the Director of Finance is judged are essentially around effective financial management of the Trust resources.

The power of the Finance Director are essentially the power to stop expenditure outside of the budget set or in breach of the Trust's standing financial instructions.

5.5 Initial holon of the risk management soft system

Table 5.1 summarises the analysis based on the Glutaraldehyde experience. Items marked with a '*' indicate that they are additional elements, added to the earlier theoretical conceptual model of risk management, identified as a result of the Glutaraldehyde experience. From this table I am now able to develop my initial conceptual model of risk management decision making Fig 5.1 into a high level holon of the risk management soft system which appears to be operating within the Trust. Fig 5.3 provides a rich picture of this high level holon of the risk management system based on the Glutaraldehyde experience.

Table 5.1 Holon - Real world comparison using the Glutaraldehyde experience				
Actors within the system	**Analysis 1 Roles (Interventions and Interactions)**	**Analysis 2 Norms (Behaviours in the role) and Values (How they are judged within the role)**	**Analysis 3 How power is used**	**Analysis 4 Heuristics Used**
Health and Safety Executive	Active risk identification Risk analysis Enforcement of legislation & related regulations*	Norms-Inspection, advice and provision of recommendations. Values - Degree of compliance with those recommendations	Expertise within the field Legal power to close the department. Bring criminal charges against the Trust.	Not observed
Health and Safety Manager	Active risk identification Risk analysis Consultation	Norms-Inspection, monitoring and reviewing incidents reported, provision of advice and recommendations. Values - Degree of compliance with those recommendations	Expertise within the field Persuasion based on argument and evidence from expert advisors. Making the risk more visible to managers. Reporting of unacceptable practices to the Risk Manager	'Availability' heuristic 'Expert Check-List' heuristic

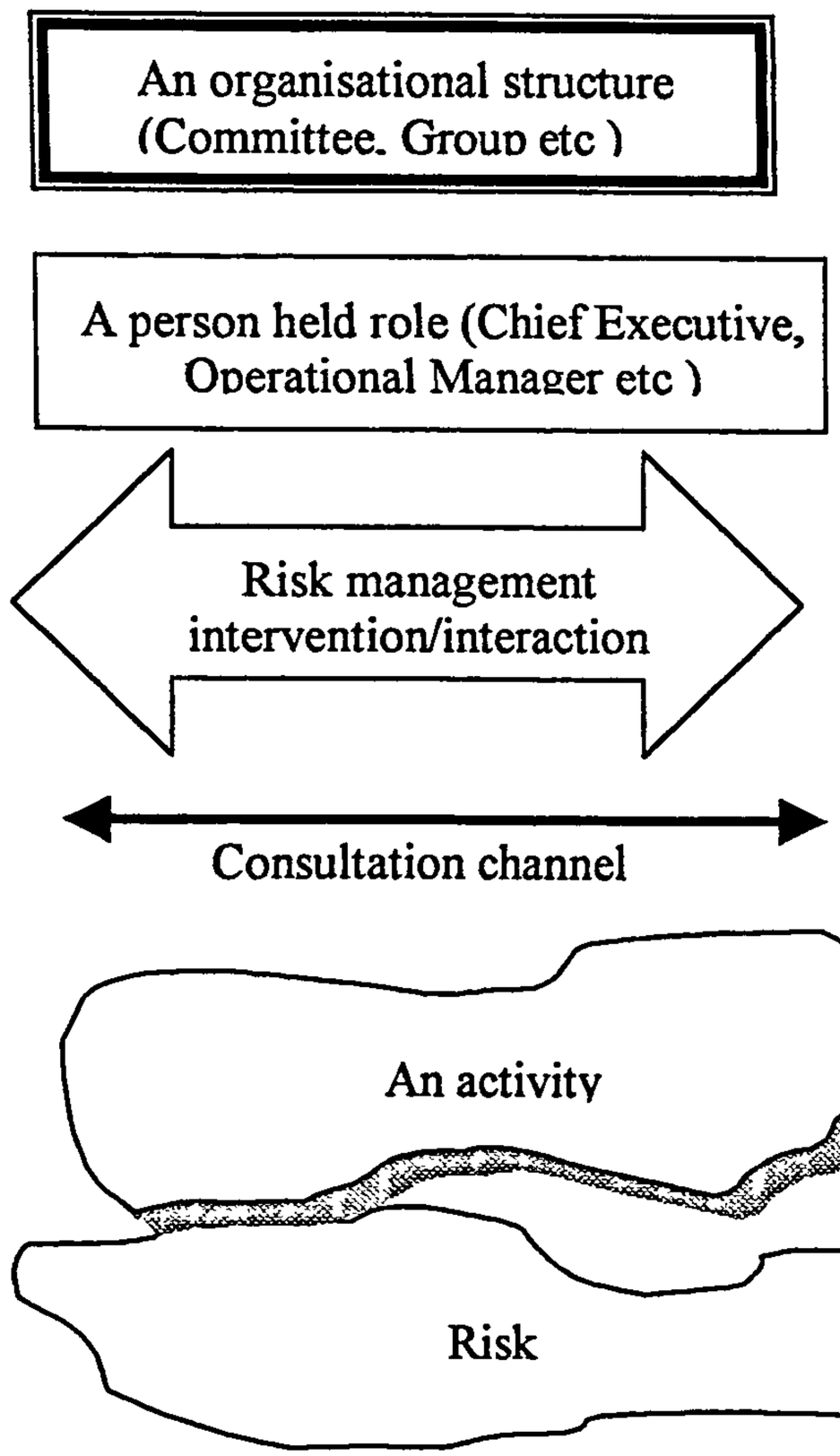
Risk Manager	Develop and manage the Risk Management System* Active risk identification Risk analysis Consultation Review decisions made* Ensure decisions are made at the appropriate level * Monitoring Implementation of decisions made. * Referring upward, uncontrolled risk risks, which were unacceptable to the Risk Management Team *	Norms - Coordinate risk management activities across the Trust. Facilitate the development and functioning of the risk management system as a whole. Facilitate the prioritisation of the entire risk portfolio of the Trust. Identify areas of concern and bring these to the attention of the Chief Executive together with recommended action. Values - Expert knowledge of risk management., Ability to balance risk control requirements with operational requirements. Ability to handle complexity while communicating clearly and simply what needs to be done.	Persuasion based on argument and evidence from expert advisors Reporting of unacceptable practices to more senior managers and ultimately the Chief Executive Making the risk more visible to managers. Reaching consensus with colleagues on the Risk Management Team	'Availability' heuristic 'Expert Check-List' heuristic

Staff	Follow laid down procedures Incident reporting	Norms - deliver the service according to their specific roles. Report any identified risk or incident Values - levels of competence in delivering the service. Ability to recognise and manage local risks generated as part of service delivery	Legal action for damages Taking time off sick	'Availability' heuristic 'Expert Check-List' heuristic
Operational Managers	Provision of services/products Active risk identification Risk analysis Consultation Authorization	Norms - Lead clinical and managerial teams in the delivery of the service Values - Delivery of the service to contract, standard and within budget.	Implement changes required within budgetary constraints.	'Availability' heuristic 'Personal Consequence' heuristic 'Affordability' heuristic*

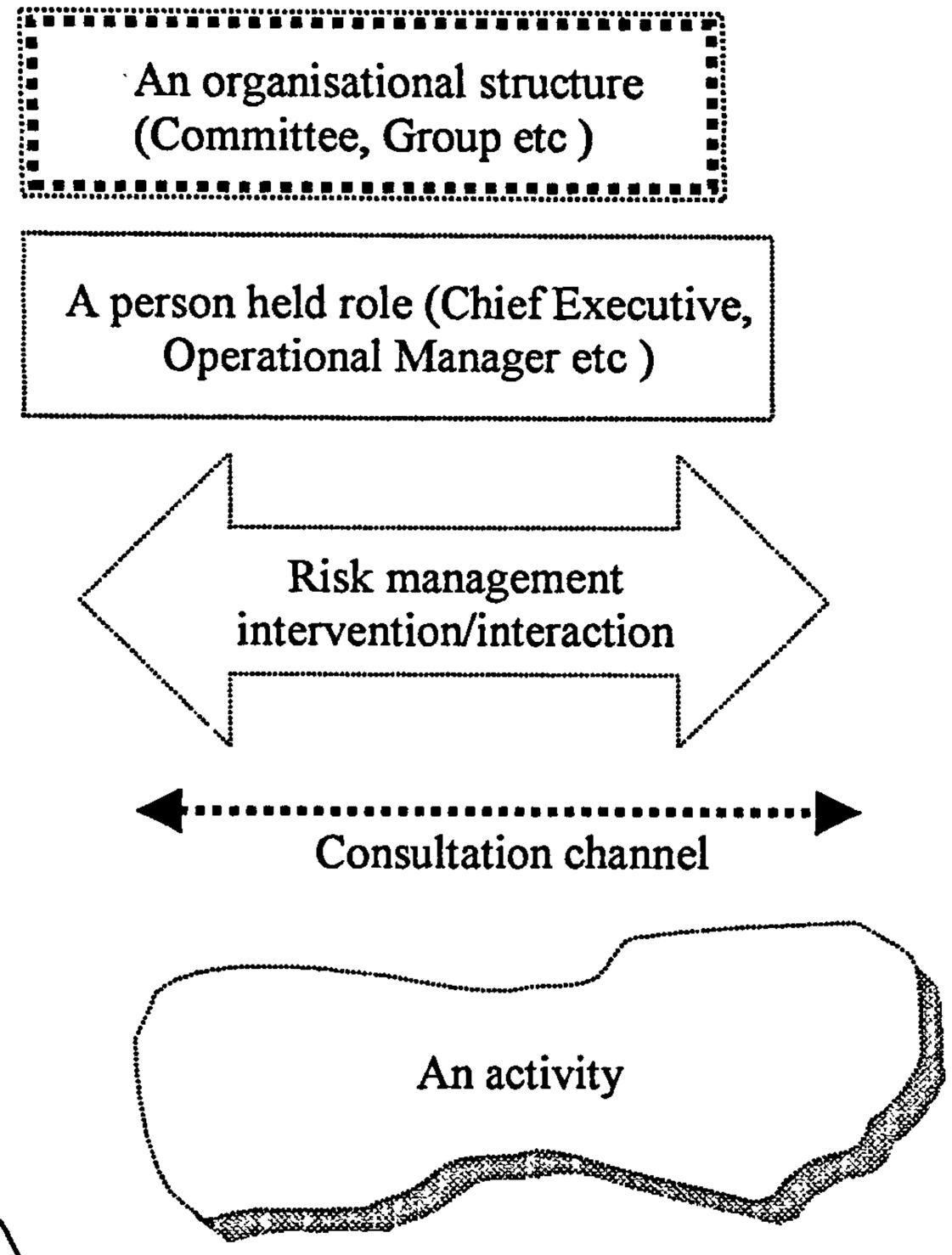
Chief Executive	Accountable Officer* Authorization Implementation of risk control measures	Norms - Leadership, Communicating performance requirements, Delegation and control. Values - Delivering the service to contract, standards and budget. Controlling risks to the legal, NHS policy and socially acceptable standards	Designation of staff role and responsibilities and range of power to act. Power to enforce the implement of decisions through the ability to take disciplinary action against staff. Power to re-allocate resources as needed.	'Availability' heuristic 'Expert Check-list' heuristic
Executive Director of Finance	Authorization Implementation of risk control measures	Norms - Agreeing a balanced budget. Monitoring income and expenditure to ensure that the Trusts financial responsibilities were met Value - Effective financial management	Prevention of expenditure outside of budget set or in breach of the Trust's Standing Financial Instructions.	Affordability Heuristic 'Personal Consequence' heuristic

Key to rich picture of soft-system holon Fig 5.2

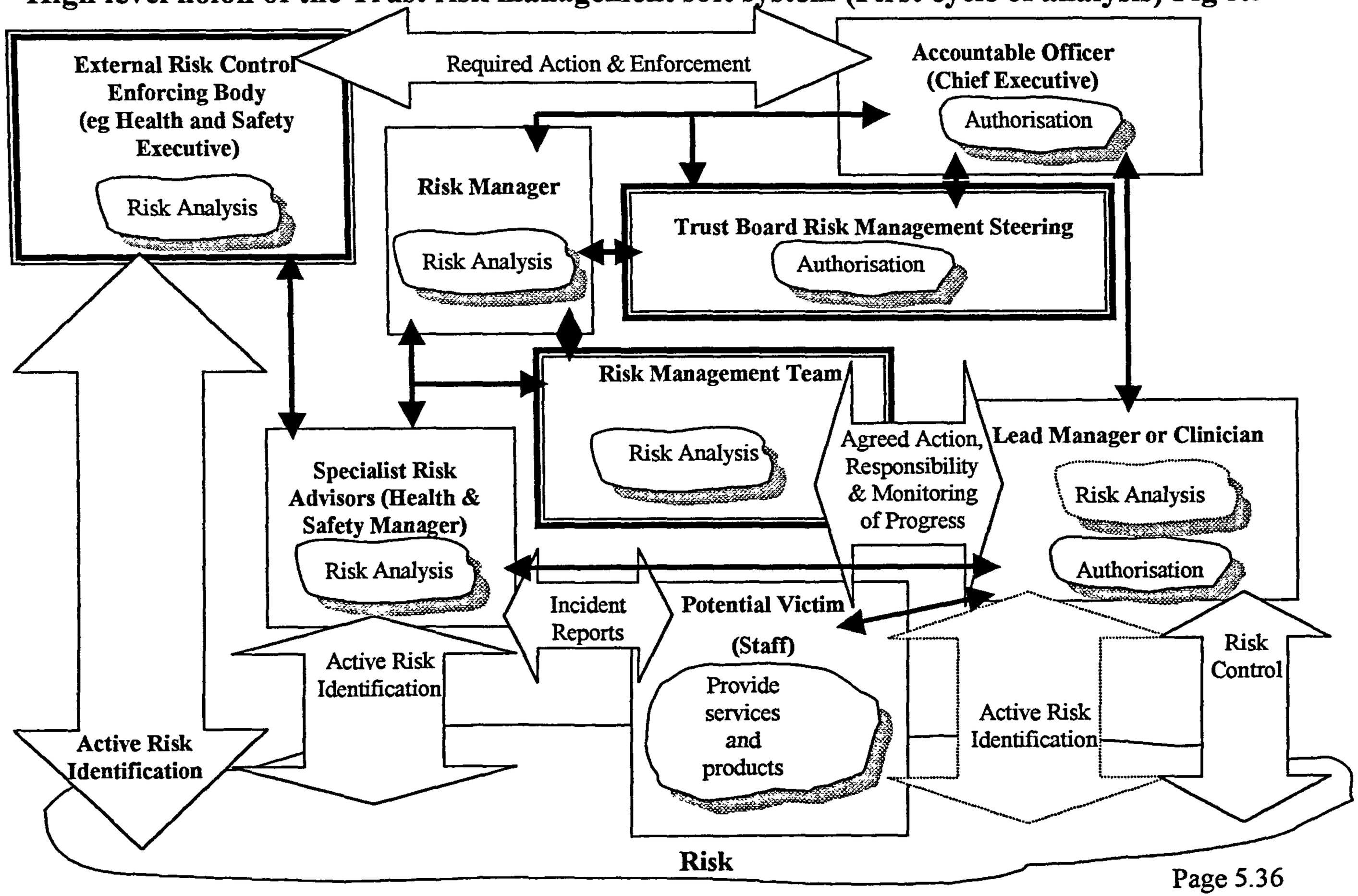
Solid lines indicate observed in the real world



Dotted lines indicate not observed in the real world but should theoretically exist



High level holon of the Trust risk management soft system (First cycle of analysis) Fig 5.3



The system is composed of six elements (Fig 5.2 provides the key to these within the rich picture):

- Organisational structures such as committees and formally established groups.

- Personally held roles such as Chief Executive, Risk Manager, Health and Safety Advisor etc.

- Risk management interventions such as active risk identification, implementation of risk control measures and interactions such as consultation, monitoring etc.

- Consultation channels which are formally recognised. Informal communication channels are not included not because they are unimportant but because every person can establish informal communication channels with everyone else and this is taken as a given. For example there are many informal communications between me and the operational managers and their staff but all these have eventually to work through the formal communication channels for organisationally legitimate decisions and actions to be taken.

- Activities which result in interactions or interventions within the risk management system.

- Risk such as those due to Glutaraldehyde.

Starting with 'risks' of which the risk from Glutaraldehyde is just of subset, an 'external risk enforcing body', the Health and Safety Executive in this case, carries out 'active risk identification' through audits of practice during site visits and the monitoring of RIDDOR reportable incidents. Following their 'risk analysis' they specify their 'requirements' and 'enforce' them if compliance is not to their satisfaction.

The enforcing body formally interacts with the 'accountable officer', the person with formal responsibility for complying with the enforcing bodies requirements, in this case it is the Chief Executive. The authorising officer is also representative of the Trust Board and since they are collectively accountable, they are often also included in the feedback and recommendations made by enforcing bodies. Therefore, accountable officer here includes the Trust Board and Executive Directors who are collectively accountable and represented by the Chief Executive in this case,

The enforcing body will also have consulted with the 'specialist risk advisor', the Health and Safety Manager in this case, who will receive these audits and recommendations as supplements to the 'active risk assessments' which that manager will be carrying out on a regular basis. The Health and Safety Manager will use formal 'risk analysis' methodologies and together with his experience and knowledge will consult with operational managers and the 'external enforcing body' so that the operational manager understands fully the risks facing the operational manager's area of responsibility and the potential risk control measures which are available.

The Health and Safety Manager also receives 'incident reports' from 'potential victims' of the risk, staff in this case. This flow of information on incidents across the Trust helps the Health and Safety Manager to spot trends and risk hot spots which further informs the 'risk analysis' carried out. Serious incidents are reported to the responsible operational manager along the consultation route and to the Chief Executive through the Risk Manager consultation route.

Operational managers are those with responsibility for the delivery on a day to day basis the services and products of the Trust, these include General Managers, local manager, supervisors and managing clinical staff. Executive Directors within the Trust have two roles. The first is collective responsibility for the Trust as members of the Trust Board and within this role their participation in the risk management system is the same as that described for 'accountable officer'. Within their second

role, they manage a service on a day to day basis and as such, within this system have the same role as operational managers.

Operational managers are required, under the Health and Safety at Work Act (1974), to carryout 'active risk identification'. In the Glutaraldehyde example it appeared that, at this stage in the development of the risk management system, this was seldom done, though there were exceptions. Operational managers were also supposed to carryout risk analysis based on these risk assessments and to balance the control of risk with the service delivery demands within the budgets set. They had the power to implement 'risk control' measures within the budgetary constraints they were operating under and were expected to complete a further 'risk analysis' to see if the risk control had adequately controlled the risk. If there were problems in achieving adequate risk control they could consult with the 'accountable officer' to determine what further action they should take. It appeared to me that very few risks went through this route.

Typically, uncontrolled risks were brought to the Risk Management Team for discussion and risk analysis. The Risk Management Team's role was to carryout risk analysis on these uncontrolled risks and to agree the most appropriate risk control action to be taken. The Team would also agree what was the most appropriate authorisation level for a particular risk control solution. In some cases it would be a specific operational manager who would be informed of the action agreed. Any actions agreed at the Risk Management Team were also documented in a Risk Management Team Action Plan which helped to monitor progress of the agreed action through to implementation.

If the Risk Management Team felt that progress was not being made at the agreed rate or that a higher level authorisation was needed, for example, if there was insufficient budget within the operational managers control to implement the action, then the risk and recommended control action was taken to the Risk Management Steering Group by the Risk Manager to be considered for approval.

In addition the Risk Manager was expected to monitor the overall functioning of the Risk Management System and develop it as needed to meet the Trust's risk management needs.

5.6 Initial holon - real world comparison (The autoclave experience)

Having developed a holon describing the risk management system, I now wanted to test how well it reflected the way the real world risk management system dealt with other uncontrolled risks which had been outstanding since before the formal establishment of the Trust's risk management system. These uncontrolled risks were related to a set of autoclaves.

Autoclaves are special ovens which are used to sterilise equipment or samples which are potentially infected. Autoclaves are usually installed in areas which deal with potential infected equipment such as operating theatres. One department which dealt with high risk samples had to send them to another part of the hospital for analysis and had requested an autoclave to reduce the risk of transporting these samples. Years of trying to get such equipment through the line management route had failed to get the department an autoclave and so the risk was reported to the Risk Management Team by the clinical head of the department in July, 1995.

Here we see that the potential victims of the risk had tried to get the risk controlled through the operational management line. The only reason put forward for this lack of progress was that there was no budget allocated for this expenditure. The responsible manager seemed to be using the 'Affordability' heuristic. That manager did not have a budget and so did nothing. There was no evidence the manager had even tried to get a budget or make a case for the control of the risk through the normal budget setting process. This is a clear indication of the use of the 'Availability' heuristic which is expressed as the simple rule of thumb, 'If I cannot afford it I will do nothing'.

The manager should have used 'risk analysis' but this is a more complicated intellectual exercise compared to using heuristics. Risk analysis would have involved assessment of the risk in term of a comparison of this risk to the whole risk portfolio they were carrying. There was no evidence that operational managers had such a portfolio. Therefore there was no ranking of the risk against that portfolio and no assessment as to what risk control was most appropriate. Such risk control options could include a logically justifiable decision to retain the risk but this was not the conclusions which the operational mangers had come to. They accepted that the risk needed to be removed but did nothing because they had no budget. Neither did they make an attempt to use the Trust's management systems to get such a budget.

Using the concept of heuristics, this apparently illogical decision is understandable. Operational managers are faced with complex demands on a daily basis. There is no time to do detailed analysis on every issue they face, neither is there any way that they can keep within the forefront of their mind all the demands that they receive. Therefore, this risk failed to become a priority due to its ease of recall, "Availability' heuristics'. Neither was there an immediate solution available because there was no specified budget for this item. However, there was a general budget under the manager's control but the consequence for that manager of spending over this budget would be serious. The manager chose to balance the budget rather than protect the staff, "Personal Consequence' heuristic and justified this through the use of the 'Affordability' heuristic, no budget means not affordable so do nothing.

An effective risk management system can be judged by how well it can handle inappropriate use of heuristics like this one. Prior to the risk management system being in place nothing was done about this risk, now that there was a risk management system could it do anything about this risk?

Because the matter had been raised with the Risk Management Team it became highly visible to the responsible operational manager thus assisting in switching on the "Availability' heuristic' of the managers responsible for controlling that risk. Risk analysis by the Risk Management Team agreed that the risk was serious enough to warrant the capital expenditure required. The risk management representative of the general management area in which the department with the autoclave risk existed had a bid for an autoclave added to the capital program planned for that year. The manager used, appropriately, the general management authorisation route rather than the Chief Executive Authorisation route via the Risk Manager.

The Risk Management Team logged the risk on its risk management action plan and requested periodic progress reports. A report on progress made to the Risk Management Team in October, 1995 reported that the work was underway and would be completed by the end of October. Apparently another success of the Risk Management Team.

However, in March, 1996 a further review of progress revealed that the work was not completed but would be by the beginning of April, 1996. I thought this was due to some technical delay but still felt that progress had been made and the risk would be adequately controlled shortly.

It came as quite a shock to me, when at the review of progress at the end of April, 1996, that no work at all had been carried out. The explanation given was that the funding that the responsible manager had requested and had been allocated, for the capital work, turned out to be inadequate for the work required. Worse, still no action had been taken to remedy the under-funding by the responsible operational manager. Again the 'Affordability' heuristic dominated the decision making process.

Lack of funding to control risks was the most common excuse given by line managers for not controlling risk within their area of responsibility. It was repeated

time after time as the reason for inaction whenever a risk was identified which required some funding however small.

This provided further evidence that the 'Affordability' heuristic plays a key part in decisions whether or not an unacceptable risk will or will not be controlled. However, the concept of affordable is not a simple concept easily divided into affordable or not.

Affordable can mean:

- There is a surplus of funding which I have the discretion to spend on the control of this risk.

- There is potential expenditure, elsewhere, which is less important than spending on the control of this risk.

- There is a budget from which I can transfer funds to control this risk.

- There is a specific budget to control this risk.

- There is a need for an injection of new money into my account to control this risk

Health service managers have budgets allocated for specific activities during the annual budget setting process. This provides a mechanism to ensure spending is in line with the budgets given to the health service and does not necessarily reflect what needs to be spent in order to deliver the service required by patients, expected by professionals or required to ensure that risks are adequately controlled. There has been a feeling that the service is under funded. The national budget, announced in the year 2000, which would progressively increase health care expenditure from 6.7% of gross domestic product to the European average of about 9% of gross domestic product seems to confirm this feeling.

Whatever the expenditure, the message to managers that balancing the budget was their priority was always strong and clear. Spending outside the allowable limits of specified budgets was soon spotted and acted on by the finance function.

Therefore, for health service managers affordable tended to mean:

- Do I have an allocated budget for the control of this risk?

- If not should I transfer from some other under-spent budget or should I bid for extra funding in my budget?

There appeared to be few under spending budgets and so if there had not already been an allocated budget, to control the risk, then the only option was to bid for an extra funding allocation to control that risk. This was a time consuming task and attempts to increase one's budget part way through the year was not likely to succeed because the budgets had been set on the basis of the income received. There was little in reserves and so called Cost Improvement's, percentage of the budgets which had to be cut in order to ensure the Trust balanced its books, meant that from a finance point of view, good managers were those who produced savings from their budgets not those who increased their expenditure and reduced risks. For some people it was therefore easier and in their personal interest to ignore a risk than to go to the trouble of transferring from budgets or bidding for an increased budget allocation. In this case a mistake in costing had been made and thus the managers were not keen to make this visible by going part way through the year for more funding.

Managers were not being deliberately irresponsible. The problem appeared to be in the way that they had to handle this and other demands on their time. Managers within the health service are under a great deal of pressure from a myriad set of

demands to increase activity, improve quality and reduce costs as well as manage risks. They have to do this in one of the most complex organisations, delivering hundred of different services and treatments to thousands of patients cared for by multiple professions, each with their own power, authority and mission. All this has to be done within a highly political context and media hype which produces shifting priorities of respective governments.

When faced with this barrage of demands the heuristic that appears to become dominant is that which focuses on helping to determine which risk will do me most harm first. Further evidence that the proposed "Personal Consequence' heuristic plays a central role in risk management decision making.

When brought together for assessment of the risk, the operational manager, the Risk Management Team and the potential victims of this risk had all agreed that this was an unacceptable risk and had to be controlled but no action was taken by the responsible manager. I thought that this was a further example of the use of the "Personal Consequence' heuristic in action. Since the 'Availability' heuristic, was being over-ridden by the 'Personal Consequence' heuristic I decided to use that knowledge to affect the decisions which the managers had made. I decided to escalate the pressure on the managers by using my position and direct access to the Chief Executive to raise the personal importance of the matter in these line managers' eyes.

The Chief Executive agreed that the risk was unacceptable and that the risk should be controlled as originally agreed by the Risk Management Team. I informed the managers of the decision and it had the desired effect of motivating them to do the work required to fully cost the scheme. The personal consequence of ignoring the instructions of the Chief Executive outweighed the personal consequences of doing the work required to control the risk.

Costing were completed by July 1996 and sent out to tender August. Work started in October, 1996 and was due for completion in March 1997 but because of a number of installation and equipment faults, it was not until July 1997 that the system was running, nearly two years after it had started to be pursued by the Risk Management Team. However, it should be remembered that the problem existed for years before the lead clinician felt that he had to raise the issue with the Risk Management Team. Quite clearly, gaining adequate risk control within a health care organisation was going to be a difficult and long task but the solution seemed to lie within the development of effective risk management systems designed to ensure that the heuristics used by people would result in better risk control than would be the case without such a system.

The holon seemed to stand the reality test once more and at the same time the experience of managing non-clinical risk confirmed the key role of heuristics in the decision and implementation process of risk management.

5.7 External Health and Safety Audit

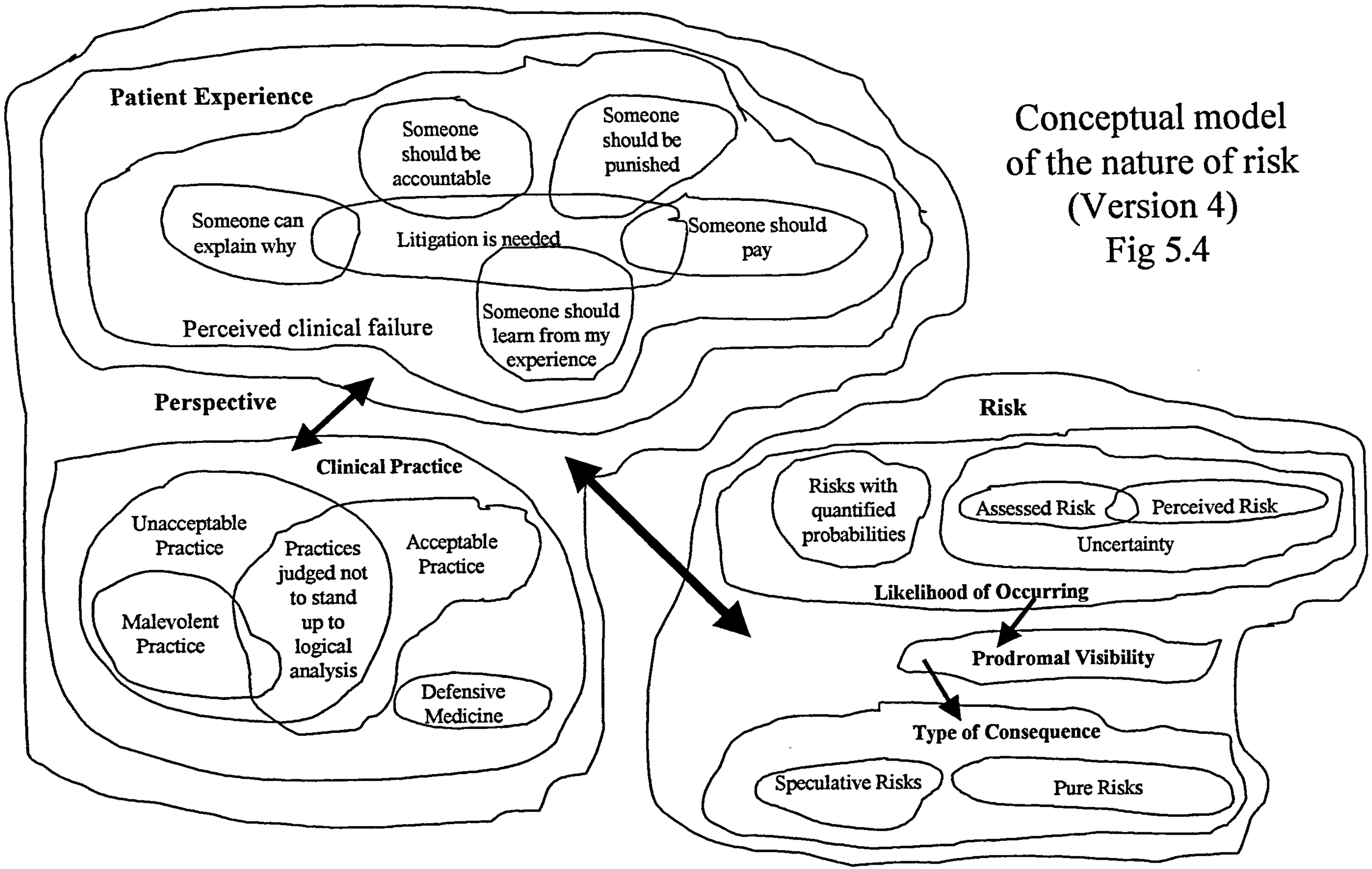
On 10th February the Health and Safety Executive sent a team of four inspectors into the Trust to review its management of health and safety risks. The team spent three days interviewing staff and inspecting all areas of the Trust. I welcomed this visit as it would provide me with an external perspective on the way we were managing this particular type of risk. Of course, this was not just an academic exercise, the days when a Trust could ignore their recommendations had gone.

> 'Health and safety inspections used to come and go without leaving much impression on most NHS managers...Not any more. The new breed of inspections by the Health and Safety Executive have a scope and depth which is unprecedented in the health service - and they demand the involvement of the most senior managers.' (2)

I asked my Health and Safety Advisor to provide me with a list of all successful prosecutions of health care organisations in order to assess what was the most serious action that the Health and Safety Executive had taken to enforce the legislation (see Appendix 2). The fines range from £200 for failing to report a RIDDOR incident on time to £50,000 for an incident in which a patient was scalded and drowned as a result of failure to fit thermostatic control to water output taps. This brought home to me that my decision to have the thermostatic control valves fitted was the right decision. Between 1977 and 1988 there were successful prosecutions because of 6 deaths and 4 severe burns due to failure to control the scalding risk. I was pleased that this risk was the first risk I removed as Risk Manager.

Reflections with colleagues led to questions being asked as to whether the conceptual model of the nature of risk, developed to explain clinical risk Fig 5.4 developed in Chapter 4, could be turned into a generic model of the nature of all health care risks. Using the findings in the Health and Safety Executive audit as the real world example, I attempted to develop a more generic model of risk.

When looking at the elements of the conceptual model of risk, the Health and Safety Executive used their experience to determine whether there has been a failure to manage risks adequately. They then seem to decide whether legal action should be taken. They assume that someone can explain why things went wrong. They also sometimes seek to punish, to determine who is accountable, to make someone pay and finally they expect people should learn from the experience. If the 'Patient Experience' category was replaced by a 'Consumer Experience' and we replaced 'Perceived Clinical Failure' to 'Perceived Failure' then these element of the model apply both to the Health and Safety Executive and to patients. Even though the Health and Safety Executive is not a direct consumer, as is the patient, it is providing its own interpretation of that consumer perspective.



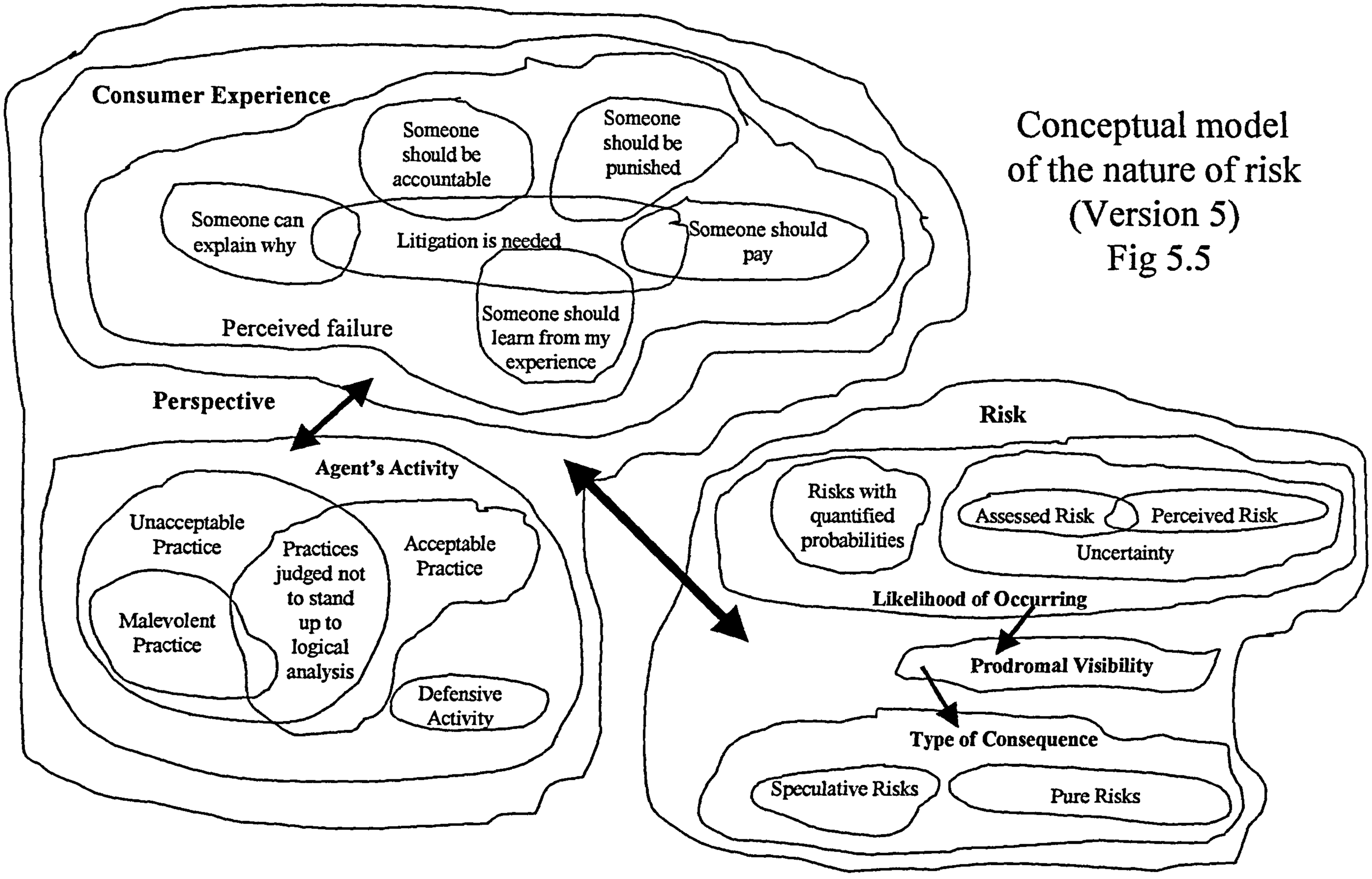
Conceptual model of the nature of risk (Version 4) Fig 5.4

If we examine the provider 'Clinical Practice' element of the model and replace this with 'Agent' that is the performer of actions which provide the services or products and which can include people, professions, organisations etc., and if we replace 'Defensive Medicine with 'Defensive Activity' to mean actions and procedures taken to protect the agent from criticism rather than for the benefit of the consumer, it is clear that the Health and Safety Executive is not an agent when carrying out its audit function.

When it does an audit it examines the practices of the agent in order to recommend practices which it thinks are likely to protect potential victims (consumers such as staff, patients, visitors etc.). It does not consider whether there is a right balance between risks control and the provision of the service and products, it leaves that to the agent. The Health and Safety Executive does not provide the service or products, that is what the agent does, but it can influence how the agent provides those services and products through recommendations and use of legal powers.

The conceptual model of the nature of risk is now much more generic (Fig 5.5). Risks continue to exist as the initial definition: The product of the likelihood of an events, together with its prodromal visibility and potential consequences. However, risk does not exist in a vacuum, it is intimately tied to the perspective of the human beings who experience it, 'Consumers' and this has to be balanced with risks due to failure of delivery of products and services, the 'Agents' perspective. These perspective do not represent individual people or organisations but are rather perspectives from which the risk is being perceived. For example, a doctor when treating a patient can view the risk as an agent who has to balance the risk with the requirement to deliver clinical services and products. However, the doctor may also perceive the risk from the perspective of a consumer when a patient decides to sue

Conceptual model
of the nature of risk
(Version 5)
Fig 5.5



him for alleged negligence. The doctor is now a consumer of the claims management function of the Trust and his defence union which is going to assist in his defence. His experience of this will be lead him to judge whether there was a perceived failure to defend him properly. A real example of this conflict is when the Claims Management Function (from the agent's perspective) has decided to make an out of court settlement as the best option rather than fight the case and prove the innocence of the doctor (consumer perspective). The doctor as consumer then considers whether there was a failure of the service to protect him. He may even consider taking legal action if he suffered loss, for example if he lost his job and felt it was unfair dismissal.

Having developed my conceptual model of the nature of risk into a more generic model we decided to review the findings of the Health and Safety Executive Audit of the Trust which reported to the Trust Board in 5th August, 1998.

> 'This report summarises the findings of a health and safety audit carried out by a team of Health and Safety Executive (HSE) Inspectors at the Hope Hospital and Ladywell Hospital sites on 10, 11 and 12 February 1998.
>
> The main purpose of the audit was to assess the Trust's overall compliance with the Health and Safety at Work etc Act 1974, utilising the requirements of Regulation 4 of the Management of Health and Safety at Work Regulations (MHSWR) 1992 as a framework for our approach.
>
> Regulation 4 specifically requires organisations to have appropriate arrangements in place for effective planning, organisation, control, monitoring and review of protective and preventative health and safety measures. Successful compliance with this Regulation will naturally encompass all subsidiary and more specific health and safety legislation.
>
> The audit was not an exhaustive assessment of health and safety standards within the Trust, since the organisation is too large and complex to allow such an approach. Instead, our audit was a "sampling" exercise which, during interviews and inspection work, paid particular but not sole attention to the following priority
> topics:
>
> (1) control of glutaraldehyde;

(2) manual handling;
(3) violence to staff, and;
(4) ionising radiations.

The HSE audit team believe that the topics, personnel interviewed and activities / areas inspected enable a reasonably valid assessment to be made of the Trust's management of health and safety and of how the Trust was meeting its legal duties under health and safety legislation at the time of the audit. Since the audit was not exhaustive, the detailed points in the report should be seen as indicators of the Trust's performance and as evidence to support the rationale for the main action points.' (3)

The report was a long rambling list of comments covering 'Strengths, 'Weaknesses' and 'Action Points' within a document which was over 65 pages long. Appendix 3 is an extract of the 'Strengths' section which will give the reader a flavour of the report.

The report contained 179 identified strengths, 144 identified weaknesses and 197 specific actions which the Trust was recommended to take. The only structure which was common across the report was based on sections defined by the Health and Safety Executive as:

' **Policy** "The element of the management process which sets the direction in which the organisation is to progress"

Organisation "The element of the management process by which the mechanisms for delivering (the organisation's) policy are formulated and implemented".

Control "The element of the management process which ensures that immediate preventative and protective measures to deal with risks arising out of work activities are functioning correctly".

Monitoring "The element of the management process that verifies the implementation of policy and the adequacy of preventative and protective (health and safety) measures"

Review. "The element of the management process which objectively determines the need for changing the organisation's current arrangements for controlling hazards arising from work activities".

It should be realised that these sub-divisions are somewhat arbitrary and

subjective, but it is felt to be useful to separate the key processes in accordance with this format, so an attempt at this has been made.' (4)

The audit was not focussed on risk but on what the Health and Safety Executive considered to be acceptable practice in the management of health and safety risks.

I examined these elements to see if the soft system covered what was expected to be in place in order to effectively manage risks. These elements included:

- Policy "The element of the management process which sets the direction in which the organisation is to progress". This is represented in the holon by the Trust Board Steering Group and the Chief Executive.

- Organisation "The element of the management process by which the mechanisms for delivering (the organisation's) policy are formulated and implemented". This is represented in the holon by operational managers and directors, together with the Chief Executive.

- Control "The element of the management process which ensures that immediate preventative and protective measures to deal with risks arising out of work activities are functioning correctly". This is represented in the holon by the operational managers.

- Monitoring "The element of the management process that verifies the implementation of policy and the adequacy of preventative and protective (health and safety) measures". This is represented in the holon by the Health and Safety Manager.

- Review. "The element of the management process which objectively determines the need for changing the organisation's current arrangements for controlling hazards arising from work activities". This is represented in the holon by the Risk Management Team and the Trust Board Steering Group.

The Health and Safety auditors seemed to be using a whole range of instances and indicators which demonstrated to them that the system they expected to be in place were working, for example:

> '1. The Trust has made clear, via the Statement of Intent signed by the Chief Executive, that it is committed to providing safe and healthy conditions for staff and others.'
>
> 28. Clinical waste is removed twice a day from the gastroenterology ward by contractors who wear gloves and who tie them up securely and mark them with the place of origin.'

Although the Health and Safety Executive claimed to have given some structure to their thinking the structure they provided was at the same time so detailed that the theme behind the example was not immediately easy to see and at the same time the broad grouping of policy, organisation etc was at such a general level as to be useless.

I therefore decided to concentrate on the recommended actions but a list of 197 apparently unrelated specifics was unmanageable so I attempted to group the specifics into what appeared to be a related set of key actions. Appendix 4 shows my analysis of the key groups of actions. Under each of these groups of actions is the list of specific actions recommended by the Health and Safety Executive. The numbering by each action relates to the order in which it was presented in the original Health and Safety report.

Examining the groups of key actions revealed a core set of must do's which I have stated in generic risk management, as opposed to a specific health and safety, terms as follows:

- Ensure that individual roles & responsibilities for risk management are clearly defined.
- Monitor managers risk management performance.
- Deploy the Trust's Risk Management system in all parts of the Trust.
- Develop, implement and ensure a comprehensive range of risk management policies.
- Keep the Trust Board informed of the Trust's risk management performance.
- Ensure that specialist advisor are involved appropriately in management decision making.
- Ensure risk assessments are carried out.
- Produce and implement action plans for the control of risks

Although the four auditors were not aware of using an 'Expert Check List' heuristic it appeared that this is what they were doing and that check list seemed to be based on eight elements listed above. They seemed to have interviewed people, visited sites and observed what was going on using a simple rule of thumb that good risk management of health and safety can be determined by the presence of absence of these eight elements of their 'Expert Check-list' heuristic. They then noted down, in the order in which they came across them, specific instances or missing examples of what their 'Expert Check-List' heuristic required them to check for.

5.8 Conclusion

Using four levels of analysis a holon of the risk management system was developed. There was evidence of widespread use of heuristics in decision making. There was also evidence of the inappropriate use of heuristics leading to the Trust retaining serious and unacceptable risks. A number of heuristics seemed to play a central part in heuristic decision making and these were: 'Availability', Personal Consequences' and 'Affordability'. The power of the risk management system to mitigate the worst effects of heuristic decision making was also demonstrated.

An interesting new type of heuristic exemplified by the decision making of experts such as the Health and Safety Manager, was identified. This heuristic was named an 'Expert Check-list' heuristic because unlike some heuristics which could be summarised in a simple single sentence, this new heuristic could only be summarised as a list of single sentences like a check list. This led to the grouping of heuristics into two types: B-heuristics or 'Basic Heuristics' and E-heuristics or 'Extended Heuristics'. Analysis of the Health and Safety audit of the Trust indicated that the auditors were also using an Extended Heuristic to make their decision as to how well the Trust was meeting its obligations under the Health and Safety at Work Act.

In addition, the model of the nature of risk based on the original clinical analysis was converted into a generic model by replacing the specific examples of the perspective of clinician and patients with the more general terms of 'consumer' and 'agent'. In this form the model was able to explain risk from the health and safety point of view as well as from the clinical negligence point of view.

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2 Agnew, T. ***Safe conduct.*** Health Services Journal. (9th November, 1995) p 11.

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4 ibid

Chapter 6

Phase 4 - Risks, heuristics and gaining control of clinical risks (January, 1996 - July, 2000)

6.1 Introduction

The control of two of the above risks, Glutaraldehyde and autoclave, provided me with my first real world taste of risk management. It was also the test bed for the initial development and testing of my theoretical concepts of the nature of risk management.

The lack of progress in controlling these two risks was not due to a lack of effort or commitment of the Health and Safety Manager or a lack of interest by operational managers. Both agreed the risks needed to be controlled but the heuristics being used by the Health and Safety Manager and that used by operational managers were quite different. Both the Health and Safety Manager and operational managers demonstrated the use of the 'Availability' heuristic, and the 'Personal Consequence' heuristic to prioritise the risks being faced by them but the personal consequences for the Health and Safety Manager depended on reducing health and safety risks, while the operational manager's position depended on reducing the risks associated with not achieving a financial balance. These differences together with differences in knowledge about the problem areas led them to use different heuristics to solve the same problems. The operational manager used the 'Affordability' heuristic to avoid taking any action while the Health and Safety Manager, as an expert, used the 'Expert Check-list' heuristic to continue to push for action.

I now wanted to test the theoretical concepts developed in Chapter 5 applied to the management of clinical risks. I thus wanted to further develop my answer the second research question:

What types of systems and heuristics are used when making and implementing risk management decisions within a hospital.?

But this time I would explore this from the perspective of clinical risks and with the aid of a holon and heuristics developed out of the real world experience of the management of a non-clinical risks.

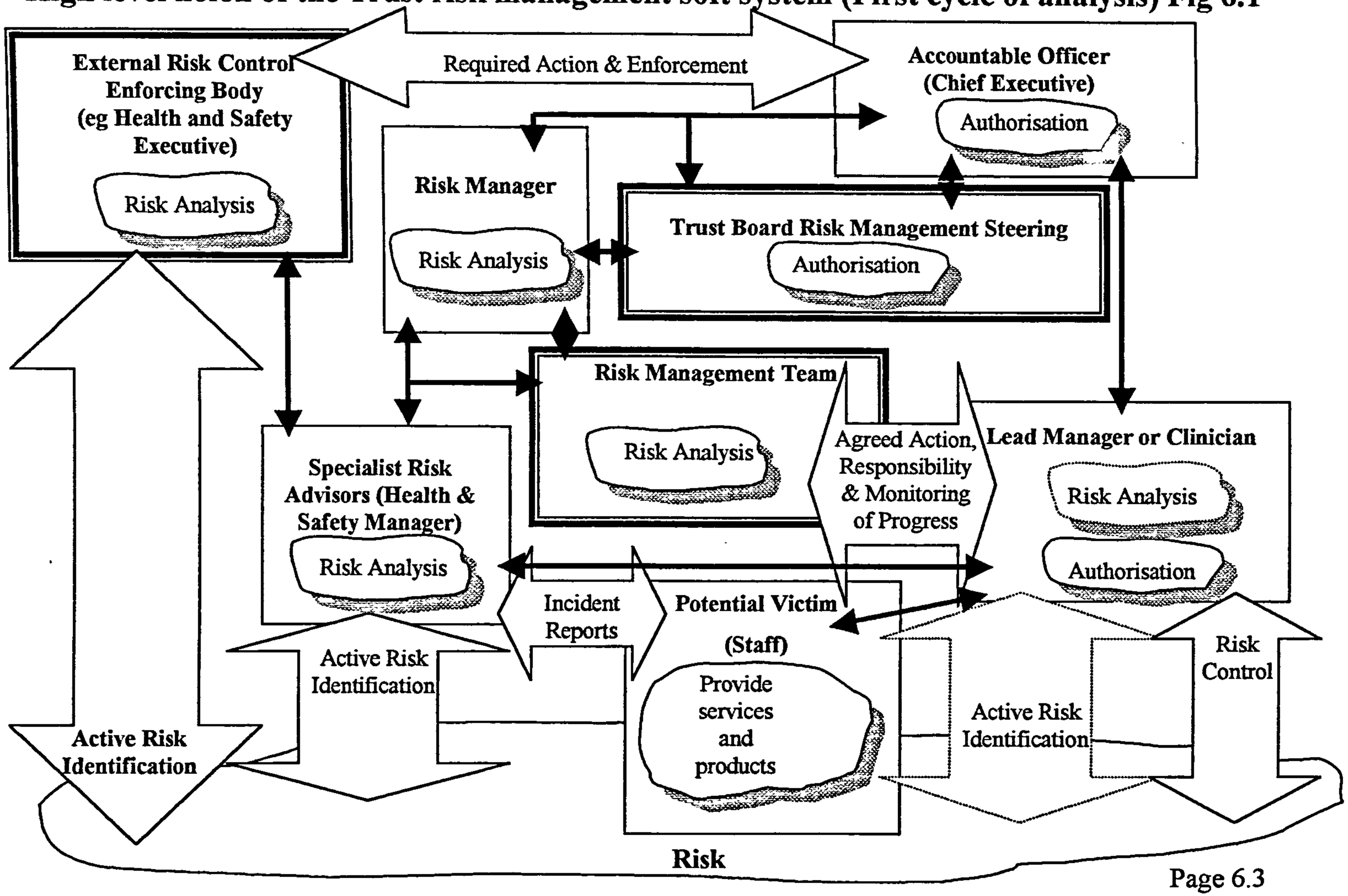
6.2 Systems and heuristics used to make and implement clinical risk management decisions within a hospital.

Checkland's key principles will be used to re-examine the holon Fig 6.1 in the light of the real world experience of clinical risk. The root definition for this remains the same:

Risk management actions taken by corporate management to achieve improved risk control.

My focus, as stated in the root definition, is risk management action taken by corporate management to achieve risk control and not risk management action taken by individual clinicians to achieve risk control within an individual's clinical practice.

High level holon of the Trust risk management soft system (First cycle of analysis) Fig 6.1



6.3 The experience of managing clinical risk

Clinicians have a long history of resisting management control of their activities. This can be seen by their original rejection of NHS indemnity, at the start of the NHS, having later to accept it when they could not afford to pay the rising claims for compensation against them in 1990 (see Chapter 4). Clinicians claim that the contract they have with the employing authority is a 'contract for service' rather than a 'contract of service' because they claim that managers lack the clinical expertise to tell them what to do (1).

My experience as the Risk Manager confirms this value system which clinicians have in comparison to other staff. They value competence as recognised by their professional colleagues and their professional governing bodies. They also value their defence organisations in that they always ask for their opinion before accepting any proposals for changes in the way they manage risks.

However, the increasing cost of litigation made it clear that the systems, what ever they were, which clinicians used to control risk were not effective enough. In an attempt to introduce managerial techniques of risk control such as external audit and review of practice within a culture of independent clinical practice, the concept of 'clinical audit' was introduced and made an essential component of clinical practice within the National Health Service. (2) The national policy on clinical audit is set out in 'Meeting and Improving Standards in Healthcare'. EL(93)59

The development of clinical audit became the responsibility of the new health authorities in April 1996 who were given the following key responsibilities (4):

- Contribute to deciding the priorities of clinical audit activity
- Agree levels of funding in order to secure short, medium and long term benefits in the quality of health care.
- Monitor the range and extent of participation in clinical audit
- Ensure quality and effectiveness of clinical audit. (4)

According to these guidelines EL(95)103 clinical audit has the following characteristics:

Balanced Selection of topics	• Cost effective • Audit across primary/secondary care interface • Involves the consumer • Multi-professional • Links with research & development • Reflects health authorities, trusts and G.P's priorities
Employs adequate audit processes	• Robust and appropriate methodologies
Secures implementation of audit results	• Involves managers • Informs the commissioning process • Links with education and training • Informs the R&D agenda
Is comprehensive	• Involves all aspects of health care

6.3.1 Clinical Audit in practice

As the Trust's Risk Manager I was a member of the Trust's Clinical Audit Board which was chaired by a clinician. It's membership included two surgeons, two physicians, a general practitioner, senior nurses, physiotherapist, pharmacist, Health Authority clinician, patient representative, management representative, clinical audit manager, me the Risk Manager, and the chair of the board.

The Clinical Audit Board's terms of reference were to:

- promote and support clinical audit in order to achieve high levels of clinical quality improvement and assurance.
- encourage all clinical directorates to actively participate in clinical audit.
- encourage all professionals to participate in multi-professional audit.
- involve primary and secondary care agencies in the process of clinical audit.
- identify audits which will lead to effective change in clinical practice.

The key ways in which the Clinical Audit Board achieved its remit was to encourage participation in clinical audit through peer pressure and the provision of audit resources which would provide clinicians with information on which to assess their own performance and to assist them in reviewing how effectively they had improved clinical practice. Although the majority of clinical departments practised clinical audit, what they understood by clinical audit was variable. Some used it as a one off review of an interesting case. Others used it as a supplement to training, with junior staff presenting cases to peers and senior clinical staff. Very few could demonstrate that clinical audit was done systematically and in a way that could bring about improvements in clinical care and reduction in clinical risk. However, one example

does show how, if done well, clinical audit can be a significant mechanism to manage clinical risk.

The most effective use of clinical audit within the Trust was carried out within the Diabetes and Endocrinology Directorate. This started with an audit of the treatment and care of patient's suffering from diabetes mellitus, a condition in which the body does not properly control the level of glucose within the blood and can lead to death if untreated. Even with treatment there are serious risks of complications due to inadequate control of blood glucose levels which can result in blindness and amputation of limbs.

Having audited their clinical practice the diabetes team recognised that there was poor co-ordination between primary (care outside of the hospital provided by general practitioners and community health care staff) and secondary care (provided by the hospital). The number of complaints from diabetic patients were increasing. These complaints were focussed on delays in referral and insufficient adequate information about how care would be continued within the primary care setting.

The team recognised that the organisational divide between primary and secondary care was a key problem that needed to be overcome if these problem were to be solved. The aim was to develop a mechanism by which the primary and secondary team would share the care with each other but this could only be achieved if information on the care could be shared with each other.

They developed a district wide diabetes information system based on a local diabetes register of patients. This system now provides information about all aspects of patient care included their clinical history and management. When a patient is seen in hospital, information about the patient is put into an information repository which also provides guidance on an agreed protocol of care. When patients see the general practitioner, information is also added and in this way a complete set of information is kept on the patient and shared with those involved in the treatment and care.

Summaries of this information are sent every quarter to the general practitioner and the patient.

This information and shared care protocol has resulted in all patients in the district having an annual review carried out by a doctor and nurse either at the hospital or in the community setting. This is dependent on the type of diabetes which the patient has. At the reviews, patient education is a key feature. Any problems between reviews initiates an assessment by a specialist nurse. Three times a year the primary and secondary care teams meet to audit their performance and solve any problems facing them.

The result of this approach has made significant improvement in the control of risks to the patient and is demonstrated in the table 6.1 below:

Table 6.1 Clinical Audit impact (Diabetes example)		
Key performance indicator	1993	1998
Number of Salford residents with diagnosed Diabetes	4780	5352
Patients screened in last 18 months	55%	73%
Patients with total cholesterol <5.5 mmols/l	32%	74%
Patients with total LDL cholesterol < 3.5 mmols/l.	15%	54%
Complications Rate	1995	1998
Diabetes related amputations (knee)	9	4
Diabetes related amputations (toes)	15	8
Complications Rate	UK	Salford
Blindness due to diabetes < 50 years	1- 4%	0.04%

6.3.2 Reflections on the clinical audit experience and analysis 1,2,3 and 4.

Table 6.3 below summarises my analysis of the clinical audit experience in terms of analysis 1, 2, 3 and 4. The analysis is based on both my own direct experience supplemented with the wider experience of other colleagues in the field and within the learning set. In Chapter 5 the following actors within the risk management soft-system were identified as:

- Members of the Health and Safety Executive
- The Health and Safety Manager
- Risk Manager (me)
- Staff
- Operational Managers
- Chief Executive
- Executive Director

While the clinical audit experience provided an addition set of actors to the above:

- Members of the Clinical Audit Board
- Clinicians
- Patients
- Patient's advocates
- Clinical managers

6.3.2.1 Clinical Audit Board

The Clinical Audit Board's role was to promote the use of clinical audit as a clinical quality improvement and risk management tool. This role was not identified in the analysis of risk management roles in Chapter 5. This role demonstrates further the high priority that clinicians place on their clinical freedom and independence of management for their clinical actions.

In order to be effective the Clinical Audit Board cannot appear to be an agent which is enforcing a legal requirement, even though clinical audit is a professional requirement. Clinical audit has to be sold through professional and moral peer pressure and thus the Board presents itself as a professional enabling function rather than a managerial enforcing function. Its norms then are the promotion of best practice in clinical audit and practice review.

It's values are summarised in Executive Letter EL(95)103 as follows(5):

Table 6.2 Criteria for assessing Clinical Audit arrangements	
Focused	Programme addresses an appropriate range of topics
Effective	Leads to improvements in health outcomes and other aspects of quality (acceptability, access, equity, efficiency and relevance) through changes in practice and health care delivery
Developmental	Promotes individual professional development and strengthens clinical teams and multi-professional working, hence improving quality in the long term
Collaborative	Improves communication between different sections of the NHS (and with non NHS agencies whose work impacts on health) through collaborative working.
Efficient	Resources devoted to clinical audit are commensurate with the expected benefits (including longer term and difficult to measure benefits) and there is accountability for resource use
Inclusive	Patients or their representatives are involved in clinical audit activities, including the selection of topics.
Fair	Expectations of and support arrangements for the audit activities of different speciality, professional and management groups are equitable
Stable	Longer term development of audit through investment in training and appropriate support systems, through continuity of strategy and organisational arrangement.

Power is exercised through peer pressure and professional moral codes of practice. In order to ensure that audit is properly carried out according to the value system described above the resources for audits are only allocated by the Board to proposed audits which meet the value system of the Board. The other source of power which the Board has is one of recognised expertise and respect for its membership by the clinical professionals within the Trust.

The Board never did a formal analysis of options or used formal problem solving methods. However, neither did it guess. Again heuristics seemed to play the dominant role in the decision making process. Issues brought to the Board were discussed and the skills and knowledge of its members using their own 'Expert Check- List' heuristics were worked through to their own satisfaction until there was consensus and a decision reached. I found myself using such a check-list and it could be seen from the discussions how many times the key values of the Clinical Audit Board, detailed above were cited and checked off, not on paper and not in order, but at key points in the discussion until there was satisfaction that each professional's key check-list items had been addressed to their own satisfaction.

6.3.2.2 Clinicians

The clinician's main role is to deliver the clinical services directly to the patients. Though their decisions were the key factor in how the resources of the Trust were spent they had no responsibility for the budget or achieving a balanced budget, this was the responsibility of the manager.

The norms and values of clinicians were therefore quite different from those of managers. The clinician's norms were diagnosing, treating and caring for patients.

Their values primarily related to the quality of the treatment and care of patients they had in front of them but were less concerned with patients waiting for admission and treatment. What was important to many of them was the excellence in which they practised their clinical craft rather the overall excellence of the service which the patient experienced. This can been seen by the lack of enthusiasm by which clinicians responded to the standards laid down in the Patients Charter. The Patients Charter laid down standards of good practice of which a key number related to length of time waiting in various parts of the health care system. There were standards for length of time to first outpatient appointments, waiting time in outpatient clinics, inpatient waiting times and waiting times to admission from the Accident and Emergency Department. While discussing a complaint by a patient about the length of time that a patient had been waiting to be seen, a consultant angrily shouted.

> 'I've saved that woman's life and all she's bothered about is how long she's waited.'

The amount of time and effort spent by managers trying to improve the patient's experience of service delivery against clinical resistance, reflects how common this attitude was amongst clinicians.

The values of clinicians were those of their professional bodies and outlined in their codes of conduct, which include the value of providing treatment and care according to the needs of their patient, confidentiality and keeping up to date through professional development.

The way that clinicians used power depended on the type of clinical professional group to which they belonged. They all used the power of their position as experts in the field, their legal professional monopoly to practice in specified clinical fields and their high public regard.

The most common clinical group, the nurses, had a clear hierarchical relationship with each other and exercised their power as a group rather than as individuals.

The most powerful clinical group were the doctors who also had a clear hierarchical relationship until they became consultants when their relationship was much more collegiate. Junior doctors tended to be very concerned with satisfying their seniors as this is what determined their future likelihood of success. Few junior doctors seemed to have any real understanding of the organisation in which they worked and were strongly focussed on the technicalities of the clinical practice needed to treat patients. Consultants tended to be concerned with their own clinical specialty and how to ensure that it thrived within the organisation in which it existed.

The heuristics demonstrated were those of the 'Expert Check-List' heuristics. This can be seen in the way that clinicians mechanically go through a number of set routines when they carryout their clinical practice. Typically the diagnostic procedure will involve a set of routines which will be carried out even if not needed and even if counter productive. An example of this was exemplified by a pre-audit review of clinical practice related to the initial treatment of patients with a suspected heart attack. The single most important factor in treating patients who have had an heart attack (Myocardial Infarction) is the administration of a thrombolytic drug (clot buster) as soon as possible. The sooner this treatment is given the lower the likelihood of death or disability. Patients who get this drug early also tend to be in hospital for less time. Speed of treatment is therefore critical if the risks associated with the heart attack are to be reduced. I facilitated a group of clinicians to problem solve how to reduce the so called 'door to needle time', that is the time from arrival of the patient in the Accident and Emergency department and the time which they received the thrombolytic drug. A whole range of factors were identified but one factor demonstrated the 'Expert Check-List' heuristic in action.

Heuristics are used because they have been found to work in most circumstances and require less intellectual effort than do more rigorous problem solving approaches. The fact that they generally work well leads the user to use the heuristics in inappropriate circumstances and such a circumstance is the use of the 'Expert Check-List' heuristics used by doctors when faced by a patient in the Accident and Emergency department. They tend to take a history and examine the patient according to the protocol they have been taught. This usually involves carrying out a set of tests such as X rays and 'bloods' as a routine. When reviewing this practice with the clinical problem solving team we noticed that the earliest point at which the decision to give the thrombolytic was at the point when the Electocardiograph (ECG) showed that the patient had had a Myocardial Infarction . In practice, doctors went on to do the rest of the routine tests first before making the decision that a thrombolytic needed to be given. The training protocol was changed and doctors trained in the new protocol in order to update their 'Expert Check-List' heuristic to include a branch to administer the thromobolytic on ECG evidence alone and then to continue with the other diagnostic tests. The result was a significant reduction in the 'door to needle time'.

6.3.2.3. Patients

The patient's role is to be the main recipient of the services provide by the Trust. They are at increased risk compared to the general population because of the risks associated with their illness and the risks associated with the diagnosis, treatment and care process that are needed by them. Their ability to manage these risks themselves are compromised because of the illnesses which they are suffering from and also their lack of knowledge and understanding of the processes which they are being subjected to. They are the potential victim of the clinical risks.

The norms associated with the patient are to comply with the treatment regime and advice given by the clinical experts. Though more enlightened norms include greater involvement of the patient in the decision making process especially decisions associated with choices between different treatment options and their associated risks.

The values by which the role of the patient is judged are related to how well the patient helps the health care system to carryout its function. Patients that do not comply with the treatment regime or advice given or who require detailed explanations about options and clinical risks are not generally well regarded within the health care system.

The power of the patient is exercised through complaining, litigation and media pressure. In this role the patient is in a powerful position and can cause significant disruption to the normal working patterns of health care staff and significant financial costs to the health care system. However, patients tend to perceive themselves as vulnerable and rarely use these options. This has been recognised in the government's NHS Plan (6) which intends to introduce a patient advocacy service within each hospital to help the patient.

Heuristics demonstrated by patients tend to be related to memorable events which have impacted on their experience of care. Because they lack 'Expert Check-List' heuristics to evaluate the care and treatment they are receiving they focus on memorable events, 'Availability' heuristic, which if unpleasant can been seen as failures in treatment and care.

6.3.2.4 Patient's Advocate

Because the patient tends to be reluctant to use the power which they have within the health care system others have taken up the role of advocate for the patient. These already include informal advocates such as relatives and friends and formal advocates like the Community Health Council. This role will be supplemented by a formal NHS Patient Advocacy team within each hospital by the year 2002.

The norms of such advocates is to support, represent and advise the patient when things go wrong.

The values by which they are judged is the reasonableness of their actions and impact it makes on resolving the patient's concerns.

The power of the advocate lies in unleashing the power of the patient to complain, take out litigation and use the media.

The heuristics used depend on how formal the advocacy group is. Informal advocates tend to focus on memorable events - 'Availability' heuristic while the formal advocates have developed a routine for working their way through the health care system and achieving the required outcome 'Expert Check-List' heuristic.

6.3.2.5. Clinical Manager

The clinical managers include all professionals which also are expected to carryout a management role on behalf of the organisation. These include Clinical and Medical Directors, heads of clinical departments, and ward managers (sisters/charge nurses).

Their role is a hybrid between that of the General Manager and that of the clinical professional. They are concerned with balancing the needs and aspirations of the clinician with the requirements of the organisation.

The norms of clinical managers, who are also doctors, is to manage their senior colleagues using the facilitative style of consultation and consent rather than the autocratic style of directing, instructing and enforcing. The norms for managing junior doctors ranges between facilitative to autocratic. The norms for managing other professional groups is again variable along the range from facilitative and coaching to autocratic dictator.

The values of clinical managers is how effectively they deliver the organisation's agenda without upsetting their colleagues professional ethos.

Their power lies in their ability to control and focus resources both from the professionals perspective of bringing in staff, facilities and equipment needed to deliver the service to the level of professional expectations and from the organisation's perspective, in how well they can bring about the behaviours required to deliver the organisation's agenda in terms of the budget, contracted activity and achievement of standards required.

There was considerable evidence of the 'Availability' heuristics being used with action being focussed on the currently memorable event, so called 'fire fighting'. Others, had better managerial control and were more systematic in their approach. Very few used formal problem solving methods and relied again on routines for dealing with problems which faced them - 'Expert Check-List' heuristics. They did however use more formal problem solving, with detailed option appraisals, when it came to making business cases for proposed developments in their service or when they required increased resources. There were also a number of Quality

Improvement Teams led by the more skilled clinical managers which also used formal problem solving approaches to improve the services. However, the extent to which formal problem solving approaches are used is still very much in the minority. Heuristic decision making is the dominant mode.

6.4 Review of initial holon of the risk management soft-system in the light of the clinical audit experience

Table 6.3 summarises the analysis based on the clinical experience. I will now use this to review and test how well the rich picture Fig 6.1 compares with the real world experience of this aspect of clinical risk management summarised in table 6.3 below.

Table 6.3 Holon - real world comparison using the Clinical Audit experience

Actors within the system	Analysis 1 Roles (Interventions and Interactions)	Analysis 2 Norms (Behaviours in the role) and Values (How they are judged within the role)	Analysis 3 How power is used	Analysis 4 Heuristics Used
Clinical Audit Board	Promotion of risk management methodology (clinical audit)	Norms- Advice and provision of audit resources. Values - Degree of participation by clinicians. Audits focussed on important clinical issues - High volume, high cost, high risk and high performance variability. Improves clinical practice. Professional development. Multidisciplinary Efficient	Peer pressure. Expertise. Provision or withdrawal of resources	'Expert Check List' heuristics

		Inclusive Fair distribution of resources Long term		
Clinician	Deliver treatment and care to patients Incident reporting	Norms- Diagnosing, treating and caring. Values - care according to the needs of the their patient, confidentiality and keeping up to date through professional development	Expertise in the field. Legal professional status with a monopoly on key activities. High public regard	'Expert Check List' heuristics

Patient	Receives treatment and care (usual passive role) Partner in treatment and care (developing role for some patients)	Norms- Following advice and co-operating with treatment and care. Values- Degree of compliance with requirements of the healthcare system.	Complaints Litigation Media	'Availability' heuristic
Patient Advocate	Advocate	Norms - Support, represent and advise the patient Values - reasonableness and effectiveness in achieving the required patient outcome.	Unleashing of patient power	'Availability' heuristics 'Expert Check List' heuristic (formal advocates)

Clinical Manager	Balancing the needs and aspirations of the clinician with the requirements of the organisation. Incident reporting Active risk identification Risk analysis Consultation Review decisions made	Norms - facilitation and coaching (senior medical staff) Variable ranging from facilitation and coaching to autocratic. (junior medical and other staff) Values - Delivering the organisations agenda without upsetting the professional ethos.	Control and focus of resources: Bringing staff, facilities and equipment resources to achieve professional aspirations. Bringing professional behaviours in line with that required to achieve the organisation's agenda	'Availability' heuristics 'Expert Check List' heuristic

High Level Holon of the Trust Risk Management Soft System (First Cycle Analysis)

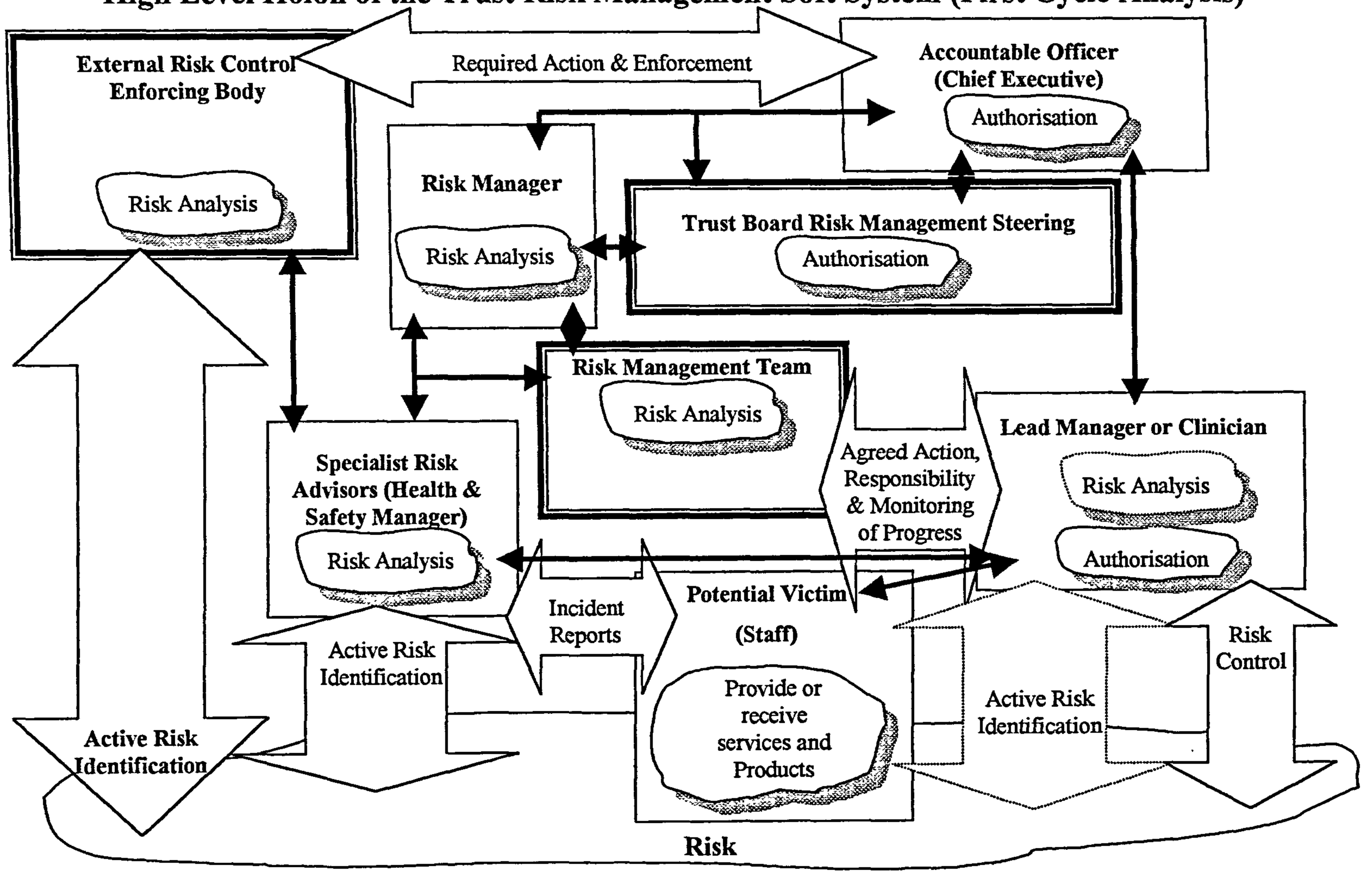


Fig 6.2

From Chapter 5 the system is considered to be composed of six elements:

- Organisational structures such as committees and formally established groups.

- Personally held roles such as Chief Executive, Risk Manager, Health and Safety Advisor etc.

- Risk management interventions such as active risk identification, implementation of risk control measures and interactions such as consultation, monitoring etc.

- Consultation channels which are formally recognised.

- Activities which result in interactions or interventions within the risk management system.

- Risks to be managed.

Clinical risks are known to be extensive and can be seen as a subset of the overall risk pool which the risk management system is there to manage. Although during this research phase there was no external enforcing body for clinical risk, like there is for health and safety risks, there are moves to develop a body which has an external enforcing role for the management of clinical risk, though it does not expressly present itself as such. This body is the Commission for Health Improvement.

The origins of this body can be found in a government white paper:

> 'In the 1997 White Paper The New NHS - Modern, Dependable, the systems of clinical governance mark a fundamental and significant shift towards involving clinicians in the assurances of both quality and accountability in health care delivery. The paper states 'The Government will require every NHS Trust to embrace the concept of clinical governance, so that quality is the core, both of their responsibilities as organisations, and of each of their staff as individual professionals'. In order to achieve this, the government will bring forward legislation to give NHS Trusts a new duty for the quality of care and working in partnership. Under these arrangements, chief executives will carry ultimate responsibility for assuring the quality of the services provided by their respective Trusts, just as they are already accountable for the proper use of resources.' (7)

This White paper marks another point in which the independence of clinicians to practice and govern their own practice is being further replaced by increasing managerial involvement and responsibility. Chief executives do not tend to use general managers by themselves to provide this managerial control of professional practice, instead they use the clinical managers whose role has been outlined in the analysis of the above clinical experience. The approach by which the Trust will ensure compliance with its new clinical legal responsibilities is called 'Clinical Governance'. This includes clinical audit, described above, together with mechanism to ensure clinical practice conforms to the research evidence. Clinical governance will include active risk identification through reviewing of complaints made against clinicians and the monitoring of adverse events related to the outcomes of clinical treatment and care. Professionals will also be expected to report their concerns about the clinical practice of colleagues. The Trust will be expected to have mechanisms to ensure that it learns from these experiences, and that it introduces mechanisms to control risks and improves clinical practice. Appendix 5 gives a more detailed summary of the requirements of clinical governance.

The key mechanisms which will ensure that the concept of clinical governance is brought to life include:

> '...Corporate accountability for clinical performance lies with the chief executive...'accountable officer' role. There may be a board sub-committee led by a clinical professional...
> Internal mechanisms for improving clinical performance, including individual accountability, self and professional regulation.
> External mechanism for improving clinical performance - the Commission for Health Improvement ... 'the watchdog with a smile and sharp teeth'. (8)

There appear to be many similarities between the Commission for Health Improvement and the Health and Safety Executive's role as an external risk management enforcing body. Both are established by statute to ensure that a set of legislative risk management control mechanisms are in place and are being effective. Both audit compliance and make recommendation for improvement actions.

Both have teeth, but the use of their teeth is quite different. The Health and Safety Executive can stop an organisation from performing and bring about criminal charges against the organisation's officers for breach of health and safety legislation while the Commission for Health Improvement can replace the Trust's officers with others more able to deliver the clinical standards expected of them.

There is also another fundamental difference, the focus of the Health and Safety Executive is on risk control while the focus of the Commission for Health Improvement is on improving the quality of treatment and care as well as on risk control. Therefore, as far as the risk management system is concerned, all of the Health and Safety Executive's role lies within the risk management system while only part of the Commission for Health Improvement role lies within the risk

management system. This is also true of Clinical Audit, although part of its remit is the control of risks, its role is much greater than that and is defined as:

> ' the systematic critical analysis of the quality of care, involving procedures and processes used for the diagnosis, interventions and treatment, the use of resources and the resulting outcome and quality of life as assessed by both professionals and patients.' (9)

This is much more a description of quality management than it is of risk management. It was at this point that the second research objective came into sharp focus:

Specify the parameters of risk management decision making as distinct from other management decisions within an acute hospital.

6.5 Parameters of risk management as distinct from other management decisions.

Clinical Governance is only the latest of a whole series of quality initiatives which have been introduced into the National Health Service. Some others include Resource Management, Clinical Audit, Evidence Based Medicine, Patient Focused Care, Investors in People, The Patients Charter and various accreditation systems.

In late 1994, the Trust faced with what appeared to be a continuing stream of unrelated initiatives decided to adopt the European Foundation for Quality Management (EFQM) model to structure its overall approach to management. The Trust adopted this approach to management in order to put continuous improvement in quality at the heart of its management systems while at the same time being able to handle the growing number of initiatives being imposed on it.

The origins of the EFQM model started when fourteen of Europe's leading industries recognised the competitive advantage that the United States and Japan had gained through developing and promoting their own models of organizational excellence. These fourteen, supported by the European Community, joined together and formed an organization called the European Foundation for Quality Management (EFQM) to develop its own excellence model. This European model of excellence was developed in 1991 on the basis of the best practices of leading European organizations and the American Malcolm Baldrige National Quality Award already established in 1987.

The EFQM model was not widely known in health care in 1994 and until the release of the 1999 model the language was not health care friendly (Fig 6.2). (9)

The European Foundation for Quality Management (EFQM) Model of Excellence

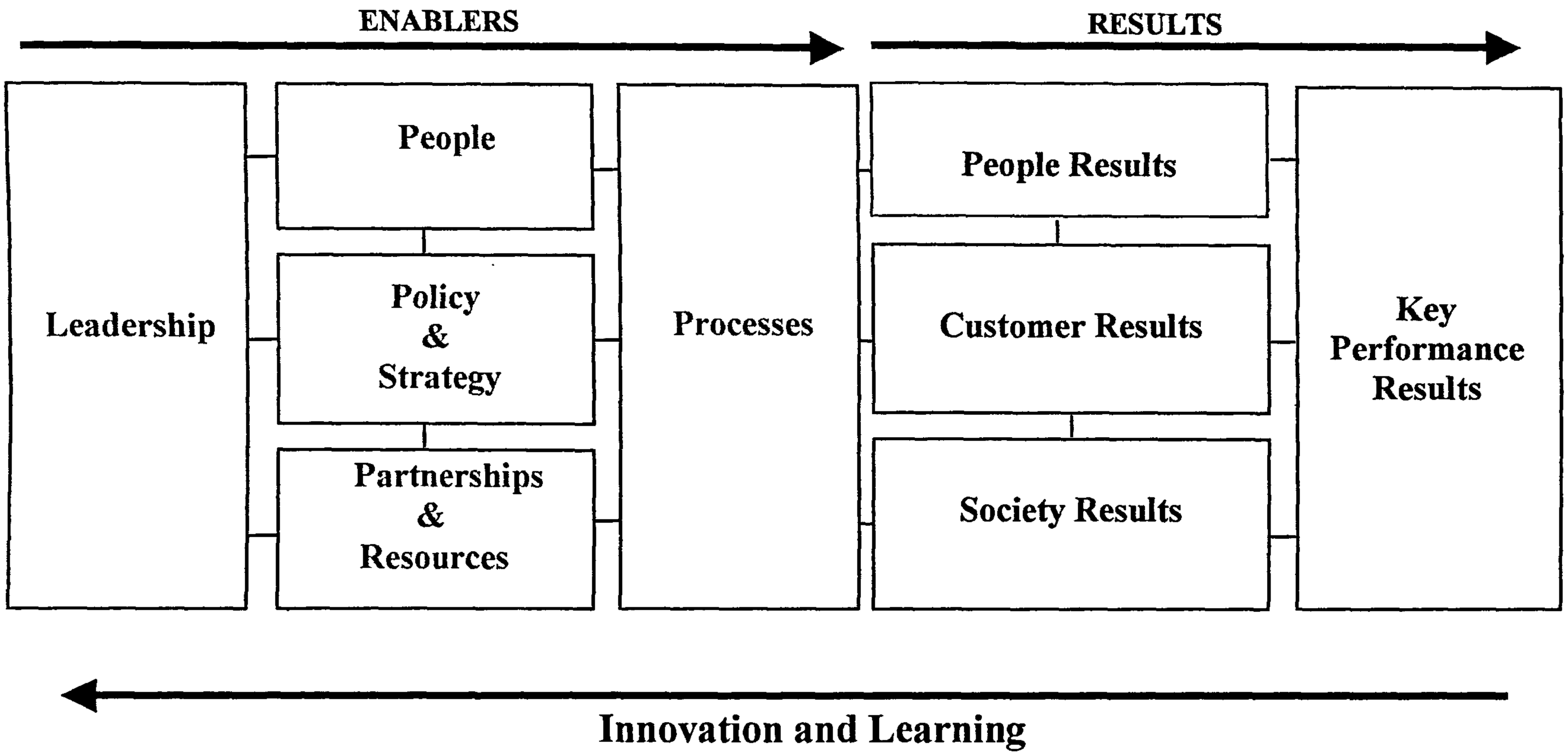


Fig 6.3

The model is divided into two parts: 'Enablers' and 'Results'. The 'Results' are what the organisation achieves the 'Enablers' are how it achieves these 'Results'. As an overall management tool users of the model carryout self-assessments and reviews which raise the visibility of good and poor performance and helps to clarify where the organisation's strengths and areas for improvement are. Making performance visible helps to motivate staff to improve and the model helps them to systematically examine their approaches in terms of effectiveness and efficiency.

The process of self-assessment and review is the driver of the Trust's management system Fig 6.4. Directorate and departmental multidisciplinary teams are expected to identify their strengths and areas for improvement against each of the key areas of the model.

The first questions in the self-assessment are related to the directorate/department's results. For clinical departments these must include clinical results and patient satisfaction. All departments must present financial, customer and staff satisfaction results. In addition to these results all must address results related to the management of key risks faced by the Trust such as complaints, litigation, losses and media reports.

Results are what the directorate/department/Trust delivers to its stakeholders. These are achieved through activities described in the EFQM model as enablers. These enablers include 'Processes', such as clinical pathways, which is an approach used for ensuring correct practice in delivering clinical services to the patient. 'People' enablers include approaches such as 'Investors in People' which help to maintain the right level of skills to deliver the processes of care. 'Partnerships and Resources' enablers include approaches which ensure that the right facilities, equipment and consumables are available when needed. The 'Policy and Strategy' enablers includes approaches which ensure that the Trust is operating and developing in the

direction required by all the Trust's stakeholder. Finally the 'Leadership' enabler includes approaches used to motivate and give direction to staff.

The self-assessment and review process forms the inputs to the Trust's business planning systems which brings together the requirements of the Trust's providers of funds (Commissioners) and the Trust's capability. This provides the basis of the Trust's strategic direction and performance monitoring systems which provide information on how well the Trust is performing against its strategic plan and contract requirements.

The process of self-assessment and review together with other quality assurance techniques are a valuable source of risk identification but that is not their primary focus, these are complementary to risk management techniques rather than the same as them.

Examining the Trust's general management system described briefly above with that of the risk management system being described in this research it is clear that though risk management is a subset of management, management is a more over-arching concept. A good working definition of management is:

> '...working with human, financial, and physical resources to determine, interpret, and achieve organisational objectives by performing the functions of planning, organizing, staffing, leading and controlling.' (10)

Salford Royal Hospitals Management System

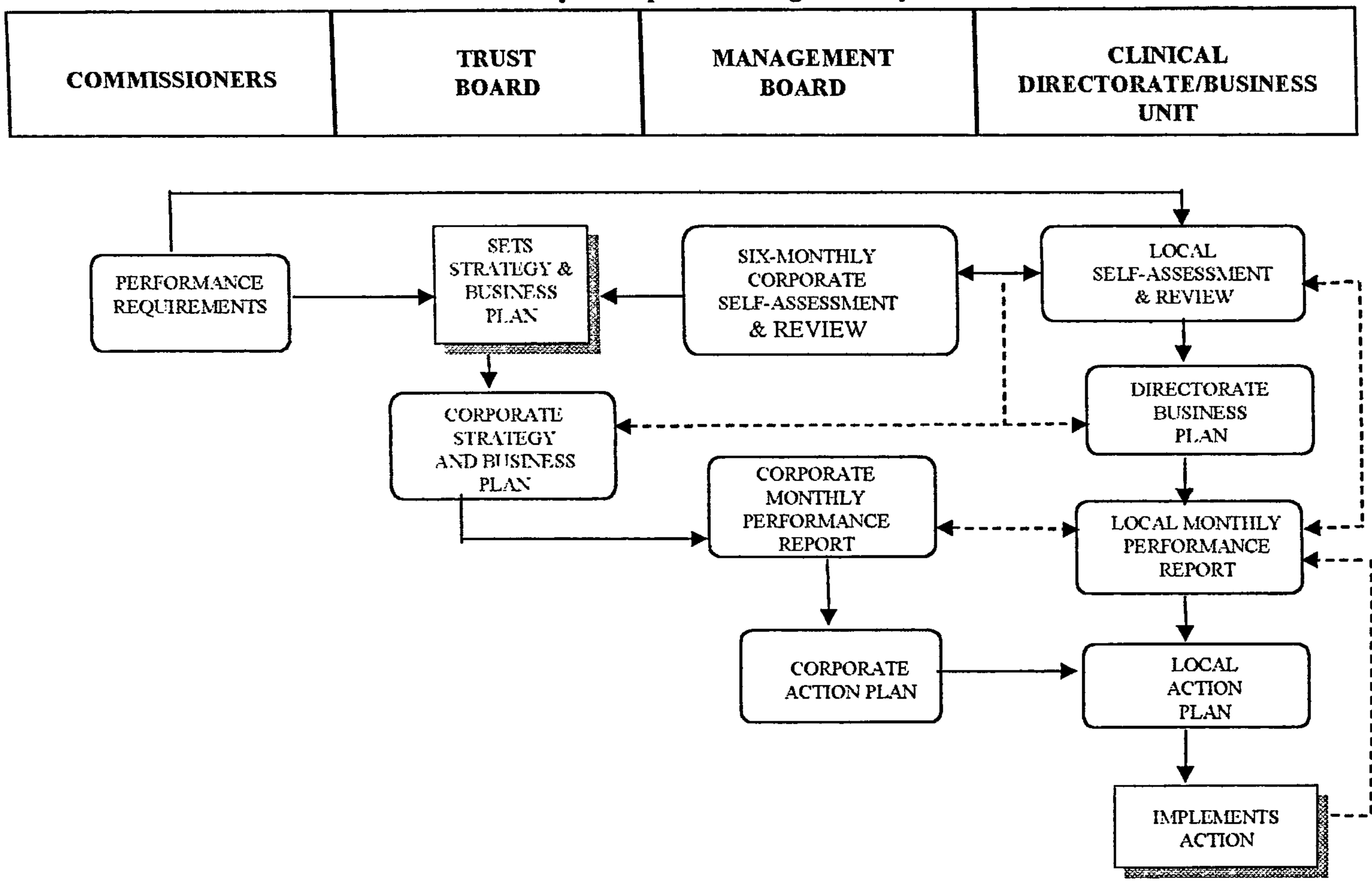


Fig 6.4

Risk management fulfils this definition in terms of the organisational objective of controlling risks but general management has the wider organisational objectives laid down in Trust's mission statement:

'Continually pursue clinical, academic and service excellence'

For the Trust, excellence is described by the EFQM excellence model outlined above. The control of risk is a key component of excellence but is not the complete component of excellence.

It is clear from the analysis of the various roles and power relationships in health care, that the role of the general manager is about enabling professional colleagues to provide the service efficiently and is not about directing and instructing professionals on how to achieve the organisation's objectives. The key role of health care general management should therefore be to create a culture of excellence:

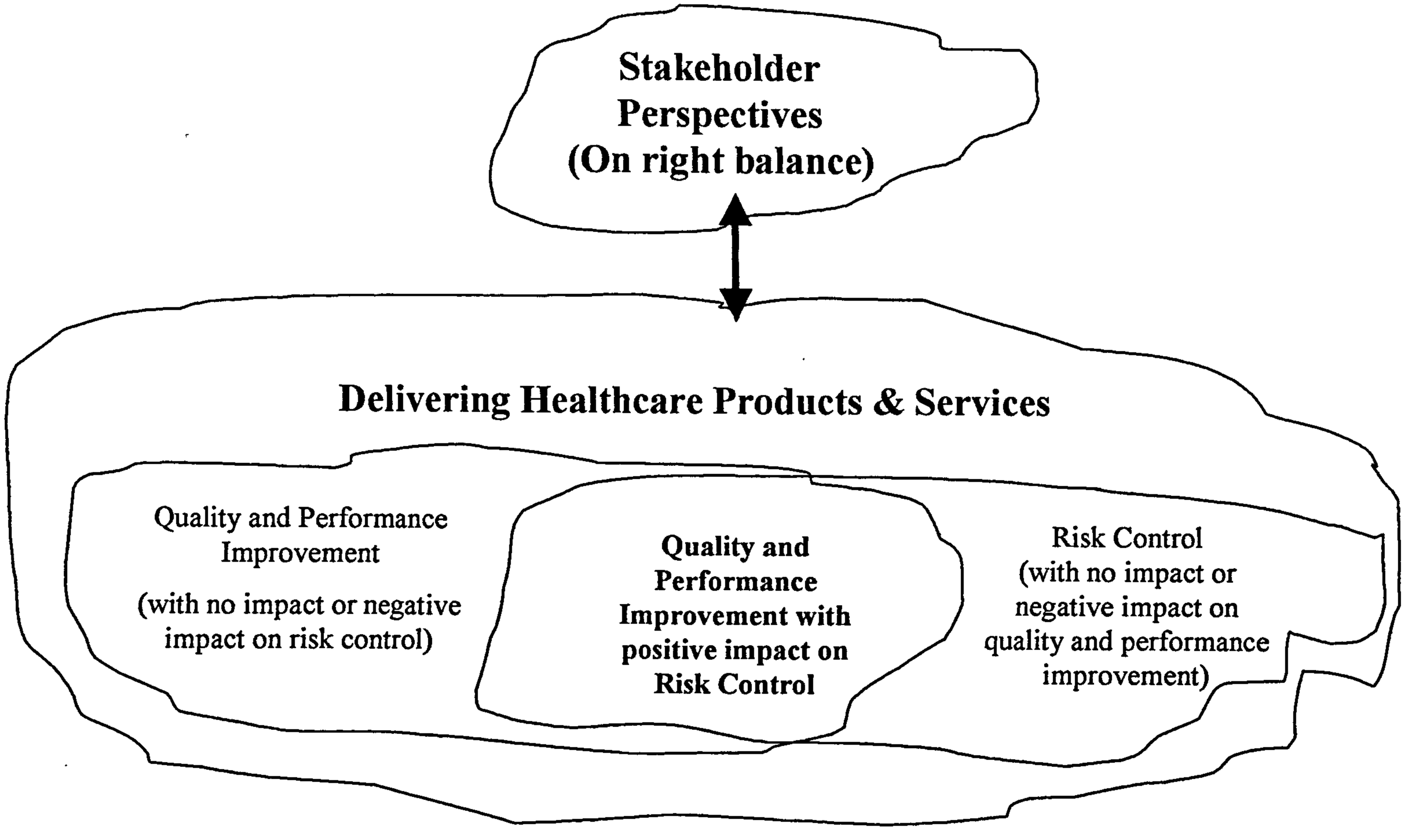
> 'A culture of excellence in health care is one in which all staff are involved and committed to achieving long term excellence in clinical, academic and service provision to patients, carers, the community at large and other stakeholders and which they achieve through evidence based decision making, economic, efficient, effective, equitable and ethical processes, and a coaching and facilitating style of leadership.' (11)

The EFQM excellence model provides the framework for general management to create such a culture and risk management sits within this framework. However, there are many key aspects of this framework which are outside of the scope of risk management. Fig 6.5 provides an initial conceptual framework of the general manager's task in managing the provision of services and products while controlling risk.

Ideally, managers would like to provide their services with improving quality and performance while also achieving a consequential improvement in risk control. An example of that was given in the 'door to needle time' improvement described above. The improvement of the processes, by which the service treated patients with Myocardial Infarction, increased the speed at which a thrombolytic was given and this both reduced the risks associated with heart attacks while at the same time improving efficiency and reducing cost.

However, the Glutaraldehyde experience provides an example in which there was a conflict between the need for risk control to protect staff by diverting funds from treating patients. The provision of new equipment not only took funds which could have been used to improve the services to patients but also introduced new procedures which reduced the efficiency with which instruments could be cleaned. This conflict, from the general manager's perspective, was resolved for many years by convincing themselves that the risk to staff was not sufficient to warrant the loss of resources from the provision of services to patients. This view was not shared by staff, the Health and Safety Manager and Trust's the accountable officer and thus the risk was controlled in spite of its cost to the service.

Conceptual model of the relationship between risk management and general management decision making (Fig 6.5)



I could not find any examples in the literature in which there was clearly a decision to improve quality and performance using approaches which also increased the risk. Most examples quoted hinted that there was an increased risk but it was difficult to be sure whether or not the overall risk had increased. A clinical example is the increasing use of minimal access surgery compared to open access surgery. Essentially, the difference between the two is the size of the opening used during surgery. The smaller the opening the better the quality in terms of patient aesthetics and rate of healing, this leads to efficiency gains because the length of stay should be shorter. However, the skills needed to do minimal access surgery are greater because this usually has to be done using specialist equipment such as laparoscopes. The Medical Defence Union reports that over the last seven years there has been a steady increase in the number of claims related to minimum access surgery (12).

However, I have had a number experiences in which decisions have been made to improve performance and/or quality of service delivery while at the same time increasing the risk. One such experience is that related to attendance at mandatory fire training. All staff must attend fire training on a periodic basis to ensure that they know what to do in the event of a fire. Attending fire training takes staff away from wards and departments, thus reducing the quality and performance of those departments in the delivery of the treatment and care services. A review of attendance at fire risk training found that less than 50% of staff had attended this training in the last twelve months and the most common reasons given by managers, who were responsible for ensuring their staff attended that training, was that they did not have sufficient staff to release for training without it affecting their ability to provide the service.

The manager then has the job of balancing quality, performance and risk control. This sometimes requires a judgement to be made as to the right balance to be taken between improving performance and controlling risk. Whether that judgement is the right balance will depend on the perspective from which it is viewed. The operational manager perspective will be that the balance is right because they have the power to make the judgement and to implement it. Potential victims, staff and patients may

agree or disagree with this after they have made a judgement of the potential risks and benefits to themselves.

However, these are not the only perspectives from which the balance of risk must be judged. The perspective of the accountable office must also be taken into account as the person with final responsibility for that decision. However, how is the accountable officer to know that such decisions have been made on his behalf and even if known, how can he to make a judgement about whether the balance is right?

It is not practical to have every decision made by managers reviewed by the accountable officer in order to see if they are acceptable. Neither is it acceptable for the accountable officer to assume that because a decision has been delegated so has the responsibility. The accountable officer remains responsible and thus must have some mechanism to be assured that the decisions made on his behalf are made at the right level in the organisation and are acceptable to the those with ultimate responsibility for that decision, the Trust Board. A good risk management system should be able to provide that assurance to the Board.

In conclusion, the parameters of risk management decision making, as distinct from other management decisions within an acute hospital, is two fold. The first parameter is that risk management is there to provide risk management expertise to help managers determine what is the optimum balance between quality, performance and risk control. The second parameter is to provide a mechanism by which the accountable officer can be assured that the balance of judgement, related to risk and made by delegated officers, is of such a standard as to be acceptable to those with ultimate responsibility for it, the Trust Board.

The holon of risk management must therefore be modified to include the activity of assurance to the Board that clinicians and managers are making the right balance of judgement between their responsibility for risk control and their responsibility for

delivering the service to the standards of quality and performance also required of them by the Trust Board.

However, what has been described above is mainly risk management as part of the day to day management required to deliver a service. This can be seen to be intimately tied to the management of quality and performance and could be seen as an elaboration on what goes on within the delivery of products and services area of the holon. The victim box remains the same, except that to the example of staff must be added patients. However, to make the holon generic, the term Potential Victim will be used to apply to any potential victim be they staff, patient, relative or visitor. In addition the box 'provides services and products' now needs to read ' provides or receives services or products', while the term 'operational manager' now needs to read ' Lead manager or clinician'.

Clinical audit and clinical governance have a remit which includes risk control but not in its pure sense, their main concern is with improving performance and quality. To include them, other than in an analysis to see whether or not they are parts of the risk management system, would be to extend this research into the nature of management rather than into the nature of risk management. However, they do have significant interactions with the risk management system and this will be explored later.

However, there is a body which developed after clinical audit which was established specifically to reduce clinical risk and which has many of the characteristics of the Health and Safety Executive example of an External Risk Control Enforcing Body and that is the Clinical Negligence Scheme for Trusts (CNST)

6.6 The Clinical Negligence Scheme for Trusts (CNST) experience

The NHS and Community Care Act 1990 started a series of reforms which led to the creation of Trust's. Claims for negligence prior to 1 April, 1991, or the establishment date Trusts, were dealt with by District and Regional Health

Authorities. Claims now have to be borne by the Trust who can borrow money, at a rate of interest, from the Department of Health or Regional Health Authority if a claim against them is large. The effect of this is that Trust's are responsible for the actions of their staff including their clinical staff. The earliest Trusts recognised the threat that a large claim for negligence posed them and this led to the establishment of the Clinical Negligence Scheme for Trusts which provides a pool from which Trust's could draw.

In April 1995 the split between the role of 'providers of services' and the 'purchasers of services' was completed. The Regional Health Authorities ended in April 1996 and Trust's are now free to adopt the protective arrangements they feel fit to cover the cost of claims against them.

The establishment of risk management systems is seen by many as the key to being able to manage risks. Bodies such as the Health and Safety Executive focus much of their attention on these systems. The Clinical Negligence Scheme also focuses much of its attention on how well a Trust's risk management system meets their standards related to the management of risks.

> 'What is of concern is the wide range of risks which occur by accident, rather than design. Even more worrying are those untoward incidents which result from lack of clear policies, deficient working practices, poorly defined responsibilities, inadequate communications and professionals working beyond their competence.' (13)

In 1995 the National Health Service established the National Health Service Litigation Authority (NHSLA) in order to administer the Clinical Negligence Scheme for Trusts (CNST), CNST is a risk pooling scheme which deals with liabilities, occurring after 1st of April 1995, of member Trusts and Health Authorities. In addition, the NHSLA also manages the Existing Liabilities Scheme (ELS) which deals with liabilities occurring before 1st April, 1995.

The key aim of the CNST is to:

> 'The Scheme will eventually lower the cost to the NHS of clinical negligence claims and, in the process, improve the quality of care provided to patients, but only if the Trusts take the right steps to minimise the chances of a clinical negligence incident and by effectively managing any claims that do occur. '(14)

There is general consensus that good risk management systems can make a difference and attempts have been made to define what such systems are composed of. According to Morlock and Malitz (15) the main factor affecting clinical negligence claims is the case mix of the hospital. However, they still concluded that clinical negligence claims could be affected positively by strong management support for the risk management program, demonstrated by the requirement for regular reports to the Board, routine notification of all clinical incidents to the head of the clinical division, clear policies on informing patients and their families when clinical incidents occurred, educational support for medical and nursing staff

CNST's method of achieving this aim is to carry out a number of key activities. The first is to define a set of clinical risk management standards. Secondly, to encourage Trust's to adopt those standards through educational programs and a journal. Encouragement to adopt these standards is through the provision of a discount on the Trust's contribution to the scheme on a scale relating to the level of the standards that are passed. In the first year the discount available was 5% and would rise progressively to a maximum potential discount of 25%. Each year CNST offers to carry out an audit of compliance with the standards in order to determine the discount achieved.

Stephen Walker was appointed chief executive of the NHS Litigation Authority in August 1996. His background was in the insurance industry specialising in personal injury litigation. The thinking behind his approach to the management of risk is revealed in an interview he gave in May 1997.

Walker considered that a key role of the NHSLA would be to reduce the legal costs associated with litigation because of its ability to question legal advice more effectively than other NHS bodies could do because in general these do not have sufficient experience in claims handling. (16)

However, financial savings are not the only goal, so is protection of reputations.

> 'Economics are obviously important. But so, in medical negligence cases, are reputations.'(17)

In addition Walker has some clear ideas of the issues facing the NHS if it is to manage its risks well. Walker recognises that there is a lack of understanding of the nature of clinical risks and an understanding of the probabilities of adverse outcomes of treatment and care. If this is to be taken into account then there is a need to build the evidence which shows that on balance the clinicians have made the right decision when judging between the risk of treatment and no treatment.

Heneghan suggests that in order to protect against claims for clinical negligence the clinical profession needs to strengthen its evidence base and to record meticulously what it does.

> 'Our only recourse is to strengthen our evidence. If we routinely record everything we measure and everything we do, we may be able to convince a judge that we were not negligent or, alternatively, that another explanation was the true one.' (18)

The importance of communicating with and involving the patient in the decision making about their treatment and care also appears to be a key issue. There are many instances in which the patient's claims that they had not been given enough information in which to make an informed decision.

> '...the principles relating to causation is found in the cases concerning failure to warn of risks inherent in an operation. The plaintiff needs to prove on a balance of probabilities that had proper disclosure been made the operation would have been declined and the injury so avoided... Often, these claims cannot be defended because of a failure properly to record what clinicians actually said. Plaintiffs argue retrospectively that they had no opportunity to reach an informed decision...'(19)

However, Walker recognises that there is unlikely to be objective evidence for the rightness of a particular decision to take a risk and this is because the rightness of a risk decision may appear very different when looked at from the clinician's perspective and that of the patient's perspective.

> '...what kind of expected benefits may be traded against which potential harms vary markedly between individuals. In tying to second guess the patient, the practitioner would, in effect, simply be imposing their own views on the issue... Instead, an attempt should be made to provide the patient with all relevant information as to risks, so as to allow the latter to make an autonomous choice.' (20)

Not only should patients be involved in the decision making process to protect the clinician from potential litigation, there are those who see this as having an ethical dimension also.

> 'Indeed, if we assume that all medical procedures carry some risk of harm to the patient, it could be argued, at a more general level, that what entitles the practitioner to go ahead and perform any therapeutic procedure is the known higher risk (often a practical certainty) of harm if they fail to intervene... Nevertheless, although this conclusion has a certain intuitive appeal, we should not be over-hasty in reaching it. This is because so far nothing has been said about the very important question of the patient's own views..'(21)

> 'In order for such an approach to be most effective, the decision-makers must take into account the perspectives of the key stakeholders and develop mechanisms to give each of these groups a voice.' (22)

In addition to involving patients other stakeholders, such as staff, should be involved because they are more likely to find the best solutions to risk management problems.

> 'The ethics of running a complex organisation also encompass responsibility to staff. There is an obligation to cater for the professional needs of staff in terms of access to postgraduate education, the regular assessment of skills and the development of skill mix to match the service profile of the organisation.' (23)

> 'The answers are much. more likely to be workable solutions because the staff involved will know the operational constraints much better than people higher up in the organisation he says.' (24)

The most significant attempt to define and enforce key elements of a clinical risk management system for the health service was carried out by the Clinical Negligence Scheme for Trusts (CNST) and articulated in its clinical risk management standards.

6.6.1 Standards for the management of clinical risks (CNST Standards)

CNST developed its standards in order to ensure that risk management is focussed, effective and contributes to improvement in patient care. The standards were developed through consultation with Trusts, health care professionals and risk management consultants. They are expected to develop over time in the light of experience in using them and managing health care risks (25).

There are eleven standards, ten applicable to all Trusts and one applicable to Trusts with obstetric services. The standards are meant to reflect what is achievable and produces gain in terms of effective risk management. Lower level standards are meant to reflect straightforward systems which produce easy gains. However, the standards are not meant to be prescriptive and if another route can effectively achieve the desired outcome then the standard will be considered to have been achieved.

Assessment is carried out by a CNST Assessor who audits the Trust and specifies the score it has achieved in relation to the standards. Discounts are given for the Level achieved and Trusts may not move to a higher level until the lower level has been achieved. Re-assessments occur at the request of the Trust. However, random visits of auditors are planned in future years to assess whether the level of discount achieved is warranted.

The 11 standards required by the CNST can be grouped under four key headings which are all captured within the holon of the Trust's risk management system:

Top Management Responsibility and Control

Active Risk Identification and Incident Reporting

Risk Analysis

Risk Control

The standards were developed from the consensus of experts in the field and look very much like a check list. The evidence base for the effectiveness of these standards in terms of controlling clinical risks is not yet available but the establishment of a database of all claims and a record of differential compliance rates by Trust make this a possibility in the future. I therefore postulated that these standards are an articulation of a consensus 'Expert Check-List' heuristic used by clinical risk experts in the field. I tried to extract from the standards the generic risk control items so that I could compare these to the developing risk management system of the Trust. I also wanted to be able to compare this CNST check list with other similar check lists used by the Health and Safety Executive. As was defined earlier, heuristics are simple rules of thumb which are sometimes applied beyond the experience from which they originated and therefore can lead to inappropriate application. I would also be looking to see if this check list was expected by the CNST to be applied inappropriately within the Trust.

The first generic item in the postulated 'Expert Check-List' heuristic is that:

Top level management involvement is essential for effective risk management:

The standards require a Trust Board approved Risk Management Strategy (Standard 1). The role of the Trust Board is seen as the key to ensuring that risks are properly managed and that if the Trust Board does not makes such a public statement it is unlikely that risks will be properly managed throughout the organisation. The Trust Board is expected to appoint one of its Executive Directors to take responsibility to implement this strategy on behalf of the Trust Board (Standard 2). It is recognised that there is also a need for someone to co-ordinate the complex activity of risk management across the Trust if it is to be effectively implemented (Standard 3).

Within the holon of the risk management system, this is identified under the accountable officer which within the Trust is the Chief Executive (Standard 2) and there is a risk manager to coordinate the risk management activity (Standard 3).

However, the holon needs to be modified to include the process of 'developing, approving and implementing a risk management strategy' as a key function of the Risk Management Team and which the Risk Management Team had developed but which I had not until this point in the research recognised as a key component of the Trust's risk management system. Fig 6.6 is modified to take this key role into account.

The second generic item in the postulated 'Expert Check-List' heuristic is that:

Comprehensive risk management systems are difficult to create so the use a piecemeal approach to manage specific instances of risk should be used in the first instance.

CNST recognised that there is a need for a comprehensive risk management system through which the Trust's risks are managed (Standard 10). However, it considers

that this is a more advanced action to be taken and only assesses this when a Trust has successfully completed the first (Level 1) audit of compliance. This provided me with the first evidence that we were dealing with a heuristic, in which the rule is being used as an inappropriate solution to the risk management problem being faced in the Trust.

The external audit of the Trust by the Clinical Negligence Scheme for Trusts (CNST) was completed on 7th January, 1997. The Trust passed on the following standards:

Standard 1:	There is a written risk management strategy which the Board has formally accepted.
Standard 2:	The Executive Medical Director has Board level responsibility for the management of clinical risks.
Standard 3	There is a Risk Manager responsible for the management and co-ordination of clinical risks.
Standard 4	There is an adverse incident reporting system for clinical risks.
Standard 5	There is a Serious Clinical Incident Policy
Standard 6	There is an agreed system for the management of complaints.
Standard 9	There is an induction programmed for all new clinical staff.
Standard 10	There is a clinical risk management system in place.

However the Trust failed to achieve two standards:

Standard 7 There was insufficient written information provided to patients on the likely risk of common elective procedures and treatments.

Standard 8 The Trust should have but does not have a unified medical record.

When audited by the CNST they accepted that the Trust had one of the most comprehensive risk management systems that they had seen and said that the Trust in this matter was operating at the highest CNST level. However, because the check list they were using for auditing required a number of specific risks to be controlled before an effective risk management system was introduced, the Trust was not given credit for this higher level of achievement. The Trust was not managing its risks in the order in which the heuristic expected it to be done and thus a comprehensive management system functioning at the highest CNST standard could not be considered because there were outstanding risk controls to be put in place at a lower level first.

The way that CNST used this heuristic demonstrates how heuristics can become inappropriately applied. The problem for risk management is not that specific risks needed to be controlled but which risk has the priority over other risks for the scarce resources which are available. In order to develop a list of risk priorities for Trust action, there must be a mechanism to identify all uncontrolled risks, clinical and non-clinical, there must then be a mechanism for ranking those risks against each other. Then there has to be a mechanism for deciding on balance what level of resources are to be transferred from service provision to risk control and what risks are associated with that decision. This is clearly a complex task and requires a system to be in place which can carry out that task, this is the risk management system. The Trust had developed and was using such a system because the Trust had considered this to be a priority.

A second piece of evidence for the CNST standards as being a postulated 'Expert Check-List' heuristic is related to the requirement for the Trust to have a single case record. The clinicians felt that a unified case record would compromise the quality of the records which they had developed within their own specialty, both in terms of quality and in terms of access. The Executive Medical Director argued that the risk associated with complying with Standard 8 was greater than the risk of not complying with it.

A further piece of evidence for the presence of a heuristic was Standard 7 which required information leaflets on risks to be given to patients. As far as Standard 7 was concerned the pass point was ten leaflets specifying risks of common elective procedures or treatments. The fact that staff spent time explaining risks, in the appropriate language and with the appropriate detail required by the patient, did not count. There had to be ten leaflets to pass the standard. Why not 20 ? Why not 6?

The issue here is not whether the above risks are important to control, neither is it that the risk priorities of the Trust matched or did not match the priorities in the CNST standards. The issue is that here is a good example of an 'Expert Check-List' heuristic applied beyond the experience out of which it developed and then leading to inappropriate action. The check list tends to result in mechanically providing evidence to meet the expected standards the prime focus of risk management activity . Performance at a higher standard does not count until the check list has been completed for what the check list counts as lower standards.

There are two arguments given why the lower level standards must be achieved before the higher level standards. The first argument is related to the importance of the lower standards in terms of their critical role in controlling high risk areas. The second argument is that the lower standards are easier to achieve than the higher standards.

The first argument, that the lower standards are critically important for risk control is considered by the clinicians in the field as not to be true. There are more important risk control measures required, such as increased clinical staffing levels in order to provide better supervision of junior staff but these are not included in the standards because determining the correct level of staffing is too difficult to define. Again adequate communication, especially face to face explanations from a skilled clinician is more important in risk control than are ten leaflets which outline risks, but the quality of face to face communication is more difficult to specify as a standard than is having ten leaflets with risks outlined in them.

The second argument, that lower level standards are easier to implement than higher level standards, is also untrue. It was easier to set up a comprehensive risk management system than it was to unify the clinical record both in terms of the cost and in terms of gaining support of clinical staff for such a system.

Check list can easily become an end in themselves, resulting in doing just what is required by the standard rather than doing what the organisation needs at a particular moment in time in order to effectively management risk. I started to recognise that this simply compliance to standards approach was just another heuristic, the 'Minimum Effort' heuristic stated as:

If this is the easy way forward, then do it.

I responded to the CNST demands by using my own 'Minimum Effort' heuristic in order to make the CNST auditors happy and introduced a warning label which was to be attached to all case-notes, in which it was known that other case-notes existed.

The third generic item in the postulated Expert Check-List heuristic is that:

Risk identification must be systematic.

Standard 4 requires there be a system, in all clinical areas and their support departments, for reporting incidents and untoward occurrences to patients. The Trust had an incident reporting system and so passed the standard, but for me the real issue was not whether we had a system but how well it was working.

I asked for all incidents, hazards and near-misses to be logged onto the database and then reviewed the incidents reported on this form in July 1995. During that period 1/1/95 - 31/7/95 1632 adverse incidents had been reported on the incident form of which 1111 (68%) related to patients. Analysis of the patient related AIR shows that 33 related to the care and treatment of patients. A further analysis in March 1996 comparing clinical adverse incidents (AIR) with litigation claims further demonstrates how under-reported are clinical incidents.

However, during the Risk Management Team's review of these incidents it became clear that they did not reflect the Trust's experience of claims for clinical negligence against it and which were identified through complaints and litigation claims. A comparison with the litigation claims against the Trust found that only one, breakage of a drill bit, had been previously reported on the official adverse incident report form. This was of great concern to us. Not only did the overall number of clinical incidents reported seem very low, even serious clinical risks were only being identified at the corporate level of the Trust.

Reported clinical incidents (TABLE 6.4)	AIR 1/4/95 TO 31/3/96	CURRENT LITIGATION AS AT 31/3/96
Equipment failure during patient treatment:		
Breakage in use (eg: needles/thermometers etc)	2	-
Incorrect use/setting of equipment	0	-
Malfunction of equipment	5	-
Total (a)	7	-
Clinical Practice:		
Medical diagnosis	-	16
Medical treatment (medication error)	-	1
Medical treatment (other treatment error)	2	7
Untoward clinical event	2	20
Nursing (medication error)	1	-
Other errors:		
- Midwifery	-	1
- Physiotherapy	-	1
- Radiography	-	1
- Pharmacy	-	-
- Not able to classify at time of report	-	5
Total (b)	5	52
GRAND TOTAL	**12**	**52**

Speaking to clinicians about this problem it appeared that many see the process of reporting adverse incidents as just a paper exercise, others thought that it was the job of nurses, others thought of it as a health and safety forms rather than clinical incident forms, yet others admitted to fearing that it exposed them to the risk of admitting liability for things which have gone wrong.

The Trust passed this standard because it had a system in place but the real issue was not whether we had a system but how well was it being used by clinicians and the answer is that it was not being well used.

The fourth generic item in the postulated 'Expert Check-List' heuristic is that:

Incidents must be reviewed in order to ensure learning takes place in order to ensure future risk control.

This is part of the risk analysis process of a good risk management system. However, the standard is concerned with the learning to be gained out of a serious incident. This standard prompted me to develop a procedure for reviewing serious incidents.

However, the issue here is not whether risk analysis should be done for serious incidents, which of course it should be, but rather is why is there no requirement for analysis of the many more near misses or minor incidents which could easily have resulted in a serious incident. The standard is concerned the we learn after the tragedy but risk management should be about learning to avoid the tragedy in the first place.

The fifth generic item in the postulated 'Expert Check-List' heuristic provided a further series of 'off the shelf' key risk control measures:

New clinical staff must be provided with adequate induction to the areas in which they are going to practice (Standard 9).

Clinicians must have access to a comprehensive system for the storage, retrieval and use of medical records (Standard 8).

Clinicians must provide patients with sufficient information to make an informed consent and this must include the risks and benefits of common elective treatments and procedures (Standard 7).

Because maternity care is of such a high risk area there must also be a documented system for management and communication through all the key stages of maternity care (Standard 11). This must include mechanism for the management of complaints in such a way that it minimises the level of claims and learning takes place in order to improve patient care (Standard 6).

Again the issue here is not that the risk control measure are wrong but it is that the risk control measures must be implemented in the order expected by the CNST levels rather than as assessed by analysis of the problem situation faced by the Risk Management Team. The sign of a heuristic is that it provides a solution to a problem without the need to think much about the problem. All one needs to do is match the experience to the heuristics available in memory and out pops the solution. In terms of 'Expert Check-List' heuristics a skilled person can do this all from memory, a person learning a particular check list usually needs it written down in front of them so that they don't miss any items.

The CNST 'Expert Check-List' heuristic therefore includes the following:

- Top level management is involvement is essential for effective risk management:

- Comprehensive risk management systems are difficult to create so the use a piecemeal approach to manage specific instances of risk should be used in the first instance.

- Risk identification must be systematic.

- Incidents must be reviewed in order to ensure learning takes place in order to ensure future risk control.

- Provision a further series of 'off the shelf' key risk control measures:

Some of the proposed heuristics at this point in the research helped to make understandable the early experience I had had with the management of some of the early risks identified by the Risk Management Team. The one that stood out from my experience of managing the Glutaraldehyde risk was the 'Minimum Effort' heuristic which helped to explain why the easy solutions were implemented, but as soon as some effort was needed to resolve the problem then the action ground to a halt. I also felt the executive lead item was a key element of a successful risk management system for ensuring actions were taken but also realised that these executive leads were also operating under other heuristics and thus liable to retain some risks which on more careful analysis should not be retained.

However, apart from the modification of the holon in the light of the CNST experience it was clear that the key elements of the holon were confirmed as fig 6.6.

High Level Holon of the Trust Risk Management Soft System (Second Cycle Analysis)

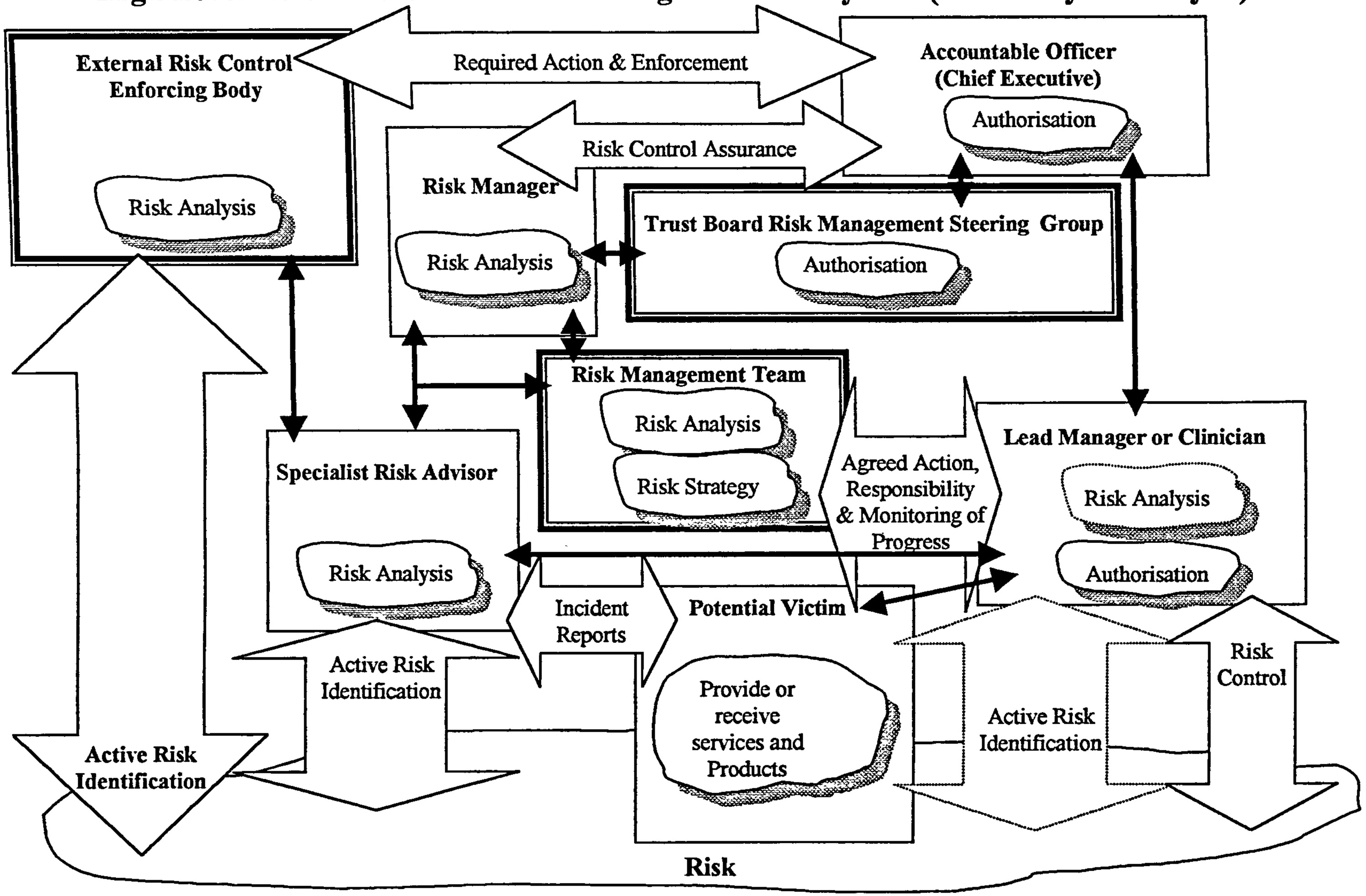


Fig 6.6

6.7 The Claims Management experience

There was an intuitive appeal to many of the items in the CNST's 'Expert Check-List' heuristics because they matched many of my own, which I had received from my training in risk management provided by the Institute of Risk Management. I now wanted to know whether those items were also repeated in other expert check lists. I decided to examine the requirements for claims management outlined in an executive letter from the NHS Executive.

That executive letter EL(96)11 arrived in April, 1996 and gave instructions on how to manage the risks associated with claims management. I had, at the time, to assess the extent to which our claims management processes matched the requirements outlined in the letter. Having developed my conceptual framework of risk and heuristics I now decided to re-examine the contents of this check list to see how many items matched that of the CNST in terms of risk management.

The letter contained twenty four recommended actions and I analysed these in terms of the items described above for the CNST. The method of analysis involved asking questions about the statements. The first questions was, 'What action is required?' and the second question was, 'Is there within the statement, or associated with it, an explanation as to why that action should be taken?'. This led to the identification of key words or phrases which indicated the presence of a concept related to the proposed items in the CNST 'Expert Check-List' heuristic. For each item in the check list there is an extract from the recommendations made by the Executive Letter together with key words related to the proposed item underlined.

The CNST 'Expert Check-List' heuristic appeared to contain the following generic items:

- Item 1 - Top level management involvement is essential for effective risk management.

- Item 2 - Comprehensive risk management systems are difficult to create so the use a piecemeal approach to manage specific instances of risk should be used in the first instance.

- Item 3 - Risk identification must be systematic.

- Item 4 - Incidents must be reviewed in order to ensure learning takes place in order to ensure future risk control.

- Item 5 - Provision of a further series of 'off the shelf' key risk control measures.

Item 1 - Top level management involvement is essential for effective risk management:

The recommendation in the executive letter related to this item included:

- ' Board member with clear responsibility for clinical negligence and personal injury issues'

- 'Access to claims manager with sufficient experience and seniority to manage claims actively and to secure substantial savings over time and reporting directly to Board member.'

The underlined phrases above clearly define an 'executive post' which has responsibility for managing risks due to claims. This matches the holon in which there is an 'accountable Board member' but it also requires a 'claims manager' which is not included in the holon. I had not considered the Claims Manager to be part of the risk management system because that manager reported through the Executive

Director for Contracting and Business Development which included responsibility for complaints handling and customer relations. However, this made me realise that claims management could be seen as a post incident risk control mechanism in which the purpose is damage limitation following an incident. The recognition that this is a type of risk control measure which needed to inform and be coordinated by the risk management system led to the Claims Manager becoming a member of the Risk Management Team whilst still retaining a line management responsibility to the Director of Contracting and Business Development. The holon was therefore modified to include a 'Claims Management' function Fig 6.7.

Item 2 - Comprehensive risk management systems are difficult to create so the use a piecemeal approaches to manage specific instances of risk should be used in the first instance.

There was no clear example of this within the claims management letter.

Item 3 - Risk identification must be systematic.

There was no item relating to this in the executive letter.

Item 4 - Incidents must be reviewed in order to ensure learning takes place in order to ensure future risk control.

The recommendation also confirmed this item in the check list.

- 'Claims must be reviewed after closure and senior manager made responsible for ensuring remedial action taken and general lessons disseminated.'

Item 5 - Provision of a further series of 'off the shelf' key risk control measures:

The recommendation also offered a series of procedures which would improve the risk control process. Analysis of these statements provided a series of 'off the shelf' control measures some of which are specific:

- 'For major claims an initial report to the Board should be made within 3 months of notification, with updates every three months on those in which proceedings have been served or in which settlement is expected within the next 12 months.'

- 'Use checklist at Annex C for every settlement above £1,000 but within the new delegated limit.'

- 'Implement fully the new complaints procedures.'

- 'Trust must:
  Notify NHSLA of claims at earliest opportunity
  Comply with guidance from NHSLA
  Obtain agreement to proposed settlement with NHSLA'

- 'Whatever the locally determined policy, qualified legal advice must always be obtained for all claims involving potential expenditure above £5,000 for ex gratia payments and in any case before making any firm offer to settle a claim. This should cover:
  liability and causation
  assessment of the strengths of the defence and balance of probabilities.
  likely quantum of damages (best and worst case)
  likely legal cost to defend the claim.'

- 'Claims involving unusual and new features, if not correctly handled might set an unfortunate precedent for other NHS litigation, or claims which appear to represent a test case for potential class action, should be brought to the attention of the NHSLA.'

- 'All payments in settlement of clinical negligence or personal injury should be entered into the Trust's register of losses- where payment is partly funded by the CNST or ELS this should be noted in the register.'

- 'Ensure procedures comply with standards required by NHS Litigation Authority.'

- Policies and procedures are subject to regular scrutiny by internal audit under the Trust's Audit Committee.

However, I also came across other recommendations which were not 'off the shelf' solutions but were rather principles by which claims management should be applied. These principles allowed specific mechanism to be locally determined provided that the following principles were adhered to:

- 'Define when legal advice is to be sought.'
- 'Define level of authority to make settlement offers below the level of the Board'
- 'Adopt prudent risk management strategies.'
- 'Records should be kept for a substantial period of time.'
- 'Regular reports to the Board on number and aggregate value of claims in progress and eventual outcomes and remedial action taken or proposed.'
- 'Clear policy on handling of clinical negligence and personal injury claims.'
- 'Clearly documented procedure covering all aspects of handling of claims.'
- 'Claims manager has sufficient experience and/or training in clinical negligence and personal injury litigation including Alternative Dispute Resolution.'
- 'Views of those involved in the treatment giving rise to the claim must be considered carefully before a decision is made how to deal with the claim.'
- 'Need to recognise the close connection between risk management, complaints and claims management - where these are the responsibility of separate individuals there is a need to ensure the fullest possible coordination.'
- ' There will be appropriate linkages from claims handling to:
  functional directorates
  clinical audit
  risk management including health and safety
  complaints.'
- Consider joining CNST.

It appears that 'Expert Check-List' heuristics do not always contain a list of simple rules for solutions to specific problems. They can also be in the form of a set of principles to be applied when faced with problems of a particular type. This is not really the same as a check list which has to be applied in a particular form. It is much more of hybrid between the unstructured problem solving approach described in Chapter 2 and B-heuristics.

This type of heuristic is much more flexible than the 'Expert Check- List' heuristic in that it does not expect specific solutions to be applied no matter what the problem situation being faced. However, neither does it expect the person to start with a blank sheet of paper and develop specific solutions out of the problem situation, rather it provides a set of principles to be applied to help the problem to be solved. It is like seeding used in chemistry to grow crystals. Particles are used in order to provide a point out of which the crystals may start to form. In a similar way these 'Seed' heuristics provide the seeds upon which thoughts can grow and analysis take place more quickly, while allowing for a tailor made solution to be found without having to rely on an 'off the shelf' solution.

However, like all heuristics, 'Seed' heuristics pay the price for increased speed by sometimes being applied beyond that which it is appropriate for them to be applied to. 'Seed' heuristics can lead to solution to a problems being considered to be complete because all the principles have been applied. Having applied all the principles in the 'Seed' heuristic the user may not bother to look for other vital principles required to adequately control the risk.

If the Claims Manager simply applied the principles contained in the above 'Seed' heuristic then there is a danger that they would focus on the serious, but relatively rare claims or incidents, by requiring elaborate risk control procedures to be implemented in order to avoid the chance of that claim occurring again - 'Availability' heuristic. A principle which might be used to help Claims Manager

avoid this, is to ensure that all actions requiring risk control be first formally assessed and prioritised against the whole risk portfolio of the Trust. This would prevent the danger of a rare but high profile risk consuming resources of even greater risks which had not yet reached a high level of visibility to the claims management team. Such a principle is not however, to be found in the claims management recommendations.

6.8 Risk management soft-system following the clinical experience

Fig 6.7 shows the holon of the risk management system now further developed in the light of the real world experience of managing clinical risks.

From the experience so far, External Risk Control Enforcing bodies, play a significant role in determining both the risk agenda and also how risks are to be managed. These bodies include bodies established by legislation and those established by the NHS Executive such as the CNST.

Their role is to audit, advise on and enforce practices which they think will control risks to the level acceptable to legislation and/or their enforcing bodies requirements. Although they will operate at all levels in the organisation, inspecting and providing advice, the focus of their reports and recommendation are made to the Chief Executive and the Board who have corporate accountability to manage risks

Even though the Trust Board and Chief Executive have corporate responsibility for the management of risks they discharge this responsibility through lead managers and clinicians, who are able to authorise appropriate risk control measure based on their own risk analysis and the risk analysis of others. These managers and clinicians have the difficult task of balancing risk control measures with the provision of services to the quality and performance standards required by the Trust and within the resources available. How well they do this balancing act will determine how well the service is delivered and how well the risks are controlled.

High Level Holon of the Trust Risk Management Soft System (Third Cycle Analysis)

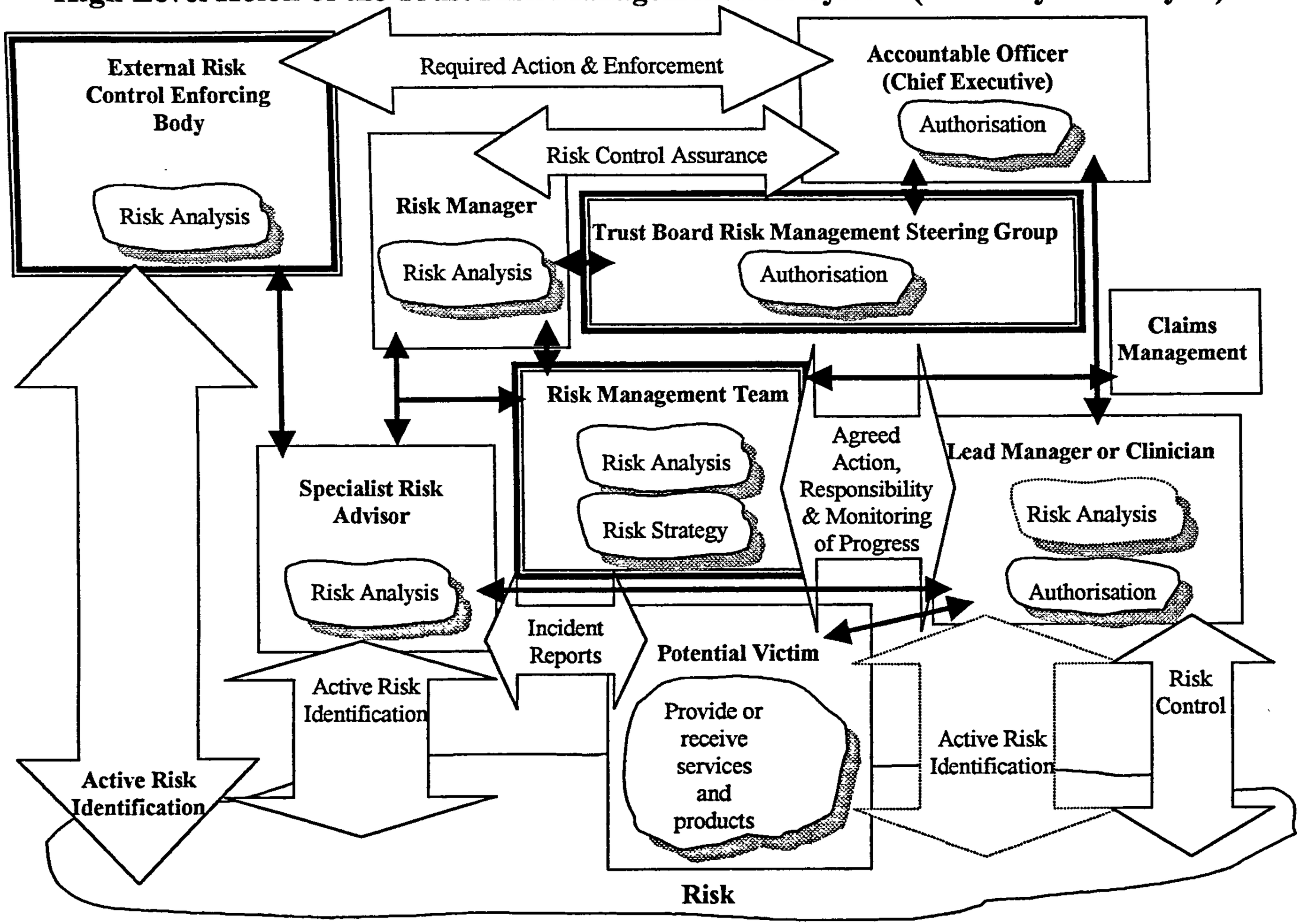


Fig 6.7

Working from left to right, External Enforcing Officers interact with the Trust through its corporate officers, particularly the Chief Executive and the Board. This interaction may be through standards of practice developed out of legislation, research, or accepted bodies of professional knowledge. It appears that they are using particular 'Expert Check-List' heuristics which specify specific risk control actions which have to be in place, while there is also evidence of the use of 'Seed' heuristics which help to structure the risk analysis and assessment of solutions against a list of specific principles.

The enforcing body will also have consulted with 'specialist risk advisors'. There appear to be many more specialist risk advisor functions than I had expected. These had developed either because they were legally required such as the Radiation Protection Committee or had developed in order to meet specific needs. Prior to the establishment of the Risk Management Team they reported through their line manager and also suffered from having their independent advice being compromised or simply ignored if it conflicted with the line manager's operational priorities. As a result of this research, all Specialist Risk Management Teams (risk advisors) have to formally report through the Risk Management Team on their risk assessments and advice. This has strengthened their ability to report their expert perspective independently of operational management constraints. The Specialist Risk Management Teams identified within the Trust and which have become sub-groups of the Risk Management Team are:

- Obstetrics and Gynaecology
- Emergency Resuscitation
- Infection Control
- Major Incident Planning

- Medical Equipment and Devices
- Drugs and Medicinal Products
- Health and Safety
- COSSH
- Fire and Security Issues Adviser
- Radiation Protection
- Building, Plant, Installed Services, Non-Medical Equipment
- Catering and Food Hygiene
- Manual Handling
- Occupational Health
- Complaints Management
- Capital Projects
- Internal Audit

These Specialist Risk Management Teams comprise a membership of experts within a predefined field of risk management. The role of these teams was agreed after discussions with them and the whole membership of the Risk Management Team. The conclusion of these discussions led to the following key roles of specialist risk advisors. To ensure: that:

- A strategy and policies related to the management of predefined area of risks across the Trust are developed and maintained.

- Formal risk assessments related to that area of risk is carried out across the Trust and prioritised using the Risk Priority Index.

- Advice on the management of specific risks is available to staff across the Trust.

- Appropriate training is available to staff in the prevention and management of specified risks.

- A set of key indicators related to the risk area is developed and maintained.

- That auditing of compliance with policies on the management of the risk is carried out.

The Health and Safety Manager, who initially, receives 'incident reports' passes them to the experts on the Specialist Risk Management Teams for advice. This advice is also made available to lead managers and clinicians who are responsible for turning appropriate advice into action.

This interaction results in risks being specified or identified and brought to the attention of lead managers and clinicians who determine whether the risk is acceptable or not. In making this decision the lead managers and clinicians appear to be making the decision as to whether action should be taken on the basis of whether the solution to the risk problem is affordable but they also demonstrate the presence of the 'Availability', 'Minimum Effort' and 'Personal Consequence' heuristics in this decision making. Only rarely is formal or unstructured decision making evident in their decisions, but there is some evidence that within their particular field of expertise for example clinical practice, 'Expert Check List' heuristics and 'Seed' heuristics are used.

There is good reason for lead operational managers and clinicians to use heuristics. They have numerous similar decisions to make each day as they try to balance the

need to provide services with the need to balance their limited budgets. Failure to deliver services carries a more serious personal consequence than do risks as these tend to have a less immediate and direct threat to them.

However, risks seen from a lead clinician/manager's perspective may be very different from that seen from the External Enforcing Bodies perspective. An example of such a conflict brought about by these differing perspectives is the requirement for fire training. This is mandatory for all staff as a Health and Safety requirement. This is interpreted by our Enforcing Officers as training provided annually. However, providing fire training for staff on an annual basis has serious consequences for ensuring that wards and clinical departments have sufficient staff cover in order to deliver the clinical work required. This result in significant numbers of staff not being given fire training on an annual basis. What is true of fire training is also true for other mandatory training such as lifting and handling.

In addition, risks are generated by the activity of service provision. These risks fall initially on the potential victims staff, patients, visitors etc. These potential victims recognize some of the risks, generate others and are unaware of yet others. Clients in their interactions with staff make assessments as to the acceptability of their experience and when the experience is unacceptable have to make a decision as to what to do about it. Clients have a choice of complaining and/or initiating litigating in the hope of achieving one or more of the following:

- an explanation,
- an apology,
- revenge,
- financial reward,
- holding someone accountable,
- improvements.

If claims are made against the Trust then the claims management function attempts to minimise the potential losses and helps the Trust learn from its experiences.

Uncontrolled risks are brought to the Risk Management Team for discussion and risk analysis. The Risk Management Team's role is to carryout risk analysis on these uncontrolled risks and to agree on the most appropriate risk control action to be taken. The Team also helps to identify what is the most appropriate authorisation level for a particular risk control solution. In some cases this risk control is the responsibility of a specific operational manager who would be informed of the action agreed. Any actions agreed at the Risk Management Team were also documented in a Risk Management Team Action Plan which helps to monitor progress of the agreed action through to implementation.

If the Risk Management Team felt that progress was not being made at the agreed rate or that a higher level authorisation was needed, for example, if there was insufficient budget within the operational managers control to implement the action, then the risk and recommended control action was taken to the 'Risk Management Steering Group' by the Risk Manager for consideration and approval of a recommended course of action.

In addition the Risk Manager was expected to monitor the overall functioning of the Risk Management System and develop it as needed to meet the Trust's risk management needs.

6.9 Conclusions

The risk management soft system holon developed out of the non-clinical experience was challenged and further developed by the experience of clinical risk management. Clinical audit, an approach focussed on improving overall clinical performance was shown, when effectively used, to significantly reduce clinical risk while improving overall performance.

Confirmation of the use of heuristics was also made together with further confirmation of the use of 'Expert Check List' heuristics demonstrated by the way that clinicians inappropriately used an 'Expert Check-list' heuristic to determine the right course of action in patients with heart attacks which, once reviewed by senior clinicians and changed, reduced the associated risk significantly.

The place of risk management as an integral part of the general management arrangements was also explored in relationship to the Trust's use of the EFQM excellence model. However, the distinction between the decisions of risk managers, which was focussed on how to optimise risk control, was contrasted with the decisions of lead clinicians and managers whose focus was on balancing risk control with the provision of services and products. While an analysis of the CNST standards revealed that accountable officers could not simply delegate the decision on what the right balance of risk and performance was, they had to ensure that the right balance was achieved in terms of risk control and this risk control function was seen as another key role for the Risk Manager within the Trust's risk management system.

Analysis of the guidelines for claims management revealed another heuristic within the E-heuristic grouping. This heuristic was named a 'Seed' heuristic because it speeded up the decision process by providing principles 'seeds' on which thinking

could be encouraged to grow in the right direction while at the same time being more flexible about the acceptable solution, when compared to the 'Expert Check-list' heuristic.

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Chapter 7

Reflections on the research findings

7.1 Introduction

One year after I started as the risk manager of the Trust I began this research in order to help me develop, out of my experience, a theoretical and practical guide to the management of health care risks. The formal management of risk was, at the time, a relatively new phenomenon. There was little literature on the subject directly related to the type of health care system in which I was working, although there were many giving advice and guidance as to what effective risk management was all about.

Over the last five years I have attempted to apply the guidance given and learn how risks are managed in fields with more experience of risk management than the health care services. I used this knowledge as the basis for reflection and questioning on its applicability to the management of risk in the real world of the hospital in which I worked. Reflection, questioning and testing of these ideas led to new understanding of the nature of risk and innovative solutions on how it could be managed.

However, I did not just want to create a theoretical and practical guide which I could use to understand and manage the risks which I was faced with. I also wanted to produce new knowledge which was generalisable outside of the particular context in which it had developed. I hope I have gone some way to achieve this and in this chapter I will concentrate on this generalisable knowledge in the hope that others will find the ideas useful.

7.2 The research questions:

At the beginning of this research the field of risk management in health care appeared to be one of ill defined complexity. Partly this was due to my own ignorance of the field but it was also because no one had attempted to make sense of the whole idea of risk management in health care. There were of course many people focussing on particular aspects of risk management in health care such as one off accidents, clinical negligence, health and safety and many others, but they seem to have treated each as a separate field of knowledge which did not impact on each other. I wanted to understand risk management in health care as a wholistic concept of which each of these fields were elements of some greater whole called health care risk management.

The search for the nature of this greater whole was pursued through a search for the answer to three fundamental questions:

- What is the meaning of the term risk in health care?
- What constitutes a good risk management decision as opposed to a bad risk management decision?
- In what way is 'Risk Management' different from management carried out daily by all grades of health service staff?

These question were answered through reflecting on and questioning the literature and relating it to the experience of risk faced by me on a daily basis within the Trust. The answers developed clarified the nature of health care risk and challenged the value of examining risk management decision making in terms of programmed or non-programmed decision models. It was found that real world decision making, in health care risk management, was better explained in terms of decision making using simple rules of thumb, heuristics. These heuristics seemed to work well in most situations

but were also shown to be used to solve inappropriate problems leading to significant difficulties in achieving effective risk control.

In an attempt to gain better risk control I developed a risk management system which was structured in such a way that it could detect and correct for the inappropriate use of heuristics. In this chapter I will reflect on my research findings and the system it created. In doing this I hope to be able to summarise my conclusions in terms of the research objectives:

1) Describe the nature and characteristics of risk faced by acute hospitals.

2) Specify the parameters of risk management decision making as distinct from other management decisions within an acute hospital.

3) Describe and evaluate the systems and heuristics which are used when making of risk management decisions making within an acute hospital.

4) Describe the system and heuristics needed to assure high quality risk management decision making is made and implemented within the acute hospital.

7.3 The nature and characteristics of risk faced by an acute hospital.

There seemed to be no single definition of risk which had gained consensus. Some tried to restrict it to potential events which could be given a mathematical probability of occurrence. Others, not only questioned whether such measures could ever accurately reflect the likelihood of potential events, but more fundamentally,

challenged any definition which ignored the key role of subjective human judgements within any concept of risk.

Although most definitions referred in some way to two dimensions of the concept of risk, 'likelihood of occurrence' and 'potential seriousness of the consequences' they had not included the idea of 'prodromal visibility'. Prodromal visibility in the 'face mask risk' discussed in Chapter 2 had turned a high risk using two dimensions into no risk using the three dimensions. A further important feature of having three dimensions specified, in the definition of risk, is that it indicates where to look for risk control solutions:

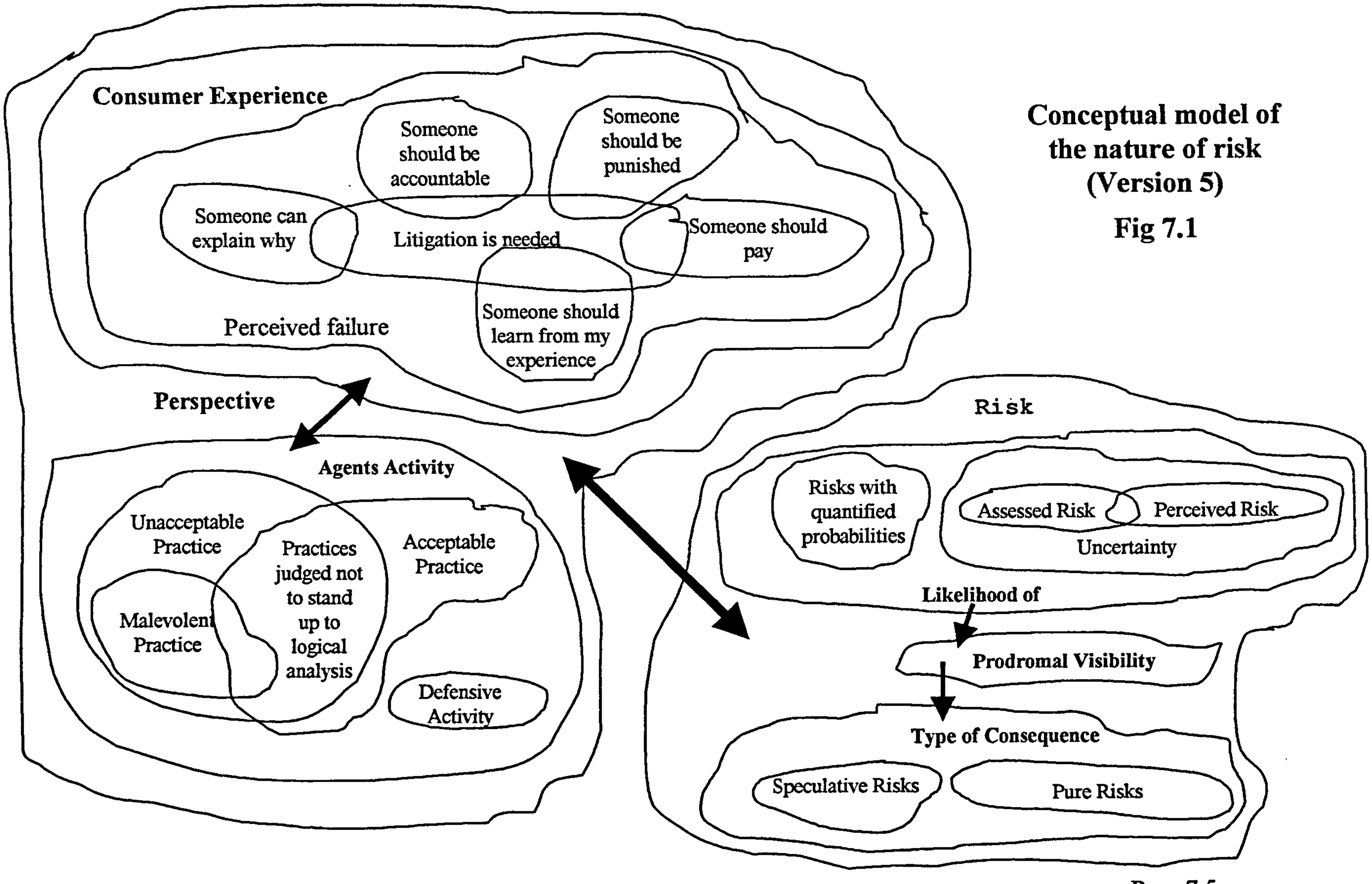
- How can we reduce the seriousness of the consequences?
- How can we reduce the likelihood of the potential event?
- How can we increase the risk's prodromal visibility?

By the end of 1996 I had developed the following definition of risk:

The product of the likelihood of an event, together with its prodromal visibility and potential consequences.

Conceptual model of the nature of risk (Version 5)

Fig 7.1



The value of this definition, above the others which I had read, was that it allowed for risk to be defined mathematically if the data was available and yet also was valuable if non mathematical estimates were all that was available. I tested out this definition with a wide range of colleagues across the Trust by challenging them to consider the three elements of risk when they came to me with a risk related problems and it worked very well in helping them to clarify their thinking about risk and its possible solutions.

However, risk as was discussed in Chapter 5 cannot be conceived of as an entity with an existence independent of the perspective from which it is viewed. My research concluded that there are two core perspectives by which risk is perceived. Firstly, it is perceived by 'consumers' of the services and products and secondly, it is perceived by the 'agents' who provide those services and products. I found that the perspective through which the risk was perceived changed the nature of the risk. I therefore needed to redefine risk to take this into account and which I now define as:

The product of the likelihood of an event, together with its prodromal visibility and potential consequences as perceived through the perspective of a particular consumer or agent.

7.4 The parameters of risk management decision making.

Being clear about the nature of risk, helps to determine what is legitimately within the parameters of risk management decision making as distinct from other management decision making in an acute hospital. This was objective 2 of the research.

This debate was opened in Chapter 2 with an analysis of the origins of risk management as distinct from other types of management. An important distinction is the nature of the thing being managed. Risk is in essence a potential event, once it turns into a real event it is no longer a risk but an occurrence with a reality of its own. Risk management is about the management of potential events rather than real events even though some risk managers do stray into the management of disasters. Once a risk turns into a disaster it really is a distinct field of its own called 'Disaster Management'.

Risk management consists of identifying risks, assessing the risk's potential in terms of likelihood of occurrence, prodromal visibility and seriousness of consequences from the perspective of consumers and agents. Because risks are potentially only limited by the imagination, while resources needed to control them are finite, risk control decisions have to start by ranking the whole risk portfolio into an order of priority for action. If this is not done, then lower risks could consume resources needed for higher risks, leaving higher risk without the resources needed to control them.

Skilled risk managers have the ability to help determine the most appropriate risk control mechanism which includes risk reduction methods to reduce the likelihood, and/or seriousness of the potential consequences and/or to increase the risk's prodromal visibility. This could be done prior to the risk becoming an event, or after the event has occurred in order to limit the damage, as is the case in claims management. Other options include risk transfer, for example by insurance or by agreeing to share the risk in terms agreed in a contract. The final option is to retain the risk.

The development of probability theory and science made people think that the unknown future could be managed by using mathematical tools and this idea is still a significant feature of the risk management profession and its tool kit. In the early days

those who managed risks tried to reduce risks down to mathematical probabilities and financial values.

While this works very well for the insurance industry were the decision criteria is simple - do I have enough income from premiums etc to leave me with a profit after I have paid out for insurance claims made? Risk management decisions made outside of the insurance sector are much more difficult and much more subjective. For a risk manager in a hospital the lack of historical data and the relatively small numbers of incidents makes estimating probabilities prone to such large errors as to be of little value. Although there are tables of financial values for injuries agreed by legal precedent, health service decisions have to take into account the public and media reaction and the moral values of the society in which health care organisation exists.

In Chapter 2 Dickson says that risk management is the responsibility of risk managers because managers are too busy managing the delivery of the service, producing product, marketing etc to do risk management. The view of many managers within the Trust reflected this view and as soon as I became the risk manager many staff, managers and clinicians passed the risks they had identified onto me to manage.

In some ways I was sympathetic to these views but that sympathy was tempered by the reality of managing risks over the past five years. That experience had not simply been a personal experience it was also social experience shared with colleagues within the Trust and especially the members of the Risk Management Team who were my 'colleagues in adversity' in more ways than my action learning set was - more of which will be said in Chapter 8. The culmination of the Risk Management Team's learning was documented in the Trust's Risk Management System (Version 4) (see Appendix 6).

The Trust's risk management policy started to develop out of this research process with an initial version published in August, 1996 and progressively revised through consultation and experiences over the following four years. In July, 2000 the Trust adopted version 4 of this policy. The policy provides the details of how the generic soft-system holon Fig 7.2 was turned into a specific operational policy for the management of risk within a large acute teaching hospital. This version went through extensive consultation with all managers, lead clinicians, staff representatives and specialists in risk management over a twelve month period in order to provide validation of the conclusions of this study in terms of how risks should be managed.

7.5 Reflections on the Trust's risk management system.

The details of the risk management system, developed out of this research, is given in Appendix 6, so here I will concentrate on the concepts on which that system is based. These concepts represent my learning and the conclusions of my final two research objectives. These objectives can be summarised in the question: what system and heuristics are useful in the management of risk?

My understanding of risk is now specified in my definition of risk. In order to manage such a complex entity, there needs to be balanced and appropriate decision making and action taking by every person who is part of the risk management system. These participants in the risk management system include both 'consumers' and 'agents' and each has a complementary but different responsibility for the management of risk.

If I am an agent, such as a clinician treating a patient, I must control the risks associated with my activities in an acceptable but not defensive way. If I am a consumer I must not increase the risk to myself of the agent's planned treatment, for example by not providing key information, such as any allergies I may have.

Similarly, if I am the manager or lead clinician who determines how resources are to be used in order to deliver the services and products to the consumer, I cannot ignore the risks associated with the decisions I have made. As a manager I have to balance the need for resources to optimise the provision of the services and products, which I have to provide within a given budget, with the need to control the risks associated with my activities.

The conclusions of the Risk Management Team was that these different yet complementary risk management responsibilities could be defined in terms of three separate decision making spheres:

- Staff
- Lead clinicians and managers
- Corporate management.

Although we recognised that patients have a responsibility, they are outside of our management control and so the policy does not define a specific role for them. The policy however does define a role for staff and lead clinicians which will help patients and others outside of direct management control, to effectively carryout their role within the risk management system for example in:

'8.1.5 Provide patients with information on risks and benefits of common elective treatments.' (see Appendix 6.20)

7.5.1 Reflections on the role of staff within the risk management system:

We decided that we wanted all staff to act in a way that helped effective risk management. Our initial description was that we wanted all staff to act safely but this was not considered to be the aim. Defensive medicine is acting safely but it is not good medicine. We could establish systems of security which would protect staff from intruders but would also turn the hospital into a fortress rather than a place of healing. Safely was not the right term. A colleague suggested the right term should be to act responsibly. We defined responsibly as:

Meeting one's obligations through rational action, taking into account the needs and context of the situation in which that person finds themselves.

Staff do this by making the management of risk part of their daily duties and by identifying and assessing risks, taking local economic action to reduce those risks to an acceptable levels and informing the appropriate lead clinicians and managers of unacceptable risks outside of their local ability to control. We wanted staff to use incident reporting to increase the likelihood of the use of the 'Availability' heuristic in keeping risk in the forefront of their lead clinician's and manager's minds.

High Level Holon of the Trust Risk Management Soft System (Third Cycle Analysis)

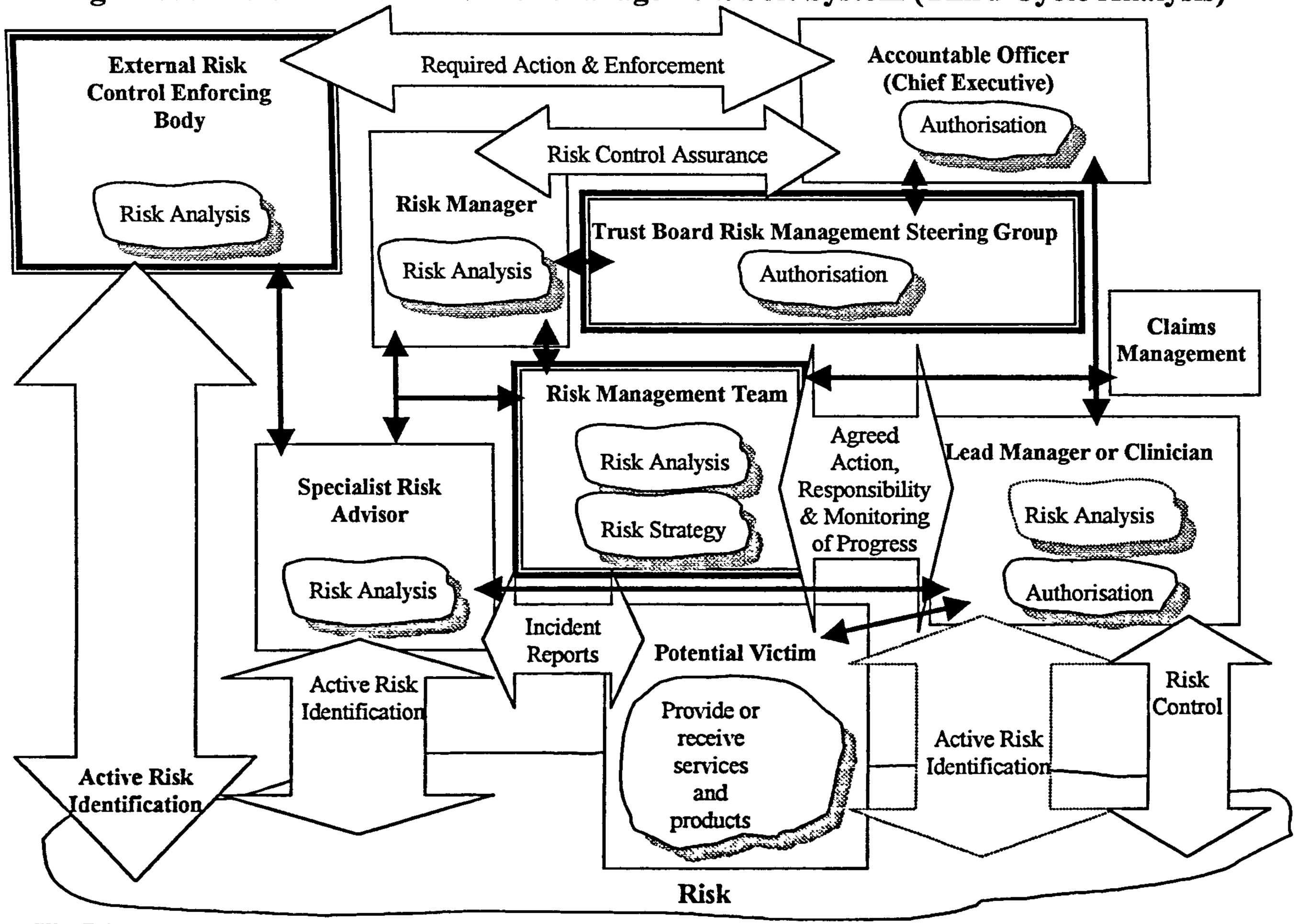


Fig 7.2

Risk management also has to start with the individual staff of the organisation. They are the skilled agents who provide the services and products of the Trust. Their judgements and actions protect or expose consumers to the risks associated with health care activities. Those consumers not only include the patient but also their own colleagues and visitors to the Trust. The activities of agents create risks in themselves for example, transferring infections from one patient to another patient or member of staff or visitor because of failure to wash hands. Maintenance activities such as cleaning in themselves create hazards such as wet floors or dust. Catering practices can result in food poisoning. The use of radio-active substances could put the community at risk. The possibilities are endless.

Risk management therefore starts with the staff who can minimise these risks by their own actions. They are often the first to be aware of hazards and incidents which occur and from which lessons can be learnt and post-event risk control measures taken to reduce the potential of further losses. They should report all incidents, hazards and near misses using a single Hazard /Incident Reporting form in order to ensure that all risks could be logged in a single database (see Appendix 6.32 - 6.33).

The importance of having a single reporting mechanism for all risk was seen as a key mechanism for countering the historical division of risk into clinical, financial and organisational. The experience of the Risk Management Team in deciding on risk priorities led us to conclude that to attempt to prioritise risk within separate silos of clinical, organisational and financial would result in poor risk management decision making for two reasons. The first reason is that the distinction between a clinical, organisational and financial risk is not clear cut and secondly, perhaps more importantly is that the resources used for one a risk control measure is not available for another risk control measure. This makes it critical to prioritise the whole risk portfolio as one set of risks.

7.5.2 Reflections on the role of lead clinicians and managers within the risk management system:

The parameters of risk decision making of lead clinicians and managers was to manage risks responsibly by assessing their own area of responsibility's performance at managing risks using the Trust's EFQM self-assessment framework and to agree actions, as part of their business planning process. They were also to ensure that agreed risk control measures were carried out and had to ensure that all staff within their area of control understood and carried out their individual responsibility for the management of risk.

The importance of this was to ensure that managers would treat local risk management as part of their general management responsibilities. By making risk management performance a part of the EFQM self-assessment and review process, the visibility of their performance in delivering their services in terms of quality, activity and budgetary control would be assessed alongside their performance at responsible risk control. The aim here was to try to overcome the widespread use of the 'Personal Consequence' heuristic which we had seen result in lead clinicians and managers ignoring risk control in order to protect themselves from criticism over service delivery performance.

We also insisted on risk assessments being carried out as part of the business planning process in order to correct for the danger of too great a focus on the performance side as compared to the risk control side. The aim was to counter the widespread use of the 'Affordability' heuristic, which often resulted in poor risk control, by ensuring that decisions to increase service performance also considered the associated risk control costs or benefits of their service developments.

In addition, lead clinicians and managers could not simply use lack of a budget as a reason for not providing risk control. If they did assess a serious risk as needing control but had no resources to provide that control they had to:

> '7.1.8 Report serious risk which are beyond their ability to control to the Trust's Risk Management Team.' (see Appendix 6.18)

In the past they had often just ignored the risk ('Affordability' heuristic) now they had to report that they had a serious risk which they could not control to the Risk Management Team.

Lead clinicians and managers also displayed further reasons why they cannot be relied on to manage risks effectively in isolation from the Risk Management Team. We found, local clinicians and managers are not in a position to see the 'big picture' of risks facing the Trust as a whole. Closeness to their own problems can make it difficult to appreciate the greater needs of others, 'Personal Consequence' heuristic. Also the amount of specialist knowledge needed to manage, properly, the risks that they face is also beyond what it is reasonable to expect any individual to know. Many clinicians and managers are not trained in the specialist skills of risk management and finally the pressure to achieve the day to day demands of providing clinical and other services can lead some to let operational requirements over-ride risk management requirements.

However, the local management of risk makes it possible to identify risks in detail and to assess them within the local context in which they operate. In this way the treatment of risks can be agreed with sensitivity to local needs and circumstances, with the consequences that there is local ownership of the problem and its solution. This should result in rapid implementation of the solutions. Closeness to the problem

makes it possible for rapid feedback on the effectiveness of the risk control measures taken and therefore rapid learning as to what is effective and what is not an effective solution.

7.5.3 Reflection on the role of the specialist risk management teams within the risk management system.

In order to complement the skills and role of the lead clinician and manager we brought all specialist advisory group into a line management responsibility to the Risk Management Team (see Appendix 6.16 - 6.17)

It is clear from the number of specialist teams how complex and how much expertise in risk management a Trust has. A number of these groups existed prior to the establishment of the risk management system but were functioning sub-optimally because they did not have a clear reporting route to the Trust Board. They had to rely on offering advice as best they could and had no way to raise concerns about how a risk was being managed or not managed by lead clinicians or managers. In effect they were not able to offer a corrective to the inherent weaknesses of lead clinician's and manger's ability to manage risks.

Recognising that such a corrective was needed, we decided to clarify the role and responsibility of these groups and to give them a clear reporting structure which was independent of operational clinical and managerial concerns.

The specialist risk management groups were thus given the role of providing specialist and independent advice to individuals, lead clinicians and mangers about the proper management of the specialist area of risk for which they had expertise. This reflected their original role.

In order to provide a corrective to the 'Affordability' heuristic, so prevalent at the operational level, we strengthened the Specialist Risk Management Team's role for ensuring that the Trust's policies were in line with legal and best practice guidelines and for auditing the level of compliance with these policies throughout the Trust. Once a high risk area was identified they had to report this to the responsible lead clinician or manager. If the Specialist Risk Management Team was not satisfied that risks were being managed responsibly they also had the duty to report their concerns to the Risk Management Team.

These teams were very able in providing the Trust with detailed knowledge and skills in the management of risk within their specialism and are now able to make judgements, independent of operational pressures, as to how well these risks are being managed. However, as specialists they also displayed a number of weaknesses. They tended to keep narrowly focussed on their specialism and were unable to see the 'big picture' of risks facing the Trust as a whole. They could fail to appreciate the greater needs of others outside of their area of responsibility - 'Personal Consequence' heuristic and can be over zealous and idealistic about how their risks should be managed by not taking sufficient account of the pressures produced by the demands of the operational service - 'Expert Check-list' heuristic.

7.5.4 Reflections on the role of the Claims Management and Complaints function within the risk management system:

The complaints, claims management and litigation function coordinates the management of complaints, claims and litigation brought against the Trust. They manage complaints and litigation, ensuring that there is a balanced and fair analysis of the incident, a rapid response to the complainants or litigants and that staff involved are properly supported and prepared. Within Salford Royal Hospitals there is direct

input into the corporate and local risk management systems so as to ensure that key lessons are learnt from complaints and litigation in order for risky practices to be controlled adequately.

The Complaints, Claims Management and Litigation Group was able to provide detailed knowledge of legal requirements and subtleties of specific cases and are a valuable source of specialist advice both at local and corporate levels within the organisation. All cases are brought through this single channel and therefore it is easier to identify themes and critical learning points based on a wide range of legal cases and examples of complaints.

However, there are a number of weaknesses with this group. It tends to focus on complaints and litigation and thus distort the perception of the overall risks faced by the Trust. This creates the danger that over-reaction can result in unnecessary defensive activity reducing the Trust's overall quality and operational efficiency - eg Defensive Medicine.

7.5.5 Reflections on the role of the Risk Management Team within the risk management system:

The position of the Risk Management Team at the centre of the flow of all serious uncontrolled risks together with data from its incident reporting database meant that it had knowledge of many of the significant risks facing the Trust. Prior to the establishment of the Risk Management Team there was no single point though which all serious risks could flow and be prioritised against each other.

The key role of the Risk Management Team is to support the Trust Board, and in particular the Chief Executive in his role as accountable officer, and to assure them

that risks were being properly managed by the lead clinicians and managers they employ.

During the final stages of my research, the health service officially recognised the dangers associated with relying on operational managers to control risks. They began to require assurance mechanisms which would provide the Trust Board with assurance that risks were being properly managed by those the Board had delegated operational responsibility to. This responsibility of the Board was to be part of its wider responsibility for 'Corporate Governance'.

Corporate governance is the system by which an organisation is provided with direction in order to ensure that it fulfils its function in an economic and efficient manner while at the same time ensuring there is effective management of risks it is facing. The importance of effective corporate governance was highlighted when in the early 1990's a series of serious failings in financial control, in a number of major private sector companies led to the establishment of the Cadbury Committee. The Cadbury Code (1992) identified three fundamental requirements of good corporate governance(1):

Internal financial controls
Effective and efficient operations
Compliance with applicable laws and regulations

The Greenbury and Hampel Committees developed the 'Cadbury Code' further and consolidated their findings into one 'Combined Code of Principles of Good Governance' published by the London Stock Exchange. The key requirement of these principles is that:

'...the board should maintain a sound system of internal control to safeguard shareholders' investment and the company's assets'

and that

' the directors should, at least annually, conduct a review of the effectiveness of the group's system of internal control and should report to the shareholders that they have done so.' (2)

Controls assurance review should cover all controls, including financial, operational, compliance and risk management controls. The Turnbull's combined code makes reviewing the effectiveness of internal control the responsibility of the Board which has to take into account any information provided to it by the audit committee, or any other committees.

The essential features of an effective Board is that there is a balance of power between executive and non-executive directors; effective systems of monitoring and controlling the activities of the organisation, effective systems for managing risk and uncertainty and accurate information and statements on the financial status of the organisation verified through independent audit. Company directors on the Board of private companies are responsible for corporate governance and they achieve this through setting a company strategy, implementing this strategy through effective leadership and ensuring that management carries out their delegated duties in line with the requirements of the Board. The shareholders appoint the Board and receive reports from the Board that they are controlling their company appropriately. In addition the shareholders appoint auditors to verify that appropriate controls are in place and are effective.

Though the concept and key principles of controls assurance were developed to deal with specific failures in control within the private sector, the NHS has agreed that these good practice guidelines apply equally to the NHS. The NHS has therefore, taken on board these principles of good governance. For the National Health Service,

corporate governance is to be achieved in a similar way to that of the private sector with Parliament acting as the shareholder and the Chief Executive of the NHS Executive having overall responsibility for ensuring that the NHS keeps proper accounts and is prudent, economic, effective and efficient in the use of NHS resources. The NHS Chief Executive is supported in this role as accountable officer by local accountable officers, the chief executives of Trusts and Health Authorities. Health Service Circular HSC 1999/123 requires:

> '...ensure that the appropriate structures are in place within their organisation for implementing controls assurance taking account of linkages with clinical governance and, where applicable, NHS risk pooling schemes;
>
> from October 1999, conduct a baseline self-assessment of compliance with risk management and organisational controls standards;
>
> formulate a prioritised action plan with clearly assigned responsibilities in the light of this assessment;
>
> provide an assurance statement within their Annual Report for 1999/2000; and
>
> ensure appropriate arrangements are in place to verify the assurance statement.' (3)

Clearly, an effective controls assurance system will save resources and thus make more available to direct patient care but the most important reason for an effective controls assurance system is a moral one. The NHS is there to provide a public service which will prevent unnecessary ill health, suffering and wasted resources which are the result of poor clinical and non-clinical practices.

The government's White Paper 'The New NHS: modern, dependable.(4) set out a ten year vision for ensuring that the focus of all activity within the NHS is on the delivery of continually improving treatment and care for patients. This vision will be achieved by building on the original NHS principles of access based on need alone and not on ability to pay, or the area in which the patient lives. Quality will be assured

through a new statutory duty for quality which will compliment the duty for effective financial management. Three key and interrelated mechanisms: Clinical Governance, Organisational Controls and Financial Controls, will provide the means of achieving good corporate governance of the NHS. Detailed guidance on controls assurance requirements were given in November, 1999 in the NHS guidance which defined controls assurance as:

> 'Controls Assurance is...a process designed to provide evidence that NHS organisations are doing their "reasonable best" to manage themselves so as to meet their objectives and protect patients, staff, the public and other stakeholders against risks of all kinds.' (5)

Health care professionals have always been and will continue to be responsible for ensuring high standards of clinical practice and the management of clinical risks associated with that practice. However, chief executives now have a statutory responsibilities for ensuring that all health care professionals achieve the quality of clinical treatment and care which is expected of them. The key mechanism by which chief executives will discharge their legal obligations for clinical management is through clinical governance.

Clinical governance is defined as:

> "a framework through which NHS organisations are accountable for continuously improving the quality of their services and safeguarding high standards of care by creating an environment in which excellence in clinical care will flourish" (6).

A senior health professional at Board level must be appointed as the person responsible for ensuring proper processes which ensure high quality care and these will include:

Clinical risk assessment and management.

Evidence based practice.

Involvement of all clinicians in clinical audit and continuing professional development.
Using high quality data to monitor clinical care.

Clinical excellence cannot flourish unless the environment in which that treatment and care is provided is also excellent. The boundary between clinical and organisational controls is blurred. For example, some aspects of medical device management, radiation protection and infection control clearly fall under the direct responsibility of individual clinicians, while others aspects are the responsibility of the organisation as a whole. However, there are many other aspects of care of patients, staff and visitors which are not directly clinical but which, if not managed well, will affect their wellbeing. These areas include:

Health & Safety
Manual Handling
Fire and Security
Catering and Food Hygiene
Building, Plant, Installed Services and non-medical equipment

Many of the organisational control requirements are imposed by civil and criminal law on individuals and organisations. Failure to comply can result in fines and/or imprisonment.

Organisations must be able to show that they have done their "reasonable best" to manage themselves so as to protect patients, staff, the public and other stakeholders against risks covered by their activities.

The basic requirement of organisational control is that there is evidence of regular risk assessments being carried out, that risks identified are prioritised and reasonable steps have been taken to effectively control them.

Clinical Governance focuses on ensuring appropriate standards of clinical treatment and care are delivered. Organisational controls focus on ensuring that the total environment of care supports and enhances clinical care while at the same time is safe for staff, patients and visitors. Financial controls focus on ensuring that health care resources are used appropriately to provide the services required by the NHS.

Controls Assurance is the process by which Trust Boards can reassure the public that the Trust operates an effective system of internal control covering these three key areas of management practice. The guidelines make the Trust's Risk Management System the primary mechanism by which these controls are effected and co-ordinated throughout the Trust. Risk management is defined as:

> "the culture, processes and structures that are directed towards the effective management of potential opportunities and adverse effects" (7).

Therefore, a key role of the Risk Management Team is to coordinate all of these controls assurance mechanisms and through its Specialist Risk Management Teams audit and provide advice on effective risk management practices.

So unlike Dickson, who felt that risk management needed to be done by risk managers we found that in health care that would be impossible because of the range and complexity of the risks being faced. We concluded that risk managers should share their expert risk management role with all the staff of the Trust within a framework of clearly defined but separate roles and responsibilities. Those specific roles and responsibilities are specified in detail in Appendix 6.

The overwhelming impression for me and the Risk Management Team was how complex risk management decision making was and that no individual or a group had enough knowledge to effectively manage risks in isolation from others within the Trust. Each individual or group had specific strengths but also had inherent weakness and these strengths and weaknesses were in many ways related to the nature of the heuristics which they used to make their decision making efficient.

Faced with having to make many decisions a day the option of programmed or non-programmed decision making would require too much time to be of practical use. While guessing would be too risky. The solution appeared to be the use of heuristics which seemed to be a natural way of making decisions.

My earliest risk management decision, made as Chair of the Risk Management Team, was the removal of the scalding risk. This prompted me to try to understand whether that decision was a good one in risk management terms.

During the early part of this research I and others were determining risk priorities according to how easily a risk was brought to mind and for me, having experienced a patient being scalded, such a risk was easily brought to mind. This risk had been identified by a Health and Safety audit but no one had acting on it because no one had pursued the process of getting a budget for the work to fit thermostatic controls on taps, another example of the 'Affordability heuristic' in action.

However, I saw this as an important risk not because I had made a formal assessment of the risk because I had not. The risk reminded me of the day, many years ago, while working at another hospital, when a patient had clambered into a hot bath and was scalded to death. My 'Availability' heuristic was switched on and I pursued the

control of this risk until it was completely gone. I had not used guessing to make this a priority. Neither had I collected all the information together and analysed the relative merits of the options, as would have been the case had I used programmed or non-programmed decision making. What did explain my decision was the use of the 'Availability Heuristic' to help me make my decision. I had prioritised this risk, though I did not realise it when I was making the decision, on how easily the risk had come to mind.

Another key debate, which developed during this research, was related to who should make risk management decisions. Initially, people within the Trust thought that risk management was something the risk manager did and they passed all unresolved risks that triggered their own 'Availability Heuristic' onto me. Many lead managers and clinicians felt that they lacked the time to manage risks themselves but also recognised that they lacked the knowledge and skills required to understand risks, analyse and assess those risks and then to priorities the risks for action.

It did not occur to them that lack of specialist financial skills does not exclude the manager from managing their budgets or lack of personnel skills excludes them from the management of staff. In a similar way I wondered whether in health care lack of time or skills to manage risk was only a way of avoiding their responsibility for the management of risk.

Assessing local risks is a legal responsibility under Health and Safety regulations and is the basis of good management practice. The lack of skills which lead managers and clinicians had in this area was very apparent in this research. It was unusual for a lead clinician or manager to make formal risk assessments. They relied instead on reacting to incidents rather than proactively seeking out risks. The result was that the dominant mode of risk management behaviour was damage limitation after a risk had become an incident rather than preventing the risk from becoming an incident

first place. In effect there was little risk management being carried out by lead clinicians and managers, it was more disaster management.

However, although lead clinicians and managers have relatively less knowledge of risk and control methods than did the risk manager, they did have more knowledge about the issues surrounding the specific delivery of the service and products which were within their domain of responsibility.

The strengths and weaknesses of lead clinician and manager seemed to be cancelled out by a complementary set of strengths and weaknesses held by the risk manager. This together with the presence of heuristics led us to conclude that we needed a system which brought all these elements together in a single forum, the Risk Management Team. In the early years of the research it was impossible to get the lead managers to attend, most sent their more junior colleagues and thus the mutual cancelling out of weaknesses by complementary strengths of risk manager and lead manager did not occur and limited the quality of the decisions made and the speed at which decisions were made.

However, by the end of this research the presence of the lead managers and lead clinicians was made policy and the quality of the decisions and the speed at which they were implemented was significantly improved.

The risk manager's role was clarified as firstly to provide advice on risk management to all those who need it, secondly, to ensure that risk management, by lead clinicians and managers, is being performed in a way acceptable to the accountable officer and thirdly, to develop and manage systems which help the organisation manage its risks effectively.

The most senior doctor in the Trust, the Executive Medical Director had been a member of the Risk Management Team from its beginning. However, there was a view held by many that clinical risks were so special that these risks needed to managed separately from other risks such as the health and safety risks. This presented itself primarily as low level clinical participation in the Trust's incident reporting system.

It was clear from the research that clinical risks were particularly problematic to control because of the historical development of the profession and how these professional roles and managerial roles had developed over the years. In addition, clinical risks were particularly complex to assess because many were really complex speculative risks in which differing perspectives and levels of knowledge and moral principles played a significant role.

Following a series of workshops with clinical staff we agreed that the best way to get clinical staff to increase their reporting of clinical incidents was to introduce a confidential clinical occurrence reporting system so that the clinical incident could be first assessed by senior clinical staff in order to determine whether or not a perceived clinical incident was a pure risk or an expected speculative risk which was on balance worth taking when compared to the consequences of not taking the risk for a particular patient with a particular condition. As a result, a set of events which should trigger this clinical occurrence report to the clinical director was agreed (see Appendix 6.24)

The Clinical Director and team would analyse the data in search of 'Hot Spots' and common clinical practice errors. A review of this analysis would be carried out by a Directorate Clinical Management Team, using their combined 'Seed' and 'Expert Check-list' heuristics, and appropriate corrective action agreed and implemented.

Local clinical risk assessments together with corrective actions implemented were also to be reported to the Executive Medical Director using a Specialist Team Highlight Report (see Appendix 6.29) in order for Trust wide issues and recommended action to be considered as part of the Trust's overall risk portfolio.

This system was not meant to replace the Hazard/Incident reporting system. This still was the key route to be used for all clinical incidents. However, the additional route was there to allow for clinical incidents to be reviewed by clinical experts in order to determine whether an incident could have been justifiably expected in the clinical circumstances of a particular case.

In its early days the Risk Management Team used to deal with clinical risks and non-clinical risks in separate parts of its meeting. The reasoning for this was to make it possible for clinicians not to have to attend discussions about non-clinical risks which they were not interested in. Once the Team recognised the problems which this created in determining the priorities for risk control, the separation of clinical and non-clinical risk prioritisation was abandoned and all risks are now assessed together.

The danger of having separate spheres of risk management operating independently of each other is described by Dickson in Chapter 2 as freely moving spheres which when they collide results in conflict in which each sphere tries to maximise its own interest. My initial experience of the result of this was a backlog of serious health and safety risks which had not been resolved because resources had been allocated elsewhere but on a basis which no one could explain. No one had a list of the whole risk portfolio because each acted independently so as to fight their own corner for the resources to manage the risks which they were personally aware of.

The creation of separate spheres of interest is understandable when large complex organisations have to be managed. The Finance Director has to be able to control expenditure at budget setting and so wanted to allocate the Risk Management Team

with a specific budget to 'control risks'. By this stage I was developing an awareness of the wide spread use of the 'Affordability' heuristic as a primary cause of failure to control serious risks. I refused to agree to having such a budget because unexpected and unacceptable risks can appear at any time during the year. I asked the Finance Director whether he thought that it would be responsible to retain a newly identified serious risk just because we had set the budget too low in that year to control it. He did not think this would be reasonable.

On the other hand, if we had a budget we would be likely to spend to its limit in order to ensure that we were not allocated less next year. The effect of this would not be better risk management because we would not have got the balance right between resources for risk control and resources for service delivery.

Each risk needs to be assessed in the light of other risks and the needs of service with the relative level of expenditure on risk as opposed to service delivery being based on proper assessment using a Risk Management 'Seed' heuristic rather than an 'Affordability' heuristic.

In spite of evidence from the literature that group decision making can result in poor decision making (eg Groupthink), experience of risk management over the last five years has demonstrated to me that group decision making is the 'least of two evils'. Making decisions in isolation from information on the whole risk portfolio and in isolation from other expert views had led to very poor risk management decisions in the past.

The dangers associated with making decisions about a risk in isolation from the rest of the risk portfolio is thrown into sharp focus by the health service's historical separation of clinical and non-clinical risk. However, this separation is not only problematic in terms of making a balanced decision, it is also not easy to be sure

whether one is dealing with a clinical as opposed to non-clinical risks. When a patient falls onto the floor, is that a health and safety risk (ie non-clinical) or is it due to a failure of adequate nursing supervision, or incorrect levels of sedation, (clinical)? In reality, a risk is a risk and the separation into one or other of these categories does not help the risk analysis.

The reason for separating clinical and non-clinical risks when determining what risk control measures are to be used and how they are to be resourced is even more problematic. Trusts plan their expenditure in the light of expected income and provide managers with specific budgets to achieve specific tasks. We have seen in the research how managers must not exceed their budgets and that if faced with a risk will use the 'Affordability' heuristic to stop them seeking further resources or using alternative budgets.

If clinical and non-clinical risks are assessed separately, then the effect of the 'Affordability' heuristics is compounded. Take for example a set of clinical risks and a set of non-clinical risks, assuming that such a list could be meaningfully constructed. There is likely to be insufficient resources to cover all these risks. Both lists would thus be put into priority order. Say that on the clinical list only the top ten could be controlled because of the resources which the Trust has. At the same time the top ten non-clinical risks are similarly the only risks which the Trust has the resources to control. However, what if the number 11 non-clinical risk is identified as a greater risk than all the clinical risks below number six. It would mean that risks which have a lower priority would be controlled while risks of a higher priority are retained. The overall risk to the Trust is thus not optimally controlled with the available resources. Risk analysis of a risk is meaningless if it is carried out in isolation from the other risks facing the organisation.

Risks are potentially as many as the imagination can conceive, yet risk control measure have a resource implication and resources are finite. The development and testing out with colleagues of the conceptual model of risk developed in Chapter 2 resulted in the production of a risk assessment form which was meant to ensure that risk assessments would be more thoroughly carried out than had been the case originally and this would help to counter the dangers produced by the application of heuristics

The research showed how the 'Availability' heuristic and the 'Affordability' heuristic tended to distort the order in which risks should be managed. Risks which are referred to the Risk Management Team now have to be rated against the three elements of risk: likelihood, consequences and prodromal visibility using a risk prioritisation tool (see Appendix 6.30 - 6.31) The purpose of this is to ensure that lead clinicians and managers had to stop and think about the basis on which they had decided the priority of risks.

The tool requires the person prioritising a risk to consider the three key components of a risk as defined in this research: likelihood, seriousness and prodromal visibility. However, because the amount of losses due to risks vary along two dimension frequency and seriousness these values have to be combined to give an overall loss score. In addition the degree of prodromal visibility indicates the likelihood of these losses being preventable before the loss is experienced and thus also needs to be combined with the product of the other two dimensions in order to give an overall risk score for prioritisation.

However, the overall risk prioritisation score needs to be based on combining the score of low likelihood but high seriousness risks with those of high likelihood but low seriousness risks. For example, risk of losses due to fire, if only assessed by considering the frequent small fires without considering the rare but devastating fire

would give a lower priority than the risk properly deserves. On the other hand if only the rare high loss event of robbery of the cashiers department was considered the risk associated with theft would not be given the correct priority because we would not have considered the small but frequent theft of small items which could be resulting in losses far in access of any raid on the cashiers department.

The purpose of this tool is not to turn what is in reality a complex assessment into a simple number which will be the sole determinant of the risk priorities. The purpose is to structure the discussion and to clarify on what basis the assessment has been made so that when the risk assessment, together with all its subtleties and value judgements, is presented to the Risk Management Team we can systematically debate the nature of the risk and come to a consensus that all the key aspects of the risk have been properly explored and considered.

Using this approach tended to put the brake on heuristic decision making because no longer could one aspect a risk be considered in isolation from other aspects of risks. Where there is uncertainty, or where heuristics are being used inappropriately, these become apparent in the discussion. The questions in the prioritisation tool help to highlight the basis on which the risk assessment has been made and in a manner which can be examined by colleagues in terms of the evidence base of the arguments being presented.

In some instances getting the right balance between improving risk control, quality and performance is easy when the risk control also improves quality and performance and has no impact outside of the risk which is being controlled. However, sometimes risk control has to be traded against quality and performance. This decision is properly the responsibility of lead managers and lead clinicians and not the risk manager. The risk managers role in this case is to help these people make an

informed decisions based on an expert understanding of the nature of the risks and risk control measures involved.

At the end of the day the final decision has to lie with the manager who has legal responsibility for quality, performance, cost and risk and this duty is now enshrined in statue for both clinical and non-clinical activity with the Chief Executive and the Trust Board.

Because all significant risks, clinical, organisational and financial, are now assessed alongside each other it is vital that there is a good representation of the key risk management perspectives across the Trust. The Risk Manager Chairs the meeting and is the overall risk management system coordinator. The Executive Medical Director provides a direct link to the Clinical Governance Committee and its clinical perspective

Having experienced problems with communicating risk management decisions and rationale to the General Managers, when lead managers were represented on the Risk Management Team by more junior managers, Version 4 of the policy made it mandatory that General Managers, for each of the key service divisions of the Trust, attended in person. Though there was some reluctance to accept this because they felt that they should be able to rely on the person that they had delegated the role to, they also accepted that when compared to the previous situation the presence of General Managers on the Risk Management Team resulted in:

- Much stronger representation of the needs and problems faced by the service area in achieving risk management controls.

- Much more balanced arguments between specialist risk managers and service managers.

- Better commitment to implement the recommendations of the risk management team because the General Manager had been party to the discussions and understood the detail of why the conclusion was made.

- Much faster implementation of decisions made by the Risk Management Team.

- Better prioritisation of risks.

- Less attempts to use the Risk Management Team as an alternative to the general management decision making system.

Because of these findings, each of the four General Managers of the Trust are now core members of the Risk Management Team. In addition the rest of the core Risk Management Team members include:

The Corporate Affairs Manager representing the Complaint, Claims & Litigation function of the Trust and is also responsible for corporate policies and procedures. The Corporate Affairs Manager helps to identify and understanding trends in complaints and litigation and also helps to identify the hot spot areas of the Trust which need extra general management attention. Extra legal support is provided by the attendance of the Trust's solicitors.

Because health and safety has a wide remit for all manner of non-clinical risks the Health and Safety Manager is also a core member. She also helps to identify trends and hot spots being identified through the incident reporting system.

The Risk Management Team also has a management accountant and internal auditor who provide the financial control perspective. Human resources are represented by the Human Resources Manager and there is a lead nurse representing nursing and non medical issues. In addition, because the Trust has a large research portfolio, with all the attendant risks, there is a university research liaison officer.

In addition the heads of Specialist Risk Management Teams receive all of the papers and action plans of the Risk Management Team and have the right to attend any Risk Management Team meeting if they feel their specialist knowledge can contribute to the risk management discussion. These specialist teams also provide a six-monthly reports to the Risk Management Team on the control status of risks within their specialist area.

In addition, individuals, lead clinicians and managers can raise risk management areas of concern with the Risk Management Team according to set criteria (see Appendix 6.14)

The importance of these criteria was discussed earlier in the research when we found that the existence of the Risk Management Team provided an alternative route for getting resources by labelling their requirements as a risk management issue. Although the Risk Management Team did not want to discourage people with genuine risk management concerns from raising them with the Risk Management Team, neither did they want to create an alternative funding route to the budget setting and prioritisation process which is rightly the responsibility of the general

management arrangements. Once the criteria were introduced the number of requests were also reduced. Of those that were submitted they were first checked against the criteria before being added to the risk to be managed by the Risk Management Team. The presence of the General Managers on the Risk Management Team further strengthened this process.

The Risk Management Team operates on behalf of the Trust Board in order to support the Board discharge its obligations for Controls Assurance under the requirements of Corporate Governance. It reports to the full Trust Board twice a year and to a subgroup of the Board, Trust Board Risk Management Steering Group, every quarter.

7.5.6 Reflections on the role of the Risk Management Steering Group within the risk management system.

The overall responsibility for risk management lies with the Chief Executive and the Trust Board which co-ordinates its responsibilities through its Risk Management Steering Group. The members of the Trust Board Risk Management Steering Group are:

- Chief Executive
- Director of Finance
- Executive Medical Director
- Risk Manager

More recently a non-executive director has been added to ensure that there is a non-executive perspective on the risk management decisions made on behalf of the Trust Board.

This group receives 'Highlight Reports' (see Appendix 6.28) of how well significant risks are being controlled across the Trust as a whole and is able to help prioritise action sensitive to the balance of overall clinical, organisational and financial needs and circumstances faced by the Trust as a whole. They can bring resources to resolve unacceptably high risks faced by the Trust and can directly monitor how well risks are being managed on the Trust Board's behalf by its lead clinicians and operational manager.

Because within Salford Royal Hospitals clinical, organisational and financial risk management are integrated, the Board level responsibility for Controls Assurance is taken by the Chief Executive personally with Board level responsibility for clinical governance being taken by the Executive Medical Director and Board level responsibility for financial controls being with the Director of Finance.

7.6 Conclusions

In order to assure high quality risk management decisions and ensure its implementation the risk management system must complement the general management system of the Trust and be able to exploit the strengths of people and the heuristics which they use while mitigating their inherent weaknesses. Although the research was focussed on improving risk management in a particular hospital the research has revealed a number of key findings generalisable to other risk management settings.

The first general conclusion is that the definition of risk, which includes the concept of prodromal visibility, is a strong and more useful definition of risk which allows for statistical concepts to be used if the data is available but

also is useful in the more common case where statistical data is not readily available.

The second is the finding that when making decisions people do not generally use programmed or non-programmed problem solving approaches but neither do they guess. As Kahnerman suggested they use heuristics. This research found that heuristics seem to be of two general types B-heuristics and E-heurisitcs. Examples of B-heuristic are those which can be summarised within as a single simple sentence of which the 'Availabilty', 'Commitment', 'Affordability' and 'Personal Consequence' heuristics are examples. E-heuristic appear to be more complex and cannot be summarised within a single sentence, they include rules of thumb combined into related lists of things to do or principles to consider, examples include the 'Expert Check-list' and 'Seed' heuristic.

A key characteristic of heuristics is that they seem to work well most of the time and require little mental effort and thus little thinking time. Their disadvantage is that they tend to be applied more widely than the decision field in which they are effective and lead to inappropriate conclusions. What was also demonstrated was that soft-systems can be designed in such a way as to mitigate the worst effects of these heuristics by creating a system of decision making balances as exemplified by the Trust's risk management system.

References

1 *The Cadbury Code.* (1992) in HSC 1999/123

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Chapter 8

Reflections on Action Learning and the research approach

8.1 Introduction

My dominant feeling, at the start of this research, was one of uncertainty as to the best way to understand the nature of health care risk and how to manage it. I was already having to make risk management decisions and was implementing the first version of the Trust's risk management system. I was very aware of how little I knew about risk management even though I was very experienced in quality management. The motivation to learn was thus very strong but when I turned to text books and the literature the answers given only partly helped. If I was going to learn how to manage risks well I really had no alternative but to learn from experience.

When I discovered Action Learning it became clear to me that my feelings were common to many managers who also have to deal with a complex world without a clear consensus as to what is the best way to manage. Many managers have used the Action Learning approach to develop their skills, to solve real world problems and to develop new knowledge. This learning is then offered to others in the hope that any personal insights, gained by experience, might help others to deal with similar management problems.

In the earlier chapters I have shared my experience and insights into the management problem area of risk and its management. In this chapter I will share my reflections on the experience of Action Learning itself in the hope that users of Action Learning might find something in my experience which it of use to their own approach to learning and research.

These reflections will also include the views of my Action Learning Set colleagues

who in December, 1998 decided that our learning set had run its course and as a final act decided to reflect on our experiences and to document the discussion (Appendix 7)

My colleagues felt that we were all close to completing our research and for most of us the writing up stage was going to be the main activity over the next twelve months. This was not true for me, I was still being bombarded with more experiences which was still either developing or confirming my research findings. I was also writing up my research in parallel to doing the research and the last date that I used literature and real world experience to inform my research process was at the end of July, 2000, after this I concentrated on writing the thesis in a form which would help communicate my experience, learning and research conclusions to others.

However, I was happy to let the set end in December, 1998 as my learning set colleagues wanted, because my colleagues on the Risk Management Team were continuing to provide the questioning and reflection which I needed and which it had provided from the beginning. My set had also reduced to three from the five since it started in October, 1995. Those three final members of the set were me, Hazel and Gerald.

8.2 Reflections on the early days

We had all entered the Action Learning process as individuals with our own agenda. We also all had different experiences and expectations of the process.

Gerald wanted an easier route to get a PhD

'...Action Learning was an easier route to getting a PhD...' (Gerald)

Hazel's focus was on personal development.

> 'I'd experienced Action Learning and found that to be such a powerful personal development that I wanted to continue, so I almost thought that this PhD was a continuation of what I had done at Masters' level. (in terms of my own personal development,) and the research came somewhere in there...' (Hazel)

While my focus was on the problem situation which I was dealing with and I was looking for a research methodology which would help me solve the management problem I was facing. I thought that Action Learning would help me identify an appropriate research method, at the time I had not appreciated that Action Learning itself could be the research approach.

Our facilitated discussions, led by the set facilitators David and John, I found stimulating and challenging. There were moments when the questioning and discussions drifted about and did not seem to be heading anywhere. At times individual members of the group dominated the discussions and made the atmosphere rather strained. However, I accepted this as part of the learning process.

From the way the discussions were developing there appeared to be a task focussed group and a personal development focussed group. Rather than the group seeing Action Learning as a process for achieving both there developed a split between the task orientated and the person orientated sub groups. The effect was to increase tension within the group as both factions were dissatisfied with the way the group was functioning because it seemed neither to be helping with the task nor helping with personal development.

Unfortunately, no one realised what was happening at the time as we were all too deeply involved in the process and our faction. Non of us noticed what was happening to the group before it was too late. I was clearly task orientated and thought that the personal development aspect which some people wanted was just 'therapy' to help them feel good. I was not worried about whether my experience felt good as long as I learnt to deal with the problems which I was trying to manage.

These differing expectations and understanding of the process of Action Learning led to significant conflicts within the group and was probably the cause of the loss of two of our members.

Gerald seemed to be task orientated and was looking for people to share this with him through the offering the challenging questions and insights. When this did not happen to his satisfaction he felt that some members of the set were not genuine.

> 'I found that as a group we were all expecting something different in terms of how much we were going to have to do with each other, and so my background in Action Learning meant you shared everything with your Action Learning Set where as I think other people's background said 'No, we're not too sure that Action Learning Sets do, but one thing we're sure about is we don't want to share that, and my feeling was that in the early days it was almost a Tutorial as against an Action Learning Set.' (Gerald)

My view was that the early lack of sharing by some members of the group was not an unwillingness to share but a lack of confidence and skills to do that sharing effectively:

> 'I didn't think we did not wish to help each other. I thought that helping others helped me to clarify my position, to move on with my research. I never got that sense that we were not trying to do that. I got a sense of a clumsiness in doing that.' (Henry)

In an attempt to overcome the problems, which the set was experiencing, we tried to agree some rules of conduct:

> 'In the early days, I think because we all felt so uncomfortable, we tried to establish some ground rules, for example, we would all have 20 minutes. That didn't happen. I think we did not "gel" because, one of the reasons, we didn't have a common aim. I think in the first year, the group didn't have a common aim. I don't think we were comrades. I don't think we saw any similarities in our adversity. We didn't see any advantage in helping somebody else we didn't see how that could benefit us.' (Gerald)

Those ground rules included the rule that we would give each member of the group a protected time in which they could use the group to share their work and to gain from

the whole group's undivided attention. Though we all agreed with this and went through the motions for a number of set meetings, the rules made interaction in the group artificial and stiff. Dissatisfied with the way the Action Learning set was functioning Gerald and Hazel formed themselves into an action learning pair which functioned for a time outside of the set itself.

> 'At one time I think that we were perhaps a learning pair as opposed to a learning set. At one time you were using your other resources heavily, the other two were fairly isolated and I'm thinking about the conversion from MIPhil!PhD. Suddenly there was 'them' and 'us' and a lot of hostility around. You and I, Hazel, we were talking, were bouncing ideas off each other a lot. And all of us, because we're adults because we have a network, and that network includes people we trust, we all dip into our own networks as well.' (Gerald)

Hazel wondered whether a group of five was too big but Gerald made some important observations:

> 'In some ways, it's more difficult not to participate in a smaller group -far fewer hiding places. But the point you made, Henry, about the group at the interim's is significant because I don't think we were a group. One of the definitions of a group is "psychologically aware of each other" which we weren't. Another is, if you believe you're a group, you're a group. We didn't. We were paired, or a triad and a couple of isolates. Yes, I felt I was a member of this Action Learning set but it was only a title, it didn't have any real meaning. I wasn't psychologically aware of L, for example, I didn't know what she was doing, I didn't feel I had any input into what she was doing, or that she wanted me to have any. By the time we got to 3, we were much more focused on the task, because groups don't work well when the task is vague. By that time, we had all invested a lot of time, and became prepared to trade with each other. The question should be whether the group should have been formed in a different manner. Whether someone should have said, 'This is a bit about groups. We're going to get to know each other first before we start.' We never did.' (Gerald)

Hazel offered a number of solutions which might have helped us avoid the problems we faced as a group and which might be helpful general principles:

> 'Would you not expect anyone doing research at the "Revans Centre" to have read around Revans and Action Learning before they came? Perhaps, also, then a facilitator capable of influencing group dynamics and help the group to mature, might have been appropriate, but in terms of Action Learning I would

have thought that they would have undertaken pre-reading.' (Hazel)

I agreed but thought that we should spend some time agreeing on the nature of what we were doing rather than expect by accident to discover what we were doing. However, Gerald disagreed:

> 'But Henry, don't you think some people don't want to be in a group, which is quite reasonable. Some people want to be told what to do. some people want to go down a positivist route or have a much more positivist attitude towards life. But if you come into an Action Learning set you should at least be prepared to work in a group. So it was a bit surprising when, 18 months into the thing, when one of our colleagues said 'I've never read anything by Revans.' It's such a big emotional commitment, it's so expensive in terms of time away from your family, just to sit at a keyboard. I think someone would say, 'I want to know what this is before I do it.' Yet 18 months, and one colleague still didn't know what it was.' (Gerald)

The difficulties in the group did not concern me very much because this was my first experience of Action Learning and as I did not know what to expect assumed that such conflict was part of the learning process. I was also getting my support and challenges from my colleagues on the Risk Management Team. This team felt much more like a learning set, as I thought Revans conceptualised one, because we were working, learning and developing together in the real world trying to solve a real problem of importance to us all. I was also very well supported and challenged by my research advisor Bryan who provided a powerful corrective to my tendency to focus narrowly on the problem situation which the Risk Management Team also tended to do. These factors protected me from the conflict within the group and made me treat the conflict as just another aspect of the learning experience.

However, the early conflict did produce casualties and many hours of what can only be described as psychologically supporting the injured. We also lost two members of our group at about the half-way point.

8.3 Learning through Action Learning

For me the key learning which I was after was to acquire the knowledge, skills and attitudes needed to effectively manage risks because this was the problem which I owned in the real world. I could not do that learning effectively in isolation. I had to learn with colleagues how to manage risks effectively within the Trust because to manage risk effectively we had to work effectively together.

I found Action Leaning a stressful experience. Not just because of the internal set problems detailed above but because there were no simple ways offered by which I could find the right solutions. On reflection I was looking for E-heuristics which I could memorise and then apply with minimum effort. Especially useful, I thought at the time, would have been an 'Expert Check-list' heuristics in which a powerful group of experts could provide me with the comfort of a list of things to do which I could then label as 'good and competent risk management'.

By the end of this research, such lists have been compiled by others. These heuristics are codified by experts within bodies such as the Clinical Negligence Scheme for Trusts, the Controls Assurance Team and the Health and Safety Executive as standards or lists of things which must be done. However, like all heuristics, sometimes these standards are helpful but not in every situation and, like heuristics, the attempt to implement them without regard to the particular circumstances extant at the time creates more problems than it solves. This was a key personal learning point for me, the fact that Action Learning did not attempt to give me a set of simple answers to the problem with which I was faced was its strength, not its weakness as I had first thought. The real world is more complex than we would like it to be.

Action Learning did not allow me to simply accept and apply this so called (P) programmed knowledge without (Q) questioning and reflecting on how appropriate these solution were to the real world problem at hand. Doing this is hard work and uncomfortable especially when my own fundamental heuristics were being exposed as not appropriate to managing the situation which faced me.

One of the earliest conflicts for me was the way I had separated learning from research as though research could be done without first learning taking place inside me the researcher.

> 'I confused Action Learning with Action Research and I assumed Action Research to be the heart of my research because it had to be done in the field of practical use immediately and so I saw the Action Learning element as being a support group, a group that could reflect aspects of Action Research on it and get the support of colleagues that that process whereas a conventional PhD route meant that I would have acted in isolation...' (Henry)

However, in spite of initial resistance on my part, the process of Action Learning moved my focus from achieving the task, doing the research, to a recognition that doing the research would inevitable require me to learn and that separating learning and research was unhelpful and artificial.

> 'I think it's fair to say Henry was driven by the research primarily .the tasks that you had to complete... (Hazel)

However, it was clear that others needed to adjust their balance from purely learning and self-development to the research task.

> ... and I've had to adjust considerably and had to become much more task-focused as the time has gone on.' (Hazel)

Within the learning set there was a sense in which (P) programmed knowledge was

given a back seat to the (Q) questioning of personal experiences. For me, in the same way that learning and research are artificially separated so was this tendency of my learning set to treat programmed knowledge as somehow inferior to reflective personal experience. The programmed knowledge which I gained through the Institute of Risk Management (IRM) course provided a solid platform on which to understand, question and reflect on my real world experiences. Reflection and questioning and testing the applicability of the learning in the real world, as required by Action Learning, would not allow me to passively accept what was the core of risk management knowledge. However, that core of knowledge helped me to understand, and more intelligently question my real world experiences in a way that I was unable to do until I started the programmed learning.

Programmed learning for me also provided a rich source of data about how people had tried to make sense of their particular experiences of risk management. Some of the thinking expressed in articles were clearly summaries of the author's own reflective experiences or descriptions of the considered opinions of others, for example, the legal profession's view of the nature of negligence.

An important aspect of my approach to programmed learning was that I focussed my formal programmed learning, the IRM course, on what I could learn about risk management outside of health care for two reasons. The first was that I wanted to know what was considered to be best practice from the most developed applications of risk management and this was mainly outside of health care. In this way I was able to consider leading edge practice, while still being forced to questions its relevance and applicability to the sector in which I was working. The second reason was that the latest knowledge of risk management in health care had not yet been converted into a formal course. The latest ideas did start to appear during the research period as health service guidelines and standards which I received directly from its sources as a NHS risk manager. In addition, a number of new journals dedicated to health care risk management had just been launched and I assumed that they would cover the latest state of knowledge on risk management related to health care. Programmed learning thus was a key component of my approach to Action

Learning and I feel my own learning would have been the poorer without it.

However, programmed learning without the questioning and reflection could easily become a sterile academic exercise of learning everything that could be found on the subject just in case it might become useful in the future. Action Learning made me focus my reading not simply in order to learn but in order to help inform my thinking and analysis of the real world of risk management with which I was confronted.

However, colleagues in my set were concerned that what was considered to be useful programmed knowledge in the practical real world situation might not always match the standards required of traditional academic research.

> 'What I've thought more and more is as the process has gone on is that what I'm interested in researching into has driven the way I've researched it, and I have a sneaky feeling if we'd gone down the more conventional route we would have said 'This is the conventional way that academics research this level. We would tailor and modify our research to fit into the methodology'... I can't plan exactly the right way to do it, in the methodology books, so I bring it to the Action Learning Set and say this, this and this everybody say no to this or yes to that, so suddenly we've got the core of the research driving the way we're researching it...personal learning and the task go very much hand in hand.' (Gerald)

I initially had a particular problem with my understanding of legitimate research and this was due to my introduction to research as part of my degree in psychology and the way that health care research is very dominated by positivism.

> 'It took quite a long time to... understand the Action Learning element of my work. One of the things I learnt was that Action Learning itself was a way of gaining knowledge...' (Henry)

Gerald also had a similar problem to me and which was caused by his own background in traditional management research:

> 'The set has said, 'if there's something that's not measurable, talk about it, learn about it, but if you can't measure it, it's still valid; If you can't prove it, it's still valid. And that's been tremendous. It's left me feeling very insecure

> because I now look back and say, 'I've done all this research, and it's been a lot of years, I can't prove it, measure it. I can't say x is better than y. I can just say' I did x, and that's what happened. That's a very significant thing to me. But you need a certain academic maturity I guess. It's quite uncomfortable at times but we've all seen it in each other that I ought to perhaps revert back to classical research methodology, just in case, because it's safer.' (Gerald)

An important role of the learning set, for me, was that it provided a group of other people who were able to confirm to me that Action Learning was a legitimate research process even if it did not necessarily conform to the conventional view of research. The set thus helped me to break out of the constraints imposed by my traditional research training and allowed me to use a much more flexible approach. I found this not only helped me to research the topic of importance to me but also allowed me to generate new knowledge which other approaches to research could not have done.

Hazel pointed out another key role for the set and that was that it could act as sounding board in order to know when reflection needed to be balanced by experience in the real world.

> 'But I think what we've done is to look at the complexity of the reality. Once we started to look at the various facets and then start to think about our personal perceptions influencing these it then became very difficult to try to analyse what was happening with any clarity, certainty, consistency and coherence. So, if you're not careful, you can get stalled and I think this is where the set is so valuable because it stops us getting lost in those labyrinths of reflection.' (Hazel)

As well as personal learning, Action Learning results in wider learning than that which occurs within the learning set members. This wider learning occurs because of the way that the learning set members have to interact with the real world which they are acting upon during the research process. The learning set thus has an informal set of members - those who are caught up in the change processes and in my particular case that was particularly evident in the learning gained by the Trust's Risk Management Team. Not only did I learn from this Action Learning process but

so did my whole team at the Trust.

8.4 Researching through Action Learning

In Chapter 3 I explored the nature of the phenomena which I wanted to research and concluded that risk and risk management was essentially a human phenomenon which was complex and not reducible to a simple set of cause and effect relationships which were amenable to experimentation.

I was the key agent of change in the task of creating an effective risk management system and in many ways that system reflects my own understanding of risk and what it means to effectively manage it. This created a problem and an opportunity. The problem is that my descriptions and interpretations of the phenomenon under study have been perceived and understood within my mind first before being shared with others and thus I cannot claim any real objectivity. However, there are clearly many respected academics who doubt the existence of objectivity in research. What ever is the case, I started with a belief that research could be done in an objective way. Having gone through five years of Action Learning I no longer believe that is possible with risk management research.

I had to accept that I was the key change agent in the management of risk and I was the person who was making judgements about what was effective and what was ineffective risk management. I was defining risk in a way that made sense of the particular problem situation with which I was faced. I was the only person who had access to my own thoughts and learning and had to decide which experiences to share others and which not to.

However, the Action Learning process was not just a way of allowing me to present my personal view of the world. The process was about changing the problem

situation in which I found myself. I could not do this in isolation from other people. I had to explain what I was doing and why I was doing it, if it did not make sense to them, then no change would take place. Changing the world in the direction I wanted it to go was also a demonstration of how well I understood the nature of that world. It was a powerful way of validating the knowledge generated by my research. I also had to explain and review what I was doing with my Action Learning set. They were not directly involved and thus could provide impartial observations on what I was doing and the reasonableness of my explanations. When the set worked well it was powerful in challenging assumptions, improving clarity of thinking and providing motivation and encouragement to complete the research.

> 'I found that the Action Learning Set, when it worked was tremendously powerful. I could bring questions in and say what do you think of this? and when it worked it worked very well and I went out with a great deal of clarity and I felt good about what had gone on. It didn't always work of course, but I was conscious of the fact that as I think for myself and I suspect for you two as well you would have found it far more difficult to do the research you wanted to do' (Gerald)

> 'I don't think it would have been possible for me to explore the areas that I've explored following a conventional route. One thing I didn't want were doors closing. So I found that the freedom offered of this approach has been extremely beneficial. Now as the day of judgement approaches I'm a little bit worried that that freedom might have been not necessarily so advantageous but that's probably just the stage that I'm at.' (Hazel)

The systems which I developed and the way I managed risks was also subject to inspections, audits and reviews by numerous expert groups such as the Health and Safety Executive, Internal Audit, Clinical Negligence Scheme for Trusts and the Controls Assurance Team. I have also presented my experience and thoughts for the reader of this thesis to judge in the light of their own knowledge and experience.

Reflecting on my experience of this research process made me realise that the Action Learning set was important but not sufficient in making Action Learning an effective

research process.

> 'I must admit I found the set didn't actually do what I expected with the research and that once I understood a lot more about Action Learning and that the set was meant to be a group of people in adversity learning together. I expected the Set to help, challenge and provide some sort of verification of the learning that was taking place in the research I was doing. That didn't work out because the place that I managed to find that was with the other people I was working with the other "set", who were actually doing the risk management with the trust, and that was where the learning, the verification, the development of new ideas, and so on, actually took place, and that was that I was expecting the Set to do, but that didn't work. But what the Set did was to give me more of the Meta analysis of the overall approach that I was doing. In effect there were two sets of Sets. There was a Set of sets at work dealing with various aspects of risk management, comrades in adversity trying to get the Trust to develop a way of managing this and we learned together what risk management was. We learnt what worked, and the standard nature of the reality, what we could do, and couldn't do, and set up conceptual models of that, and so on. But what they couldn't do was to check that the learning, the approach, the philosophical basis, was right. And that's what I found the Set was useful for.' (Henry)

The Action Learning set was not Action Learning, it was just one forum in which some learning took place but it was not the only forum for sharing real experiences. Challenging, questioning and reflecting with colleagues who were learning with me outside of the learning set was also a key component of Action Learning. Although the learning set provided some input into this research, it was not the key player. The key players were outside of the set.

Of particular importance were my work colleagues who were struggling, from their own perspectives, on how to manage risks within the same problem area as I was. They were closer to the real world which I was experiencing than were members of the Action Learning set and were able to offer powerful insights, less naive and more challenging questions than those I experience from the learning set.

However, I cannot say that the learning set did not play an important role in the

research. There was a strength in the way that my set used naive questions. These types of questions could be very powerful in helping to clarify assumptions and conclusions which I had made without sufficient thought and clarity. It was a conclusion which Hazel also held.

> 'I found that as the research developed that my research has been more rigorous than probably it would have been, had it gone down a conventional route, because I felt it necessary to justify what I was doing. Perhaps because of the fear that it may be not conform to what I had in mind. So, I found that I thought much deeper about what I was doing than I would have done otherwise. Because I think if I had a prescription, a Proforma that I was just going to follow, I would never have even considered any other option. Or even the most powerful thing I think about the Set is that, the ability of somebody just to ask a very simple question so simple, so basic, that I'd never even considered it. That is the most challenging part of following research in this way. (Hazel)

8.5 Personal development through Action Learning

In the early days of Action Learning I considered the personal development aspect of Action Learning was for some members of my set really 'therapy'. However, Action Learning has changed me in ways which I did not expect or planned for. Even though my focus was on the task, trying to find a solution to my problem of risk management, rather than self-development, there has also been a deeper understanding of myself and my values than I previously had. Never-the-less I still...

> '...find it difficult to separate intellectual and personal development. I don't think the two can be separated, so I have to combine the two. I'm not sure, in a 3 year process, has changed me in a way that I'm more.... I've got a better understanding of the nature of the reality of which I'm developing: I'm developing skills and competence in that. I'm not sure of how it has changed me as a person, as a human being, and I'm not sure that I would have expected it to have done very much of that because I don't think I've changed because my reality has not changed in any way. I'm still married, I've still got the same sorts of problems, the same level of confidence, same sorts of ambitions, same sorts of comfort with myself, I didn't come thinking I was not coping in some areas, or tensions. Some aspect of my personality has changed so that I'm better off in that sense. If you combine that with my ability to think around

things, which is still part of me, I think I'm better able to think about things and I'm more sensitive about other people. I think I couldn't say it's just this Set, because of the rest of the sets I've been working with at work. But being in a situation where I've had to drive things through and deal with crises, and so on, that that ability to reflect that I am more sensitive. I have noticed I think much more carefully.' (Henry)

'From my experience, I no longer feel that the classical way of doing things is rigorous, is reliable, is really replicable, because I think that the things we're dealing with can't be dealt with in that way. It's a myth that's been created within academia that there's such a thing as absolutely, rigorous, valid proof for anything and I think that having had this experience that I've lost any belief in that even though I was searching for it at the beginning. I think there's degrees of understanding which further our knowledge. There are lessons to be learned and I'm not sure that there's anything we can record as truth in its absolute sense.' (Henry)

Interestingly, Hazel who had been so keen on achieving personal development from Action Learning was not very positive about its effect on her.

'What has been impressed upon me is how little I actually know, and how little I'm capable of I don't know whether that's personal development, or personal regression.' (Hazel)

For Gerald the impact of two significant life events outside of Action Learning made the biggest impact on his personal development:

'It's very difficult for me because two significant things have happened which have nothing to do with this process. I don't know how much those two significant events have impacted upon me, or how much is the learning. Becoming a parent and becoming disabled have been two significant factors. Now I am different to what I was 3 years ago ... I'm much more mellow than I was 3 years ago. I would never research this subject under a conventional environment, that's why I'm so pro-the Revans Centre.' (Gerald)

Hazel challenged us with the question:

'So, how would we sell 'personal development'? Would we actually sell 'personal development'? (Hazel)

I was clear that having gone through the process of Action Learning it was not a

particularly good means of personal development if that meant development outside of skill and intellectual development.

> 'I wouldn't. I think it's probably over sold, that some people come to Action Learning for personal development per se. I came into it as a means of helping me, with personal development a part of that. It was more than about personal development -about developing new vision, new skills, new ways of working. Some people say Action Learning has made them a better person. I must admit that I did psychiatry many years ago, so I've done all my personal development, had all my deep insights many years ago. I've got very good insights into what I'm like. I've got the badge! As part of a package, that's fine but it shouldn't be over-sold.' (Henry)

Gerald also did not think of Action Learning as a way of personal development, in the sense of gaining insights into a person's psychological make-up in order to grow as a person.

> 'I don't think of it as being therapy, or feel a more whole human being, or anything like that, I think the Action Learning element of it has said you can apply this idea of living and sharing and discussing with other people who are interested, and not just to look at risk analysis or O/D, it may be quite a useful way of understanding the world in a whole range of things. Now I think that's what Action Learning is about not about making great friendships, or bonding.' (Gerald)

Hazel agreed with us that Action Learning was not a therapy and felt that our two colleagues who had left were looking for that:

> 'I'm glad you both mentioned "therapy" because I think that was one issue connected with our other two colleagues who may have been using the research for personal therapy perhaps, and that governed their interaction within the set. It's quite interesting that, although Action Learning is sometimes perceived by some as being therapeutic, our two colleagues were not receiving therapy from our set. Indeed, I did not feel, they were able to 'engage' with us.' (Hazel)

I was not as convinced:

> 'I'm not sure about that, I didn't get a sense that they wanted therapy. To me, they wanted a lot of guidance and direction of professional research, and support. I don't feel we managed to do that for them. It was quite a shock when they didn't progress with us through the interims. We hadn't really explored

their work alongside our own at that stage. I don't think we had formed a group that felt comfortable with supporting each other. In hindsight, if we had been a more together Set, they may not have failed their interims.' (Henry)

Gerald disagreed with me. He felt it was their own fault not the group's and that there had only every really been a group of three not a group of five:

'I think I'd like to put a counter argument. Looking back, when we came to the interim's (about 24 months into the process) I did not know what the other two were doing. Now, is that my failing because I did not know what they were doing or theirs? It seemed to me, one of them did not want support from the group. In fact, she said: "I don't want support from this group. I can get support from my family.' It was only after that the groups dynamics changed. There were three of us, not five. We were all pleased to get rid of the "aggro" / the "baggage" so we could do our work. There was never a feeling of shared interest, even at an academic level.' (Gerald)

I had never felt that, to me the group of five had not worked well because we had not been sensitive enough to each other's needs and instead of exploring issues we broke up into sub groups in order to feel more comfortable.

'I agree with that there wasn't any clarity of the work. But somehow that was what the group should be about. I was happily doing my work. And I must admit, when someone was a bit vague, I didn't really know what sort of questions to ask to make it clear. But I think if the group had been 'right', if there is such a thing, we should have been able to say, 'What are you trying to get at here?' But the group hadn't "gelled" at that stage .I wouldn't have felt comfortable. I would have felt I was attacking, insensitive. I didn't feel that at that stage it would not have been taken as being helpful. and I think that was part of that problem.' (Henry)

For me this was further evidence that Action Learning had not changed us into different people than we were before. Our experience seemed to conclude that personal development meant we had increased our knowledge and skills within our chosen fields but we had not become better or worse people than we were at the beginning of the process.

8.6 Conclusion

Although we all concluded that Action Learning had not changed us as people, it may well have done so but in a way we were unable to recognise. What is certain, is that it had developed our knowledge and skills in the particular field we had chosen to research.

I have had my knowledge of research broadened and I have learnt the latest ideas in the field of risk management. I have been able to test these concepts in the real world and developed new insights and knowledge as a result.

I also learnt how to share my learning with other people and of the value of both reflection and questioning with colleagues in the field and with colleagues within my learning set.

Action Learning was also a powerful way to do research. It provides for a flexibility in the use of tools and techniques which few other approaches allow. I found describing the systems I was studying using the idea of soft systems particularly useful but I did not use it slavishly. I used it to help me learn and generate new knowledge.

When I started this research I described the field as one of ill defined complexity. After going through the process of Action Learning I can now describe it in detail and it has now become a field of well defined complexity.

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Heuristics and Soft Systems of Health Care Risk Management

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Volume 2

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Appendix 1

Glossary of Terms

Agent: The performer of actions such as people, professions, organisations etc.

Agents Perspective: Perceptions from the performer of actions (people, professions, organisations etc) point of view.

Acceptable Risk: '...a risk, perhaps in the region of 1 in a million of a seriously adverse occurrence, where the conduct of life is not affected provided that we are in fact satisfied that reasonable precautions are in place.' (Health and Safety Executive)

Action Learning Set: A group of people who over a period of time come together to help each other in the Action Learning process.

Acting Responsibly: Meeting one's obligations through rational action, taking into account the needs and context of the situation in which that person finds themselves.

Affordability Heuristic: A rule of thumb which states that if there is no budget for a risk control measure then nothing can be done to control that risk.

Anchoring Heuristics: A rule of thumb which states that once a perceived risk has estimated then the likelihood of the event does not change in spite of the evidence.

Assessed Risk: An estimation of risk made by an expert group.

Availability Heuristic: A rule of thumb which states that if an item is easily brought to mind then it must be important.

B-heuristic: Basic rules of thumb which can be summarised as single simple sentence.

BATNEEC Principle: Is the principle used by risk managers to determine the level of risk control expenditure and stands for: 'Best available technique not entailing excessive cost'.(Health and Safety Executive)

Check List Heuristic: A rule of thumb used by experts which states that a specific set of control measures must be used to effectively manage risks.

Claim: A demand for compensation for damages due to alleged negligence

Claims Management: The process of handling demands for compensation for damages due to alleged negligence.

Clinical Governance: 'a framework through which NHS organisations are accountable for continuously improving the quality of their services and safeguarding high standards of care by creating an environment in which excellence in clinical care will flourish.' (HSC1999/065).

Clinical Negligence: 'A breach of duty of care by members of the health care professions employed by NHS bodies or by others consequent on decisions or judgements made by members of those professions action in their professional capacity in the course of their employment, and which are admitted as negligent by the employer or are determined as such through the legal process' (Department of Health)

Commitment Heuristic: A rule of thumb which states that once a solution has started to be implemented it must be continued even if the feedback suggests that the solution is the wrong one or that there are better ones.

Confirmation Heuristic: A rule of thumb which states that valid information about a problem is that which confirms that the original solution is correct.

Controls Assurance: The process by which NHS organisations demonstrate that they are doing their "reasonable best" in managing themselves to achieve their objectives while at the same time controlling risks.

Consumer: The users of the products and services provided by an agents.

Consumer Perspective: Perceptions from the users point of view.

Corporate Governance: is the system by which an organisation provided with direction in order to ensure that it fulfils its function in an economic and efficient manner while at the same time ensuring there is effective management of risks it is facing.

Corporate Risk Management: Organisation wide management of risk.

Corporate Manager: The person with managerial authority and responsibility for a specific Trust wide function (Customer relations, capital development etc) or system (Contracting, risk management etc)

Crown Immunity: A state service free from the threat of prosecution.

Defensive Activity: Actions and procedures taken to protect the agent from criticism rather than for the benefit of the consumer.

Defensive Medicine: '...ordering of treatments, tests and procedures for the purpose of protecting the doctor from criticism rather than diagnosing or treating the patient...' (McQuade)

Dilution of responsibility: A feeling of reduced personal responsibility by being a member of a group.

Disaster Management: The process of dealing with a disaster in which attempts are made to mitigate the effects of the disaster and control additional risks occasioned by the disaster.

E-heuristic: Extended rules of thumb which can be summarised as related list of simple sentences.

External Risk Control Body: A formal organisation which has the remit to ensure that adequate risk control measures are being practised within another organisation.

External Audit: A body external to the Trust which provides independent services for examining and checking compliance with standards.

Financial Controls: The mechanisms by which an health care organisation controls all risks of a financial nature.

Groupthink: The effect on decision because of groups search for consensus which results in suppression of disagreement, incomplete analysis, excessive confidence, dilution of responsibility and risky sift.

Guessing: A process by which a solution is arrived at without assessing the nature of the problem.

Hazard: Something which has the potential to cause harm.

Heuristic: A simple rule of thumb which people use to help them come to a conclusion in a relatively quick and easy way, they provide answers as to what is going on and how to react to what is going on without the need to guess nor analyse the issues being faced.

Heuristic Decision Making: A process by which a set solution is applied to all problems which present with a particular set of common features.

Incidents: Events which resulted in harm or loss

Internal Audit: A body employed by the Trust which provides independent services for examining and checking compliance with standards.

Lead Clinician: The clinician with managerial authority and responsibility for a specific clinical functional area (division, directorate, department or ward) or specialty (diabetes, orthopaedics, etc) of the Trust.

Lead Manager: The person with managerial authority and responsibility for a specific functional area (division, directorate, department or ward) of the Trust.

Minimum Effort heuristic: A rule of thumb which states that the easiest way forward should be done before the more difficult way forward no matter what the risk priority.

Negligible Risk: 'Refers to a level of risk, usually presumed to be below 1 in a million per annum and perhaps much lower, of seriously adverse consequences occurring, where no thought is given to their likelihood in the conduct of normal life, though precaution (as against lightning) may have been taken as a prudential measure and will almost certainly be taken in case of peril.' (Health and Safety Executive)

Non-programmed Decision Making: Unstructured process for assessing a problem and finding a solution.

Norms: The accepted behaviours of a specific group of people.

Near Miss: Events which if the circumstances had been right would have led to a serious incident. (Capstick)

NCEPOD: National Confidential Enquiry into Perioperative Deaths

Organisational Controls: The mechanisms by which an health care organisation all controls all risks with the exception of specifically clinical or financial.

Operational Management: Management of the day to day activity of the organisation so as to ensure it delivers the services and products required.

Organisational Culture: The ideas, norms, values and skills held by an organisation.

Over-confidence Heuristic: A rule of thumb which states that once a solution appears to be found there are no other solutions worth looking for.

Perceived Risk: An estimation of risk based on a non expert judgement.

Personal Consequence Heuristic: A rule of thumb which states that personal consequences of a risk take priority over all other priority criteria.

Precautionary Principle: '...where the analytical basis for assessment or risk is weak, the lack of full scientific certainty should not be used as a reason for postponing cost effective measures particularly where there are threats of serious or irreversible damange.' (Health and Safety Executive)

Programmed Decision Making: A clearly structured, repetitive, processes for assessing a problem and finding its solution.

Programmed Learning: A relatively permanent change in behaviour, knowledge, skills or attitude brought about by a clearly structured set of processes, with a clearly defined educational or training content and with specified levels of achievement.

Prodromal Visibility: The degree to which a particular risk gives early enough warning of the potential consequences so as to enable them to be mitigated at the last moment.

Pure Risk: The product of the likelihood of an event, together with its prodromal visibility and potential consequences which can only result in loss.

Representative Heuristic: A rule of thumb which states that if a problem belongs to a particular group then the same solution applies to all problems in that group.

RIDDOR: The health and safety regulations concerned with the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations.

Risk: The product of the likelihood of an event, together with its prodromal visibility and potential consequences as perceived through the perspective of a particular consumer or agent.

Risk Analysis: The estimation of the product of the likelihood of an events, together with its prodromal visibility and potential consequences.

Risk Assessment: The identification of probable causes of a risk and what risk control measures should be taken.

Risk Control: Are the measures available for mitigating a particular risk and includes the options of actions pre and post a risk becoming an event, transferring the risk to others and retaining the risk.

Risk Management: The culture, processes and structures that are directed towards the effective management of potential opportunities and adverse effects. (Australia/New Zealand Standard 4360:1999 Risk management.)

Risk Management Seed Heuristic: The rule of thumb which states that a set of key risk management principles should be used in determining what the appropriate risk control measure is.

Risky Shift: An increase or decrease in the amount of risk which will be taken when decisions are made in a group compared to those made as an individual.

Responsibly: Meeting one's obligations through rational action, taking into account the needs and context of the situation in which that person finds themselves.

Serious Incidents: Are events resulting in harm which are likely to lead to large claims for damages. (Capstick)

Speculative Risk: The product of the likelihood of an event, together with its prodromal visibility and potential consequences which could result in an overall gain or an overall loss.

Subjective Risk: ' ... the uncertainty of an event as seen or perceived by an individual. (Gordon)

Subjective Probability Estimates: The perceived likelihood of an event in which low risks are generally over-estimated and high risks are generally under-estimated.

Tolerable Risk: '...a range of risk that we do not regard as negligible or as something we might ignore, but rather as something we need to keep under review and reduce it still further if and as when we can.'(Health and Safety Executive)

Trust: A health care organisation given extensive rights to manage itself on behalf of the National Health Service

Unacceptable Risk: ...' a risk which is beyond (above the region of tolerability and unless there are special reasons a risk regulator will demand control to bring the risk below this level, or will refuse the activity.' (Health and Safety Executive)

Uncertainty: Unpredictable.

Untoward Incidents: '...both unexpectedly poor outcomes and errors in the clinical process which do not lead to actual harm. (Capstick)

Vicarious Liability: Legal responsibility for someone else's actions

Value: The criteria by which the worth of something is judged.

Appendix 2 - Health & Safety Enforcement Prosecutions in the Health Sector from 1988 to 1997

1. Sheffield Health Authority

Prosecuted on 24 February 1988 under Section 2(1) of HSWA for failing to provide a safe system of work for a employee handling hot fat in the hospital kitchen. Fined £500 plus costs.

2. South East Staffordshire Health Authority

Prosecuted on 7 June 1988 under Section 2(1) of HSWA for failing to maintain means of access to a place of work for a nurse crossing a courtyard at night. Fined £500 plus costs.

3. Walsall Health Authority

Prosecuted on 29 June 1988 under Section 21 of HSWA for failing to comply with the requirements of an improvement Notice relating to the safe disposal of Clinical Waste. Fined £450 plus costs.

4. Portsmouth and South East Hampshire Health Authority

Prosecuted on 20 September 1988 under Regulation 1 of the Electricity Regulations 1908 for failing to ensure that a piece of electrical equipment in the manufacturing pharmacy was so worked as to prevent danger. Fined £1200 plus costs. On the same day, the same Health Authority was prosecuted under Regulation 3 of RIDDOR 1985 for failing to report an electric shock accident within 7 days. Fined £200.

5. Airedale Health Authority

Prosecuted on 20 January 1989 under Section 2(1) of HSWA for failing to ensure that safety of employees who were overcome by diesel fumes whilst cleaning out a water tank. Fined £1200 plus costs.

6. Cambridge Health Authority

Prosecuted on 15 Februarys 1989 under Regulation 3 of RIDDOR 1985 for failing to report major injury and 3 day accidents (11 cases). Fined £500 plus costs.

7. North Staffordshire Health Authority

Prosecuted on 21 February 1989 under Section 2(1) of HSWA for failing to maintain a pressure cooker resulting in injury to a technician in the out-patient department. Fined £500 plus costs.

8. Bristol and Western Health Authority

Prosecuted on 21 August 1989 under Section 2(1) of HSWA for failing to ensure the health of a nurse in the endoscopy unit working with glutaraldehyde. Fined £1000 plus costs.

9. Barnett Health Authority

Prosecuted on indictment on 6 October 1989 under Regulation 34(1) of the Gas Safety (Installation and Use) Regulations 1984 - 2 cases - and under Section 3(1) of HSWA for failure to maintain 2 gas fired central heating boilers, resulting in 2 fatal accidents. Fined £30,000 plus costs.

10. Aylesbury Vale Health Authority

Prosecuted on 1 February 1990 under Section 2(1) of HSWA for failing to protect nurses against the risk of Hepatitis B infection. Fined £1000 plus costs.

11. Leeds Western Health Authority

Prosecuted on 17 October 1990 under Regulation 3 of RIDDOR 1985 for failing to report the deaths of 2 patients who died after being given dishwater fluid believed to be lemon juice. Fined £100 on each case. Prosecuted also under Regulation 12 of COSHH re training of staff. Fined £800.

12. Worthing Health Authority

Prosecuted on 20 December 1990 under Section 3(3) of RIDDOR 1985 for failing to report 2 major accidents within 7 days. Fined £300 plus costs.

13. South West Durham Health Authority

Prosecuted on 25 February 1991 under Section 2(1) of HSWA for failing to ensure the safety of 2 engineers fitting smoke doors who were subsequently injured when a scaffolding tower collapsed. Fined £500 plus costs.

14. Riverside Health Authority

Prosecuted on 4 March 1991 under Section 3(1) of HSWA for failure of the system in the hospital for segregation of clinical and domestic waste due to inadequate communication and monitoring resulting in refuse collection being contaminated with blood. Fined £750 plus costs.

15. P P Nann and M E Little BDS

Prosecuted on 18 July 1991 under Section 33(1) of HSWA. Prohibition Notice served re x-ray set electric supply cable. Not complied with. X-ray set used. Fined £200 plus costs.

16. Cornwall and Isles of Scilly Health Authority

Prosecuted on 5 August 1991 under Regulations 5(1) and 7 of the Ionising Radiations Regulations 1985 for failing to ensure that a patient was not exposed to ionising radiation in excess of the dose limit specified. Fined £3000.

17. Oxford Health Authority

Prosecuted on 8 August 1991 under regulation 3(1)(a) and (b) of RIDDOR 1985. A mentally handicapped patient was scalded whilst being bathed by a care assistant. Patient subsequently died 3 days later. The HSE discovered the incident through a press article, the accident was subsequently reported but too late for an investigation to take place. Fined £1000 plus costs.

18. Sandwell Health Authority

Prosecuted on 20 August 1991 under Regulation 10 of the Electricity at Work Regulations 1989. An electric plug had been wired incorrectly due to overloading, short circuited and caused burns to an employee, plus minor explosion and damage. Fined £250 plus costs.

19. Trafford Health Authority

Prosecuted on 4 September 1991 under Section 3(1) of HSWA. A female patient fell out of bed onto unprotected hot pipes receiving multiple site burns. Precautions had not been taken by the Health Authority to ensure patients were not exposed to risk from hot pipework. Fined £5000 plus costs.

20. Mr Vince Weeks

Prosecuted 27 November 1991 under Section 33(1) of HSWA. An Improvement Notice was issued in April 1990 requiring the setting up of preventative maintenance of a dental X-ray set. Notice was extended twice. Notice not complied with and

machine was only taken out of use after Prohibition Notice served June 1991. Fined £1000 plus costs.

21. Mid Glamorgan Health Authority

Prosecuted on 28 November 1991 under Regulations 5(1) of the Control of Asbestos at Work Regulations 1985. Two maintenance fitters were exposed to asbestos dust while removing steam pipes from the boiler room. Fined £3000 plus costs.

22. South Birmingham Health Authority

Prosecuted on 7 February 1992 under Section 3(1) of HSWA. Contractors working in a confined space were not controlled, they were not supervised to ensure that the tank was safe to enter, that they complied with safety instructions, and the tank was not isolated (locked off). Fined £1000 plus costs.

23. Dr Bromley and Partners

Prosecuted 3 November 1992 under Regulation 7 of COSHH 1988. Two year old boy at GP's surgery with mother went into locked examination room (drank from bottle of phenol. Prognosis bad). Fined £750 plus costs.

24. Camberwell District Health Authority

Prosecuted on 15 December under Section 14(1) of the Factories Act for unsafe machinery in the laundry. Fined £500 plus costs.

25. North Staffordshire Health Authority

Prosecuted on 30 April 1993 under Regulation 3(1)(a) of RIDDOR 1985 for failing to report a major accident. A patient stepped into a bath of hot water and was severely burned. Fined £2000 plus costs.

26. Norwich Health Authority

Prosecuted on 2 June 1993 under Section 3(1) of HSWA. DP was scalded whilst taking a bath. No physical safeguards or safe systems of work in situ. A fatal scalding accident occurred in another Health Authority earlier in the year. Fined £1200 plus costs.

27. Public Health Laboratory Service

Prosecuted on 8 August 1993 under Section 2(1) of HSWA and Regulations 8(1), 7(1) and 12(1) of COSHH Regulations 1988 for failing to take any action to prevent a potentially fatal infection. Fined £250 plus costs.

28. South Derbyshire Health Authority

Prosecuted on 22 November 1993 under Section 2(1) of HSWA for failing to ensure so far as was reasonably practicable the health and safety at work of nursing staff required to handle and move patients. Fined £12000 plus costs.

29. Airedale NHS Trust

Prosecuted on 8 December 1993 under Section 3(1) of HSWA. An 18 month old baby fell through inadequately protected barriers on a first floor landing, fracturing its skull and sustaining internal injuries. Poor management of risks were identified in 1988. Fined £3000 plus costs.

30. J F Broderick Ltd.

Prosecuted on 31 march 1994 under Section 3(1) of HSWA. DP fell from first floor window of nursing home. Window opening not restricted. Fined £10,000 plus costs.

31. Salford Community Healthcare

Prosecuted 8 April 1994 under Section 3(1) of HSWA. Client in care of Health Authority sustained 15% 2nd degree burns from hot bath. No thermostat mixer vales. Fined £12,500.

32. Loddon NHS Trust

Prosecuted on 6 June 1994 under Section 3(1) of HSWA. DP received burns after she fell between a hot radiator and locker. Trust unaware of guidance - no control measures implemented. Fined £1000 plus costs.

33. Basildon and Thurrock General Hospital

Prosecuted 5 July 1994 for two breaches under Regulation 3 of RIDDOR 1985 for the late reporting of two accidents to employees which resulted in absences from work of more than 3 consecutive days. Fined £1500 plus costs.

34. Parkside Health NHS Trust

Prosecuted on 18 July 1994 under Section 3(1) of HSWA. An elderly in-patient was scalded and drowned whilst taking a bath. Thermostatic valve not fitted to water supply. Staffing levels inadequate. Fined £50,000 plus costs.

35. West Suffolk NHS Trust

Prosecuted on 28 October 1994 for two breaches under Regulation 3 of RIDDOR for late reporting of two accidents to employees,, which resulted in absences from work of more than 3 consecutive days. Fined £3,500 plus costs.

36. North Staffs Hospital NHS Trust

Prosecuted on 18 December 1994 under Section 3(1) of HSWA. Little consideration was given to transport risks on site when psychiatric residents were picked up and offloaded on afternoon trips. This particular incident resulted in a fatality to a resident. Fined £1000 plus costs.

37. Copelands Tours (Stoke on Trent) Ltd.

Prosecuted on 18 December 1994 under Section 3(1) of HSWA. Little consideration was given to transport risks on site when psychiatric patients were picked up and offloaded on afternoon trips. This particular incident resulted in a fatality to a resident. Fined £1000 plus costs.

38. Frenchay Healthcare Trust

Prosecuted on 6 March 1995 under Section 3(1) of HSWA. An elderly male patient fell out of bed onto hot pipes and received full thickness burns. Reasonably practicable precautions were not taken by the Trust despite a previous similar accident. Fined £15,000 plus costs.

39. Greenacres Nursing Home

Prosecuted on 8 March 1995 under Manual Handling Regulations. Failure to comply with an Improvement Notice requiring a suitable and sufficient assessment of manual handling operations involving patient lifting to be carried out. Fined £1500 plus costs.

40. Lancaster House Nursing Home

Prosecuted under Section 3(1) of the Health & Safety at Work etc Act 1974. Spina Bifida patient sustained severe burns to his legs whilst taking an unsupervised shower at his home. The shower was not fitted with a thermostatic mixing valve allowing water temperature in excess of 70° at the shower head. Fined £3000 plus costs. Compensation of £1000 awarded to patient.

41. Dorset Community NHS Trust

Prosecuted 21 August 1995 under section 3(1) of the Health & Safety at Work etc Act 1974. Profoundly physically and mentally handicapped left alone in bath - drowned. No instructions re safety of such patients in bath. Other care assistants also left alone. Fined £14,000 plus costs.

42. City Hospitals Sunderland NHS Trust

Prosecuted 19 February under Health & Safety at Work Act 1974 Section 3(1). A baby punctured its finger on a needle from an open 'sharps box' left on floor of a consultation room. Fined £15,000 plus £696 costs.

43. South Glamorgan Health Authority

Prosecuted on 18 February 1996. Hospital patient with Downs Syndrome ran a bath unsupervised. Scalded and subsequently died. Fined £3000 plus £836 costs.

44. Downside Nursing Home

Prosecuted on 14 June 1996 for failure to comply with an Improvement Notice requiring a manual handling assessment. Fined £3000 plus £1194 costs.

45. Edenmore Nursing Home

Prosecuted on 19/20 August under Health & Safety at Work Act 1974 Section 3(1). Elderly patient received full thickness burns to legs. Fined £6,000 each plus £5,000 costs.

46. Bedford Hospital NHS Trust

Prosecuted on 19/20 August under Health and Safety at Work Act 1974 Section 3(1) and Management of Health and Safety at Work Regulations 1992 Regulation 3. Patient died in fall of over 3m from a ground floor window with unrestricted opening. Fined MHSW Regs - £4,000 plus £3,000 costs.

47. Surrey Heartlands NHS Trust

Prosecuted in January 1997 under Health & Safety at Work Act Section 3(1) following fatal scalding accident to mentally ill patient. Fined £15,000 plus £6,000 costs.

48. Premier Health NHS Trust

Prosecuted in January 1997 under Health and Safety at Work etc Act 1974 Section 3(1) following the drowning of a mental patient. Fined £7,500 plus £1147.80 costs.

49. Community Health Sheffield NHS Trust

Prosecuted in March 1997 under Health & Safety at Work etc Act 1974 following fatal drowning and scalding of an 85 year old patient. Fined £20,000.

50. The manor House Nursing Home Ltd.

Prosecuted on 8 April 1977 under Section 3 of the Health and Safety at Work Act 1974 following fatal scalding of a 77 year old dementia patient. Fined £12,000 plus £444 costs.

Appendix 3 Health and Safety Executive Audit Report August, 1998

STRENGTHS - POLICY

1. The Trust has made clear, via the Statement of Intent signed by the Chief Executive, that it is committed to providing safe and healthy conditions for staff and others.

2. The Chief Executive clearly recognises his overall responsibility for health and safety standards within the Trust and takes a personal interest in achieving improvements.

3. The Trust has set out, in its Policy No. 2 "Arrangements and Responsibilities", some specific duties and procedures, such as the specific health and safety duties given to Heads of Departments.

4. The trust has set up several specialist groups who are able to guide policy and give advice on particular risks (e.g. Radiological Safety Committee, COSHH Group, Security Group, Manual Handling Steering Group etc.).

5. The Trust has set out, in its Risk Management Strategy and Implementation Plan, a series of strategic objectives, the achievement of which should significantly improve the management of all relevant risks.

6. The "Yellow Binder" system provides easy access to current approved Trust Wide policies related to health and safety.

7. The Executive Medical Director recognises and is keen to emphasise the integration of risk management into all aspects of management.

8. Some departments have drafted good "local" policies and procedures for managing risks within their remits (e.g. the draft Dermatology health and safety manual). These could form useful examples for other departments to build upon.

9. There appeared to be a good policy on immunisation for and awareness of blood-borne diseases in pathology.

10. Before HSE's audit the Clinical Radiology directorate had drawn up a "Staff guide to Health and Safety Policy and Documentation" in a user-friendly format.

11. Good policies had been drawn up in relation to radiation protection.

12. The Trust has very recently drawn up a detailed operational policy for the prevention of legionnaires disease.

13. The Sterile Services Units had local health and safety policies which described the expected "on the ground" precautions well (although roles and responsibilities

were not addressed in detail).

14. The Estates Dept has it's own safety policy and, in draft, 4 topic-specific safety policy addendums (asbestos, pressure systems, drains and personal protective equipment).

15. All those policies which it is the responsibility of the health and safety adviser to produce are up to date.

16. All policies which the health and safety adviser is responsible for issuing are contained in the "Yellow binder".

17. The policy management group has to approve all Trust-wide health and safety related polices, having consulted the relevant departments and the health and safety committee on the contents, via a draft. Once approved, policies are signed by the Chief Executive.

18. Not all clinical directors have been set health and safety objectives.

19. The health and safety adviser has been consulted by some departments on the health and safety implications of proposed new equipment.

20. The health and safety adviser has had some involvement in the planning stage of the present phase of building.

21 . The health and safety adviser has been given objectives and his progress towards achieving them is monitored regularly.

22. It is Trust policy that all senior managers have health and safety objectives.

23. Some directorates have departmental policies to put local detail onto Trust wide policies. For example, the gastroenterology ward has drawn up local policies to add detail, applicable to this area only, to the Trust's policies e.g. lifting, safe staffing levels, clinical waste. The Dermatology Directorate has formulated it's own health and safety policy to supplement the main Trust's health and safety policy. Departmental policies should be approved by heads of department.

24. The pharmacy has drawn up a policy for the disposal of highly flammable liquids.

25. In the pharmacy there is a system for ensuring that drugs which are surplus to requirements are disposed of safely.

26. In the Day Surgery Unit there is a written policy on how to deal with a spillage of glutaraldehyde.

27. In the Surgical Specialities Group, written guidelines are being proposed in order

to assist departmental managers in fulfilling their health and safety responsibilities.

28. The recent'self-assessment' exercise has resulted in the formulation of some health and safety action plans (e.g. in oral surgery, neurophysiology and administration in the Surgical Specialities group).

29. In Surgical Services, Directorate annual business plans sometimes include health and safety items (but only if they have been identified as capital expenditure).

30. Regarding manual handling, the Trust has had a 'minimal-lift' policy in place since January 1997 and is working towards a no-lift policy.

31 . In the Accident and Emergency Unit, a policy is in place whereby new nursing staff are not allowed to work night-shifts without having first attended the Trust's 2 day violence and aggression.

STRENGTHS - ORGANISATION

1 . There appeared to be a culture of openness in the Trust, with staff being encouraged to report any concerns about risks to management.

2. The trust has appointed a Risk Manager to oversee and advise on the management of clinical and non clinical risks.

3. The Trust has established a Risk Management Team staffed by senior personnel from a wide range of interests, which is well placed to take a strategic view of risk management.

4. The Trust has drawn up a 2 year Risk Management Strategy, which aims to address risks covered by the Trust's duties under the Health and Safety at Work etc. Act 1974 as well as other risks.

5. The Trust has created a Health and Safety Committee with joint management and trades union representation, which provides a forum for discussion of current health and safety issues, although there appears to be no approved policy on Health and Safety Representatives and Committees as yet.

6. A policy document entitled "Risk Management System" was seen during the audit week (although it had not been referred to before), the content of which gives a good framework for managing risks.

7. Trust policy makes it clear that the health and safety department are able to provide a selection of checklists to facilitate risk assessments, and can readily provide assistance and advice.

8. Business/Directorate Managers have access to a wide range of in-house Health and Safety "competent persons".

9. It is recognised that, for the majority of risks, the most appropriate person to carry out risk assessment is a competent, responsible person within a particular department.

10. The Trust has held a series of Risk Management Workshops for managers which appear to have been well received by those who attended.

11. There is recognition in the Risk Management Strategy (objective 21) of the need for the Trust to properly integrate its risk management arrangements with the organisations it is clearly linked with (e.g. universities). The HSE team believe this requires further work.

12. The Trust Board receives an annual report from the risk management team, to inform decision making on risk management issues.

13. The Trust has a Document Control System which, once fully developed, should clarify for staff the status of health and safety related documentation.

14. Section 6.1.4 of the Trust's Risk Management System (status of this document requires clarifying) requires directorate and department managers to have a health and safety plan with objectives (although few at present appear to have this).

15. The Trust rewards and gives credit to good practice in managing risks by several means, including quality awards and recognition in in-house magazines.

16. Some directorates and departments have well developed systems for managing risks (eg management of X-ray risks in radiology), which may be used as examples of possible approaches to controlling other risks in other directorates/departments.

17. The training of junior doctors on site now includes general advice on the identification of stress, its causation and coping mechanisms.

18. It was reported that working relationships between clinicians and management/support functions were very good within the Trust.

19. The analysis of capital requirements contained in departments' reports for the recent Risk Management Audit provides some degree of objectivity in prioritising competing demands.

20. The position of the health and safety adviser in the Trust facilitates easy communication with the most senior Trust managers and gives weight to the function, which will tend to raise the profile of health and safety management.

21. There were examples of the Trust co-operating with other Trusts in sharing health and safety related information (e.g. networking of staff, shared weather forecasting information for gritting etc.).

22. Many staff reported that the top-down communication methods within the Trust worked well.

23. The health and safety adviser used to meet the occupational hygiene team regularly and these meetings were felt to be beneficial.

24. A system exists for recording radiology staffs awareness of local rules on ionising radiations, and any amendments.

25. Job descriptions in some directorates (e.g. clinical radiology) described post holders' health and safety related duties reasonably well.

26. The culture of trust within the organisation and its openly expressed desire to achieve and maintain good health and safety standards encouraged staff to readily consult other individuals within the Trust (and outside) for advice on improving

standards.

27. Radiation Protection Supervisors are required to agree detailed health and safety duties (in the form of their letters of appointment).

28. Some of the local health and safety policies in the pathology department allocated clear responsibilities for health and safety to named individuals.

29. Much good work had been done in documenting health and safety policies and procedures in the pathology department, spurred on in part by the requirements of the Clinical Pathology Accreditation Scheme.

30. There were trades union safety representatives in the pathology departments, which should provide a good means of consultation on relevant risks.

31. There appeared to be comprehensive local rules for the various uses of ionising radiations within the Trust.

32. The analysis and documentation of procedures in Sterile Services for ISO 9002 (quality) purposes has proved valuable in helping identify health and safety issues which may have required attention.

33. Sterile Services had devised a simple, effective "competence matrix" for new starters, so that the training status of employees can easily be checked at a glance.

34. The cascade system of training for lifting and handling in Sterile Services was reported to work well.

35. Sterile Services had appointed a health and safety representative, who assists in the identification and control of risks, but this role required clarification.

36. The Pathology Directorate's Health and Safety Committee provides a suitable forum for discussion of risks in the Directorate.

37. Attempts to assess the condition of asbestos on the Hope site have been made in the past. This involved removal of most known asbestos.

38. Large contracts are only awarded to contractors resident on a list of contractors, the so-called North-West Consortium. Providing adequate assessments are made of contractors on this list, this should help achieve adequate levels of health and safety at such contracts.

39. The manual handling training arrangements in the wards (whereby local co-ordinators are trained by other more qualified staff, and then cascade their new knowledge to other staff), were broadly felt to work well in practice.

40. Department wide safety policies specific for hazards in the pathology

laboratories were said to be in development.

41. Documentation including risk assessments and COSHH assessments in Pathology were generally located near to where the relevant work was carried out. This ready access is to be encouraged.

42. Safety policies have been drafted at Departmental levels in Pathology.

43. The Trust's health and safety adviser is well placed to put any concerns directly to the Risk Management Group which meets monthly.

44. The post of health and safety adviser now forms part of the Risk Management Team, whose head attends Board meetings and has direct access to the Chief Executive.

45. An input by the health and safety adviser into the induction training of junior doctors had recently been negotiated (albeit with some difficulty) as they do not attend the half day induction session given to the rest of the staff.

46. The health and safety adviser can communicate directly with all Trust staff via the in-house magazine.

47. Many departments have a "safety representative".

48. There is an active health and safety committee.

49. Some clinical directors have set up effective systems for ensuring the health and safety of their medical staff.

50. Clinical directors are responsible for the management of risks affecting their medical staff.

51. In the Elderly Care Directorate, staff felt that the recent appointment of an 'Equipment Liaison Nurse' had led to improvements in the provision of necessary equipment to wards.

52. Junior doctors were said to hold a meeting with the Medical Director, Nursing Director, BMA representative and accommodation officer each month, which any doctors may attend. The forum was said to work well.

53. There is a 2 day course on violence run by the Trust, which many staff in Accident & Emergency have attended, which was said to be very useful.

54. New staff in Accident & Emergency attend the above 2 day course on violence before they go on night duty.

55. The knowledge of most junior doctors joining Accident and Emergency on how

to dispose of clinical waste was said to have recently improved markedly.

56. There are back-care co-ordinators in Accident and Emergency and cascade training has taken place.

57. The Directorate of Facilities has a budget for training and managers review training needs with individuals. Training records are kept.

58. Managers in the Directorate of Facilities have health and safety objectives which are measured six monthly.

59. Some risk assessments have been undertaken in the urology, pain management, oral surgery and ENT departments, using the guidance provided by the Trust's health and safety adviser.

60. A comprehensive training scheme appears to exist for manual handling training co-ordinators.

61. Although a "mentoring" system exists, plans are being developed to introduce more systematic assessment of training needs in the Elderly Care Directorate; it is envisaged that competencies would include health and safety matters. However, it appears that these plans have not yet been implemented.

62. A risk management co-ordinator has been appointed in the Elderly Care Directorate.

63. The remit of the recent 'self assessment' exercise is to be extended to include activities relating to the work of medical clinicians.

64. In the Renal Unit, new junior clinical staff are given 2 weeks induction training during which some health and safety training (eg on blood sprays and cross-infection). It was noted that sharps injuries training was not included at induction.

65. Precautions to take in the event of some adverse incidents (e.g. blood spray) are written down and provided to junior doctors in the Renal Unit as part of their induction pack.

66. There are two trained manual handling co-ordinators in place in the Accident and Emergency department.

STRENGTHS-CONTROL

1 . The recent implementation of the Minimal Lift Policy appears to have led to a 50% reduction in manual and patient handling incidents.

2. The Trust has appointed a full time Manual Handling Trainer and Facilitator.

3. There have been recent efforts to increase junior doctors' knowledge of health and safety issues during their induction training.

4. The use of glutaraldehyde in radiology has been assessed, and less hazardous substitutes used where reasonably practicable. Air monitoring has been carried out for remaining operations to determine likely exposures and any controls necessary.

5. There appeared to be effective controls in place for Magnetic Resonance Imaging.

6. Possible risks of violence have been assessed as regards radiology staff (by joint management/trades union team) and actions identified by these assessments have been taken.

7. The removal of formaldehyde from sterilisation procedures in Sterile Services and its substitution with methods less harmful to health has reduced the risk of health problems.

8. There appeared to be reasonable procedures and policies for immunisation; stick injuries and occupational health screening in Sterile Services.

9. Sterile Services management were clearly committed to achieving and maintaining good health and safety standards and to continuous improvement.

10. There appeared to be a high level of awareness of manual handling risks and controls amongst those nursing staff we spoke to on medical wards, and it appeared that the cascade training worked well for manual handling.

11. We were informed that thermostatic mixing valves (which control the hot water temperature to a maximum of 43° C) have been fitted at all baths and showers within the Trust and that these are formally tested by the Trust's 'Competent Persons' at 6 monthly intervals, reducing the risk of scalds to patients.

12. The use of polypropylene sample tubes instead of glass in pathology reduces the risk of infection from contaminated sharps.

13. A survey of hot and cold water services considering the risk from Legionella has been completed. This identified tasks requiring disinfection and cleaning, which is carried out annually.

14. There is a blanket site-wide policy of restricting window openings to 100mm (although evidence was found that some windows in some areas not accessed by patients do not meet this).

15. The decreasing use of radioisotopes in pathology, whilst largely the result of improved non-isotope methods, is beneficial from a radiation protection viewpoint.

16. The Trust has an Adverse Incident Reporting System which is now felt to be working well. It is believed that there is no significant under-reporting.

17. Occupational Health was felt by some staff to provide a good service to medical staff regarding health surveillance, information on infectious risks etc.

18. Junior doctors on call at night were said to have good access to advice from senior colleagues, which helped control stress in these individuals.

19. Staff interviewed in Accident & Emergency felt that they have good support from management within the department with regard to the stress caused by violence and that there is a good informal counselling system.

20. The Estates Department of the Directorate of Facilities had contingency plans for failures of critical pieces of plant, although this should rarely occur as the plant is subject to a planned preventive maintenance system.

21 . 24-hour site security services are provided by contractors. There are a variety of cameras linked to a manned control room from where the controller can contact his staff via radio. The main car parks are manned.

22. The Estates Department, which manages the security contract, is aware that there is some feeling that the security staff, who are contractors, are likely to escalate a violent situation rather than diffuse it and that their training is inadequate to allow them to deal satisfactorily with such situations. The matter is being reviewed, particularly as the contract is due for renewal. The Estates Department liaised closely with Accident & Emergency to upgrade security precautions after a particularly nasty incident and, together with the liaison officer from the police, assisted with the risk assessment.

23. Staff on night shift can, on request, get an escort to their destination from the security staff.

24. Sharps boxes have been placed on the wall in the gastroenterology surgery.

25. Porters move laundry using trolleys and it is delivered in reasonably sized bundles. No instances of overfilling dirty laundry bags were noted on the gastroenterology ward.

26. There is a trained lifting co-ordinator on the gastroenterology ward, all the staff

have been trained by her and there is an adequate supply of lifting equipment which is checked visually every month and has an annual external check.

27. There have been problems with ensuring that bank nurses have had suitable training for the gastroenterology ward, but the situation has improved markedly with the recent appointment of a co-ordinator.

28. Clinical waste is removed twice a day from the gastroenterology ward by contractors who wear gloves and who tie them up securely and mark them with the place of origin.

29. There is a Link Nurse for the control of infection on the gastroenterology ward. There are no hot surfaces in the gastroenterology ward onto which patients could fall and sustain burns.

30. The pharmacy has got written "recipes" for the drugs they make up themselves.

31 . The GIP unit has completed a COSHH assessment of its use of glutaraldehyde, concluded it's use is required and ensured that all work is done in a fume cupboard containing a sink.

32. The Endoscopy Unit has a written policy on how to deal with a spillage of glutaraldehyde and have a spillage kit.

33. The Endoscopy Unit has completed a COSHH assessment of their use of glutaraldehyde, implemented the use of disposable equipment where possible (which has significantly decreased usage) and purchased 2 extracted automatic fill/discharge cabinets in which to disinfect those endoscopes which still require glutaraldehyde.

34. The cabinets used for cleaning endoscopes in the Endoscopy Unit are serviced regularly.

35. The Day Surgery Unit has completed a COSHH assessment of their use of glutaraldehyde. This has enabled them to reduce its use considerably by autoclaving and they have instituted a policy that wherever possible new equipment must be autoclavable. An extracted portable bath has been provided for those instruments which do need to be soaked in glutaraldehyde.

36. The risk assessment of the use of glutaraldehyde in the theatres has enabled them to reduce its usage significantly by increasing the amount of equipment which can be autoclaved. Most of the equipment which still needs to be cleaned in glutaraldehyde is done in an extracted tank.

37. A risk assessment of the use of glutaraldehyde in the theatres has been carried out.

38. As a result of the assessment of the use of glutaraldehyde in clinical biochemistry

an order was about to be placed for a cleansing system which uses a less hazardous chemical. This will result in the department stopping the use of glutaraldehyde.

39. The Trust have identified the need to review the use of CIDEX (glutaraldehyde) for the disinfection of orthopaedic camera parts.

40. Trust policy requires that patient-centred manual handling assessments are conducted at ward level and this is being implemented in some wards.

41 . A stress-counsellor has recently been appointed for use by employees, Trust-wide.

42. Some senior clinicians embrace health and safety management issues as part of their line management responsibilities.

43. Physical control measures such as alarm call systems, digital security locks and close circuit television are in place in the Accident and Emergency department.

44. Generic 'local rules' for the use of mobile x-ray sets were available in the Accident and Emergency department.

45. Patient-centred manual handling assessments are carried out for in-patients at the Ladywell site and the conclusions recorded in the patient's care plan.

46. A wide and appropriate range of lifting aids were available in (Ladywell) wards L4, L5 and L14.

47. The Elderly Care Directorate have drawn up guidelines for staff on the use of cot-sides.

STRENGTHS - MONITORING

1 . The Adverse Incident Reporting system appears to be working well in capturing the information necessary to make valid judgements about the risks and controls.

2. Every department has been subjected to the first round of Risk Management "audits" by the Trust's health and safety adviser.

3. The validity of each department's "Self Assessment Checklist" is assessed by the health and safety adviser, who also provides feedback at this stage.

4. Results of the self assessment surveys were given to Heads of Department.

5. The bi-annual review for managers provides some mechanism for seeking information on directorates'/departments' past performance and future plans regarding risk management issues (although there is no specific requirement to address health and safety issues at these reviews).

6. Every department has completed a health and safety self assessment form in the last year. The health and safety adviser has followed these up and it is believed that central management now knows where the problems are and where capital expenditure is required.

7. Before the recent cleaning contract was awarded, some enquiries were made about the proposed contractor's health and safety performance with Trusts who already used the contractor.

8. The "performance agreements" for work carried out in-house provide a means of monitoring health and safety performance for these functions, provided that good indicators of health and safety performance can be selected.

9. Radiation Protection Supervisors are required to report annually to the Radiation Protection Committee on radiation protection issues within their remit.

10. Workplace inspections of the immunology department were carried out by the Senior Chief MLSO and the trades union health and safety representatives, using checklists.

11 . Dose monitoring of radiology staff provides confirmation that staff radiation doses are low.

12. There appeared to be well documented, effective systems for the planned preventative maintenance of equipment in radiology.

13. The Control of Infection Team, Occupational Health Back Care Co-ordinator and the Health and Safety Adviser carry out health and safety inspections of departments.

14. The Health and Safety Adviser assesses Adverse Incident Reports (AIRs) daily and follows up any he thinks warrant special attention. AIRs and the report of any further investigation are copied to relevant people e.g. Occupational Health, Back Care Co-ordinator etc.

15. It is Trust policy that all departments carry out periodic inspections to ensure that health and safety precautions are being used.

16. The Lead Nurse in gastroenterological surgery checks monthly that staff are up to date on training and keeps computerised training records.

17. The Lead Nurse in gastroenterogical surgery carries out six-monthly ward inspections to ensure compliance with health and safety procedures, using checklists. If she finds any omissions she carries out a risk assessment and attempts to implement any necessary precautions.

18. In the CIVA3 Unit in the pharmacy, levels of isopropyl alcohol (IPA) are sampled periodically using gas detector tubes to ensure levels are acceptable.

19. Health surveillance of those in GIP who use glutaraldehyde is about to begin.

20. Staff in the Endoscopy Unit who use glutaraldehyde are subject to annual health surveillance in the form of a questionnaire.

21 . Staff in the Day Surgery Unit who use glutaraldehyde are subject to health surveillance.

22. A monitoring system for adverse incidents relating to manual handling is in operation. We were informed that, in comparative periods in 1996 and 1997, the system demonstrated that manual handling and patient handling adverse incidences had reduced by 50% and that those incidents still occurring are generally of a less serious nature.

23. A system is in place for monitoring the condition of manual handling/lifting aids and this includes servicing of equipment where appropriate.

24. Equipment shortages, in both patient and non-patient handling areas, have been identified and have been brought to the attention of the Trust Executive Board.

25. The recent risk management self-assessment exercise provided broad benchmark standards for Directorates/Departments to assess their health and safety performance against.

26. Every department has completed a health and safety self assessment form in the last year. The health and safety adviser has followed these up and it is believed that central management now knows where the problems are and where capital expenditure is required.

27. The extraction on the portable bath for cleaning instruments in glutaraldehyde is serviced regularly.

Appendix 3.15

STRENGTHS - REVIEW

1 . The Risk Management Group holds monthly meetings at which progress with risk management issues in general may be reviewed.

2. All adverse incidents which could have been avoided and reports which do not include 'action taken to prevent reoccurrence' are followed up by the Manual Handling Training Officer with the member of staff concerned, and a report sent to the Trust's Health and Safety Adviser.

3. As a result of reviewing procedures, the Trust-wide 'Moving and Handling' policy has recently been updated.

4. An annual report is produced for the Trust Executive Board by the Manual Handling Training Officer.

5. In the Facilities Directorate a quarterly report is made on the Adverse Incident Reports (AIRs) generated and, if necessary, policies are reviewed.

6. The quarterly meetings of the Radiation Protection Committee facilitate discussion and review of radiation safety issues and help ensure steady improvements in radiation safety generally, in accordance with best practice.

7. Local Rules for the use of ionising radiation are reviewed annually at the Radiation Protection Committee meetings, although this is not yet a written Trust requirement.

8. The microbiology department has assessed its own standards against the latest edition of the Advisory Committee on Dangerous Pathogens (ACDP)'s guidance on containment levels for biological agents, in order to identify any areas where further precautions may be necessary.

Appendix 4 HEALTH & SAFETY EXECUTIVE AUDIT (ACTION REQUIRED)

1. <u>Clarify and assign roles & responsibilities for Health & Safety of:</u>

- **Heads of Department/Directorate Managers & Clinicians,**
- **Competent Persons,**
- **Staff side Health & Safety Personnel,**
- **Health & Safety Representatives,**
- **Risk Managers**

4. The Trust should clarify and make more explicit the duties of Heads of Departments in relation to health and safety.

5. The roles and responsibilities of all line managers and competent persons working within the Trust should be clarified and explicitly stated.

8. The Trust should examine ways in which the involvement of staff side health and safety representatives may be further encouraged, and if necessary formally approve a suitable policy on health and safety representatives and committees.

10. The Trust should clarify and make explicit the expected roles of all those groups of staff currently referred to as "health and safety reps/representatives".

13. The health and safety related responsibilities of clearly identified directorate and departmental managers should be made explicit. Section 6 of the Risk Management System would provide a useful starting point but requires clearer, unambiguous identification of "managers and senior clinicians".

15. The Trust should seriously consider drawing up a job description for the post of Risk Manager, to reduced the chance of misunderstandings about this role.

20. The Trust may consider providing examples of health and safety related objectives which could be incorporated into directorate and departmental plans (eg to ensure that individuals have been nominated for specified aspects of health and safety management by a specified date; to ensure those nominated individuals have received identified training by a specified date, to ensure risk assessments have been completed/reviewed by a specified date; to ensure staff competencies and training histories are documented etc).

23. The role of the Risk Managers for the Surgical and Medical Specialities Groups should be made explicit, any necessary training for these individuals

should be identified and provided, and the Trust should give clear guidance on the proportion of time these post holders should devote to Risk Manager duties (and ensure this resource is provided).

26. The generic job description for directorate managers in Medical Specialities should be reviewed to ensure it clearly sets out the Trust's expectations of the post holder in contributing to health and safety management.

36. The health and safety role of the wards' "health and safety representatives" should be clarified, and distinguished from the expected role of the ward sister.

41 . The job descriptions of clinical directors should identify their responsibilities for the health and safety of their staff, and they should where possible be set measurable health and safety objectives.

47. The Trust should make clear whether Senior House Officers have responsibility for the health and safety of their House Officers.

58. The health and safety management roles of clinical directors and directorate (or business) managers should be made explicit in job descriptions and relevant policy documents.

66. The Trust should consider ways of further strengthening the line-management of junior doctors for non-clinical matters to ensure that they are aware of, and understand the requirements of health and safety legislation, the Trust's policies and any departmental policy.

2. Improve monitoring of managers performance in relation to Health & Safety objectives set for them by the Trust

1 . It is recommended that the Trust should consider the benefits of requiring all senior managers to have health and safety related objectives, based on the Trust's long term plan. Managers' progress towards meeting health and safety related objectives should be monitored regularly by their line managers

3. Increase deployment of the Risk Management system especially at Directorate and Departmental Level

43. The Trust should continue its efforts to encourage those areas which do not have a safety representative to appoint one.

45. The Trust should ensure that each Clinical Directorate has an effective system for informing its medical staff of who their line manager is, and that it is to their line manager that they should initially turn if they have any problems with health and safety.

46. Those Clinical Directors who have not set up effective systems for ensuring the health and safety of their medical staff should do so.

4. Apply the policy on policy management and document control to all Health & Safety Related Policies.

1 . The Trust should clarify and make explicit who has responsibility for ensuring adequate health and safety policy coverage.

2. The Trust should review which health and safety related policies need to be present in the Trust-wide Yellow Binder, ensure these provide adequate coverage and are approved, and update the index to prevent confusion.

3. All Trust-wide policies which affect health and safety of staff or third parties should be contained in the yellow binder or, if certain policies are not contained in it, the binder should contain instructions on where to find the policies not in it (eg control of infection).

5. The Trust should ensure that all relevant health and safety policies have mechanisms for regular review built into them.

6. The Trust should draw up a single document listing all currently authorised Trust documentation which relates to health and safety/risk management so that managers/staff are easily able to check whether they are aware of the existence of/have copies of all relevant documentation.

16. The present efforts to apply the principles of the Trust's Document Control System to health and safety related documentation should continue so that all Trust-wide health and safety related documentation is subject to these controls.

5. All Trust health and safety policies and associated guidelines etc should include a review date and be reviewed in accordance with this.

5. **Improve completeness, coverage and distribution of all corporate and local health and safety policies and in particular:**

- **Infection Control**
- **COSHH**
- **Planning of new/refurbished buildings**
- **Safe Bathing**
- **Violence and Aggression**
- **Safe Disposal of Sharps**
- **Display Screen Equipment**
- **Glutaraldehyde**
- **Review procedures for ionising radiation local rules**
- **Occupational Stress**

12. It is strongly recommended that a list of Trust policies relevant to infection control is drawn up, so that staff may easily check what Trust guidance exists regarding particular infection control issues (policies related to infection control were forwarded on request to HSE by the health and safety adviser, but several were found to be out-of date). Serious consideration should be given to implementing a "controlled document" system for control of infection documentation, if no such system yet exists.

13. The Trust should review whether the total coverage of infection control policies is adequate. Responsibility for producing new and reviewing existing policies should be given to nominated individuals, and a review mechanism incorporated which ensures that policies are reviewed not only when procedures or knowledge changes, but also at specified regular intervals (eg every year, every 3 years etc).
33. The Trust's infection control policy and supporting documentation should be reviewed to ensure that they take account of current organisations (eg the documents seen refer to Salford Health Authority) and, more importantly, recent advances in knowledge (eg Hepatitis C) and legal guidance (eg the most up to date guidance from ACDP).

15. It is recommended that Trust Health and Safety Policy 8 on COSHH is reviewed, giving particular consideration to who has responsibility for carrying out COSHH assessments locally; any procedures for checking the adequacy of local assessments (eg central checking of a random sample of assessments); a more accurate summary of the significance of occupational exposure limits (para 8.5), and, whether the Trust needs to give a more definite steer on the frequency of review of COSHH assessments.
16. The Trust should institute a policy on what involvement the Health and Safety Adviser should have in the planning of new/refurbished buildings

either with regard to the health and safety of its own staff and contractors during construction and/or to that of employees, patients etc who will use the completed building, and ensure that the policy is implemented.

21 . The Trust should devise and implement a safe-bathing policy. The policy should address scalding risks, manual handling risks and drowning risks. Appropriate training should be provided to all staff who are required to bathe patients in order to ensure effective implementation of the policy.

23. The Trust should consider amending its violence and aggression policy (or issue supporting guidance to Directorates) to provide clarification of the various levels of the training available and which training may be suitable for different groups of employees.

20. The reporting of violent incidents within the Trust should be reviewed to decide whether verbal abuse or harassment is to be recorded and reported. It is recommended that the Trust provides supporting guidance to employees to clarify what types of incident require reporting. The Trust violence and aggression policy may need amending in the light of this review.

62. The Trust should ensure that all relevant employees practise the safe disposal of sharps, understand the Trust's policy on this issue and are aware of the application of the Control of Substances Hazardous to Health (COSHH) Regulations in this matter.

34. The Trust's Policy on display screen equipment should be reviewed, to include information on the course of action to be taken if DSE is suspected to be harming users' health.

59. The Trust should draw up suitably detailed glutaraldehyde spillage procedures. A written spillage policy was in place in DSU and theatres A, B, C and D, but this required more detail as to the type of personal protective equipment to use (namely: long sleeved nitrile rubber gloves (not latex 'double' gloves, as described at the time of the audit), an impermeable apron, chemical grade eye protection or face visor and a respirator which offers protection against toxic organic vapour).

6. The Trust should formally document the review procedures for ionising radiation local rules (e.g. frequency, who will review, agreement of Radiation Protection Adviser etc).

31 . The Trust should clarify its procedures for agreement of local rules by the Radiation Protection Adviser and for documenting this agreement. The responsibility for, and frequency of, review should be clarified, as should the procedures for the RPA agreeing amendments and additions to local rules. All these agreements need clear documentation.

32. The Trust should clarify the identity of the radiation protection supervisor in the Gastro-Intestinal Unit (which remained uncertain at the time of our visit) and ensure the post holder carries out the necessary duties.

9. It is recommended that the Trust develops and properly implements its policy for the long term reduction of occupational stress, placing particular emphasis on the root causes. Although documents received after the audit refer to a Trust Stress Management policy, there was little evidence during the audit that staff were aware of any Trust policy on this issue.

10. The Trust should take prompt action to bring the above stress policy to the attention of staff and review the effectiveness of the system for bringing new policies to the attention of staff.

11 . Estimates of the costs and business-effects of stress-related sickness absence and other consequences of occupational stress may be useful in gauging how important this health problem may be to the Trust, and in identifying any areas for priority consideration.

6. Job descriptions should be reviewed to determine whether they accurately reflect the work currently carried out by post-holders, so that possible stressors, such as excessive work-load or hours, may be identified. This should in turn, assist the identification of priority areas for action in relation to managing work-related stress.

6. <u>Improve the monitoring by increased:</u>

- **Health surveillance of personnel exposed to glutaraldehyde,**
- **Clinical waste disposal**

8. The Trust should clarify its policy for health surveillance of personnel exposed to glutaraldehyde, as the present arrangements appear rather ad hoc.

22. The Trust should ensure that the effectiveness of its clinical waste policy is monitored on a regular basis and that incidents/injuries relating to clinical waste are recorded and followed up.

24. The Trust should clarify its requirement for the reporting of 'near misses' under its adverse incident reporting system (the newly revised incident reporting policy may address this)

7. <u>Directorates to establish procedures to ensure that (where appropriate), local, written health and safety policies and procedures are formulated and communicated to and understood by all relevant staff</u>

17. Directorates should ensure that (where appropriate), local, written health and safety policies and procedures are formulated and communicated to and understood by all relevant staff (a good example was Dermatology's Departmental health and safety manual).

19. Although Trust-wide policies on particular risks have been formulated, their usefulness may be enhanced by further adapting or customising them to meet Directorates' particular needs in order to make the policies more user-friendly to those dealing with the risks concerned.

22. Any existing "local" (ie. Directorate/Departmental health and safety policies, such as the Sterile Services health and safety policy) should be reviewed, to ensure that the roles and responsibilities of individuals in the management of health and safety are clearly explained (eg whose task it is to complete general risk assessments, COSHH assessments etc).

8. <u>Increase the level of knowledge of staff of:</u>

- **The Trust's Risk Management System**

7. The status of the policy document "Risk Management System" should be clarified, and if (as we understand from documentation received after the audit) it is official Trust policy, further efforts should be made to increase awareness of it amongst relevant staff and ensure it is implemented within an agreed timescale (current awareness of the document appears very low). A review mechanism should be incorporated.

9. <u>Increase the focus on non-clinical risks in the next Risk Management Strategy and especially:</u>

- **Scope and frequency of the "regular" reports to the Board**

8. Whilst it is appreciated that a good deal of the risks the Trust manages are of a "clinical" nature, it is felt that any future Risk Management Strategy should be examined before issue to ensure that the impact of risks of a more "non-clinical" nature is adequately considered in the strategy and clearly explained, and that relevant strategic objectives concerning "non clinical" risks are drawn up.

12. It is recommended that any future Risk Management Strategy should specify the scope and frequency of the "regular" reports to the Board (is the scope purely "clinical" issues or does this include "non-clinical" issues as

well?). See current Strategic Objective 8.

25. Risk managers (and other relevant personnel) should be made aware of progress made in their areas of control against the Trust's Risk Management Strategy / Implementation plan

14. Investigation of significant accidents and incidents should address any underlying causes and in this way, should be utilised to assess the effectiveness of the health and safety management arrangements in place within Directorates.

10. <u>Health & Safety Advisor to take part in meeting related to:</u>

- **Occupational Health**
- **Project Planning**
- **Building and facility upgrades**
- **New equipment purchases**

14. Although felt to be helpful, the meetings between the Health and Safety Adviser and the Occupational Health Team have not taken place for some time because of pressure of work. The Trust should consider the importance of these meetings and if they are needed, ensure they are held at appropriate intervals.

65. A mechanism should be devised to ensure that health and safety considerations are taken into account at the planning stage of any new project, and this should always include the involvement of relevant competent persons.

68. The Trust should ensure that its 'competent persons' are fully utilised and consulted during all building work or facility upgrades with regard to end usage.

69. Relevant competent persons should be more involved in the purchasing cycle of new equipment to ensure their health and safety implications are identified and eliminated wherever possible, before purchase.

11. <u>Improve the level of risk assessments carried out across the Trust and especially in relation to:</u>

- **New equipment**
- **Infections**
- **Radiation**

- **Display screen equipment**
- **Legionellosis**
- **Glazing**
- **Violence**
- **Glutaraldehyde**
- **Hot surfaces**
- **Formaldehyde**
- **Health Surveillance**

4. The Trust should make ongoing efforts to ensure that suitable and sufficient risk assessments are being undertaken and that appropriate review mechanisms are in place and operating. Risk assessments should, amongst other things, identify training needs and should include consideration of potential high hazard - low probability events.

7. The Trust should consider whether there is a need for the Health and Safety Adviser to become involved in assessing the risks of proposed new equipment and, if appropriate, devise a policy for this.

9. The Trust should make it a formal requirement that risk assessments be reviewed at regular intervals (for example annually) to ensure they remain valid.

28. Directorates and departments should clearly allocate the task of assessing risks to nominated individuals (in writing).

29. Some staff who conducted risk assessments were unaware of how the Trust expected them to deal with assessments of "miscellaneous" risks (ie where no risk-specific "risk assessment format" existed). There would be benefit in providing staff with guidance on this (ie an example of a format for recording assessments of general risks).

37. The Trust should assess possible infection and radiation risks to cleaners who clean the clinical biochemistry laboratories and document its expectations of cleaning staff. The Trust must ensure that contractors have adequate systems for training and supervising their cleaning staff, and should monitor the health and safety aspects of this work at suitable intervals. Cleaning issues should be addressed in local rules, which Trust laboratory staff should be familiar with.

38. The Trust should assess whether those individuals in departments whom policy 16 requires to undertake assessments of display screen equipment workstations yet have the necessary competence for this task and, if not, provide sufficient information/training to these individuals or re-allocate the task of workstation assessment to someone who does have the necessary competence.

40. The Trust should ensure that risk assessments of particular activities include an overall conclusion as to whether any residual risks are acceptable.

57. The Trust should ensure that risk assessments within the elderly care directorate (and at Ladywell) have been undertaken to comply with Regulation 3 of the Management Of Health And Safety At Work Regulations 1992 and other associated legislation.

19. The Trust should ensure that the assessment of legionellosis risks from Trust activities addresses the possible risks from "deadlegs" in pipework. A review of infrequently or intermittently used taps should be undertaken.

21 . The Trust should be able to demonstrate that glazing has been assessed by a competent person for compliance with Regulation 14 of the Workplace (Health, Safety and Welfare) Regulations 1992.

22. An assessment is required of the risks from water tank entry and cleaning. Assessment should include consideration of risks from legionella; oxygen depletion (which could be caused by rapid algal growth if the tank is left for a considerable time before entry); risks from drowning etc.

27. The Trust should assess the risks of violence in the haematology and transfusion areas. It is felt that the risks of violence could be reduced by better restriction of public access.

58. A suitable and sufficient COSHH assessment should be undertaken in relation to the use of glutaraldehyde in ENT(G1) and any identified preventative/protective control measures implemented.

61. The Trust should conduct a Trust-wide survey of the possible risks of burns to patients from prolonged contact with hot surfaces such as radiators and pipes. Preventative or protective measures should be implemented within reasonable timescales at those surfaces identified as posing a significant risk to patients.

16. The Trust should assess whether there is a need for health surveillance of staff exposed to formaldehyde during tissue handling. Suitable competent advice should be sought and acted upon.

20. When the pharmacy has moved to its new building, full air sampling of the levels of iso-propyl alcohol (IPA) should be carried to determine whether the ventilation is adequate to control exposure. Thereafter, regular e.g. monthly checks should be carried out using gas detector tubes.

21 . The Trust should investigate the reason for health surveillance in the GIP unit not being available. This may have been due to a misunderstanding about

the rules as to when it is required. The Trust should ensure that all those concerned understand the situations in which health surveillance is required.

12. Develop Directorate/Departmental Health and Safety Action Plans

2. It is recommended that Directorates formulate an annual health and safety action plan to identify those measures they are to implement over the next year. Measures should include equipment purchase, work environment improvements, training of staff, undertaking of risk assessments and departmental inspections.

14. The Trust should clarify its expectations regarding plans for health and safety management at directorate and department levels, and then ensure its expectations are met.

54. The Trust should institute a system to ensure that disagreements on the nature of the health and safety precautions required in a particular situation (eg that in theatres about the sterilisation of camera parts and those in the GIP unit about health surveillance and carpet on the lab floor) are brought to the attention of senior management within a reasonable timescale and that an appropriate person is appointed to make the decision in a timely fashion.

13. Establish standards for Health & Safety performance of Directorates and Departments and monitor performance.

3. The Trust should seriously consider setting objective performance standards for health and safety against which performance at Trust, Directorate and Department levels can be monitored.

19. It is felt that the Trust should consider whether it may be beneficial to specifically require directorates/departments to report on past and future health and safety issues at the biannual review sessions, in order to further increase awareness and consideration of this topic.

1. The Trust should continue its efforts to devise and implement suitable systems for monitoring progress against health and safety action plans and performance standards at Trust, Directorate and Department level. The Trust should require formal reporting back by heads of Directorates on health and safety matters against pre-set performance standards. In addition, a practical system of workplace inspections should be implemented at Directorate and Department levels, supported by guidance by relevant competent persons.

2. There would be benefit in calculating "ball park estimates" of typical costs of non-clinical incidents/accidents/ill health and providing this information to managers, since such costs are usually dramatically underestimated. Managers may then use these estimates to calculate likely costs of these events within their own departments. This should help the Trust to implement a strategy to reduce such incidents etc in a prioritised manner.

3. The Trust should develop a set of health and safety performance standards against which it could monitor the performance of its Directorates

4. Proactive departmental / ward inspections should be undertaken at an appropriate managerial level as a means of monitoring compliance with health and safety legislation. The Trust should specify the frequency and quality of inspections and should require formal reporting back on inspections.

5. The Trust should consolidate and extend ward/departmental inspections throughout all Directorates. In doing so, the Trust should clarify its expectations about the content and frequency of ward/other workplace inspections and the actions to be taken following these inspections.

6. Heads of Directorates should be required to proactively monitor their Directorates' performance against benchmark standards on a regular basis. The Trust's health and safety risk management standard - as adopted in the recent Trust -wide risk management self-assessment exercise - could form the basis of this 'self-audit' approach.

17. The frequency of the inspections done by the Control of Infection Team, Occupational Health, the Back Care Co-ordinator and Health & Safety Adviser should be laid down by the Trust and steps taken to ensure they are carried out on time.

18. The Trust should make it clear to all Directors that requests for information / action from the health & safety team should be dealt with in the time specified and that, if this causes difficulties, the timescale should be re-negotiated by the relevant parties and then adhered to.

19. The health and safety performance of Clinical Directors should be regularly monitored.

1 . The Trust should develop its system of 'self-audit' which would ensure proper review of the management arrangements for, and performance in, health and safety at department, directorate and Trust levels. The audits should allow the objective assessment of performance on health and safety against pre-determined targets and standards set by the Trust. Audit findings should be acted upon and progress reviewed.

2. A programme of audits should be drawn up and commenced having regard to the priority issues for the Trust. The scope of the audits should include assessment of management arrangements and adequacies of systems of work etc. Following audits, Directorate/Department action plans should be formulated to ensure that actions are set with target dates. It is recommended that Directorates/Departments set action plans in conjunction with the Health and Safety Department and any other relevant competent persons. In addition, it is recommended that, in the initial stages, the Health and Safety Department, in conjunction with line management, monitor whether progress against these targets is being made.

3. Competent persons, in conjunction with senior management, should review their approach to auditing, ensuring it is undertaken in a strategic manner as part of a rolling programme and that it addresses all elements of the health and safety management system.

7. Plans to introduce the 'Manual Handling Indicators Review' should be implemented.

8. The Trust should formally audit its manual handling policy to identify areas where further work may be required. Such an audit should involve the Trust's manual-handling trainer and other relevant competent persons.

11 . Now that the AIR system appears to be working reasonably well, the Trust should analyse these reports regularly to, for example, identify trends/departments etc where further action may be required and determine whether precautions are resulting in a reduction in the number of incidents.

12. It is strongly recommended that the Trust should require directorates / departments to report back centrally on their health and safety performance, actions taken and plans in place for addressing outstanding or on ongoing health and safety requirements (eg annually)

13. A review mechanism should be established to enable each Directorate to assess its own health and safety performance level and to produce action plans for the work required. The action plans should clearly identify priorities, individual responsibilities for action and timescales for completion. A follow-up system should be implemented to ensure that actions identified are progressed.

4. The Trust should identify ways to benchmark its performance both internally (ie within the Trust) and externally (ie as compared to the performance of other similar Trusts).

14. Review Health and Safety arrangements related to contractors

30. The Trust should review the procedure for the placing of contracts where there may be special risks (such as cleaning work in pathology areas) and ensure that adequately experienced Trust staff are involved in drawing up the specification for the work to be undertaken (eg pathology staff in the above example).

7. The procedures for vetting of contractors before contracts are awarded should be tightened up so that better information is obtained about the health and safety management arrangements of contractors before contracts are awarded..

26. The arrangements for monitoring of contractors' health and safety performance whilst on site should be reviewed and formalised, to ensure that contracts are monitored by a competent, nominated Trust member of staff.

28. The Trust should review and where necessary, consolidate and extend its programme for monitoring the performance of all contracted services on site. The review should ensure that random monitoring of actual systems of work and site conditions is undertaken by relevant (and appropriately trained) Trust employees and that the type and frequency of monitoring is sufficient to ensure that contractors meet previously agreed health and safety standards.

15. Increase Health and Safety Training especially in relation to:

- **Duties of health and safety representatives**
- **Managers and Clinical Directors roles and responsibilities**
- **NEBOSH Diploma status or equivalent for Health and Safety Advisor**
- **New staff**
- **Manual Handling**
- **Pan Hospital Risks**
- **Fire**
- **Violence and Aggression**
- **Risk Management**
- **Glutaraldehyde**
- **Clinical Waste Disposal including sharps.**

2. Once the role of the departmental "health and safety representatives" has been clarified, their training needs in order to perform their duties should be analysed and any necessary training provided within a reasonable, agreed timescale.

11 . The Trust should analyse the training needs of all managers, and others in relation to their health and safety roles and draw up a prioritised programme for delivering any outstanding training needs.

17. It is strongly recommended that the incoming health and safety adviser obtains NEBOSH Diploma status or equivalent, in order to develop the necessary breadth and depth of knowledge to act as competent adviser to the Trust.

18. The Trust should review its arrangements for complying with Regulation 6 of the Management of Health and Safety at Work Regulations 1992 (competent advice on health and safety issues) for the period between the former health and safety adviser's departure and his replacement gaining NEBOSH diploma (or equivalent) status.

21. Many consultants and other senior clinicians were reported to be reluctant to attend the recent risk management workshops due to the pressures of clinical work. The Trust should explore how these groups of staff may be best equipped with the knowledge necessary to fulfil their statutory duties as managers in relation to health and safety.

24. The Trust should develop procedures to ensure that senior managers new to the Trust receive any necessary training in health and safety management as soon as possible, since these new staff will not have had the opportunity of attending past Trust training sessions.

25. The Trust should review whether the current staff induction procedures, where all staff receive identical health and safety briefing, are best suited to the differing needs of eg a senior manager and a porter.

27. Health and safety related training must be clearly targeted. Where the Trust has identified that a particular group or individual needs particular training to enable the Trust to meet its legal obligations, it is recommended that the training be made compulsoryr. The vast majority of staff should understand this compulsion if the reason is properly explained.

34. It is understood that there have been some difficulties in ensuring permanent night staff receive appropriate training in lifting and handling, but the Trust has already identified these and now has arrangements. The Trust should ensure it has identified all those night staff requiring this training and ensure they receive it.

35. The Trust may wish to consider whether the "cascade" training system (as used at present for eg manual handling) could be adopted for some other risks and, if so, formalise this.

42. The Trust should ensure that the induction training for junior doctors does not omit anything which is relevant from the general health and safety

induction course given to other new staff.

48. The Trust should ensure that all junior doctors are given adequate training in pan-hospital risks and in the risks specific to the Directorate in which they are working. This should include time for thorough reading of relevant policies and checking that their contents have been understood. The Trust should also ensure that each Clinical Directorate has an adequate system for disseminating health and safety information and that staff have understood it.

49. The Trust should review the question of whether junior doctors need to attend a fire lecture annually and, if it decides not, should ensure there are adequate other means of instructing them about their role in the event of a fire.

50. The Trust should ensure that all staff who work in Accident and Emergency have contact with the public and who have not attended the two day training course on how to deal with violence do so in the next few months. Thereafter, arrangements should be made for new staff to attend such training as soon as possible.

51. The Trust should review the training given to the contract security staff who work in Accident and Emergency to ensure that it is sufficient to allow them to diffuse situations where possible and, if required to do so, safely eject people.

53. The Trust should ensure that, whether the security staff are provided by contractors or are their own employees, the standards of training required to deal with all the levels of violence with which they are expected to deal are laid down and met.

55. Directorate business managers should ensure that within each department, there is a sufficient number of trained manual handling co-ordinators. It is felt that at least one trained manual-handling co-ordinator should be in place in every relevant ward/department. It is recommended that the Trust aims to train a minimum of two such co-ordinators to allow for staff departures, absences etc. Directorates / departments should ensure that sufficient time is made available for manual handling co-ordinators to train colleagues (including those on night shift) in their work areas, in accordance with the requirements of the Trust's manual handling policy. Appropriate training records should be kept to assist managers in pro-actively identifying training needs of staff.

56. The health and safety training needs of key nursing staff should be identified and a subsequent programme of targeted training devised and implemented.

59. It is recommended that directorates / departments consult with relevant

health and safety 'competent persons' (eg infection control team, Trust health and safety adviser) to formulate comprehensive, customised health and safety induction training programmes for new starters in their directorates / departments..

60. It is not clear whether all members of the Trust risk management team have received training in risk management as indicated in the Trust's risk management strategy; the Trust should establish the current status and provide any outstanding training where necessary.

61 . The Trust should identify which employees require training in dealing with violence and aggression, and to what level. Priority attention should be given to those employees identified (via risk assessment) as being most at risk, and appropriate levels of targeted training should be provided within specified timescales. Training should be targeted to include for example, 'breakaway' and 'control and restraint' as appropriate. In particular, it is recommended that in the accident and emergency department, appropriate annual refresher training should be provided for existing staff. In addition, it is recommended that all staff new to the accident and emergency department are provided with appropriate violence and aggression training within their first 3 months regardless of whether they are working day or night shifts.

63. The Trust should ensure that all staff at risk of exposure to glutaraldehyde are informed of the health risks involved and are trained in safe methods of its control. Only staff who have completed such an education and training programme should be allowed to work with glutaraldehyde.

8. It is recommended that the Trust examine whether there may be benefit in the more widespread use of a "competence matrix" for documenting the competencies and training history of staff, to enable managers and staff to easily identify any training needs.

28. Clinical Directors are responsible for the management of risks affecting their medical staff but it is understood that none (or few) have attended the Risk Management Workshop designed for Senior Managers. This should be rectified promptly and an effective system introduced to ensure that Clinical Directors attend the course within a reasonable timescale.

35. There are still some junior doctors who join Accident and Emergency, and other departments, who do not have an adequate knowledge of how to dispose of clinical waste. The Trust should ensure that the induction course, which we understand now does include training in this subject, includes testing/assessment of the doctors' understanding of the subject and their ability to put it into practice.

37. The Trust should assess the effectiveness of the new system for allocating bank nurses and ensuring they are adequately trained.

56. The Trust should ensure that all staff who are required to handle or move clinical waste are thoroughly trained in the risks involved and the precautions that need to be taken. The level of training for an individual member of staff will depend on their involvement with clinical waste. Staff need to be aware of all the elements of the clinical waste policy that are relevant to them.

27. Those responsible for investigating incidents should receive training in identifying the root causes of incidents, so that any causative weakness in the management system may be identified and corrected.

52. Senior doctors should be reminded of the need to safely dispose of clinical waste they create.

18. The Trust must continue its efforts to educate all clinical staff about the vital need for proper disposal of sharps, to reduce the risk of needlestick injuries and any subsequent infections.

16. <u>Specific departmental corrective actions required</u>

a) Facilities Directorate

39. Estates should ensure that the replacement computer system for planned preventative maintenance is brought on-line before problems in getting up-to-date lists of necessary work can create a health and safety risk.

1 . Concerns continue to be expressed by staff about the working temperatures and level of ventilation in phase I buildings. The Trust should continue to seek to resolve these concerns.

3. The Trust should identify any remaining situations where a Permit-to-Work or similar formalised controls are needed to adequately ensure the safety of Trust and other maintenance staff, and draw up safe systems of work for these tasks (situations to consider may include work on drains from pathology facilities and on those handling radioactive wastes).

17. It is understood that the incinerator operators North West Energy respond to boiler alarm calls, whilst the boiler attendant is at the Ladywell site. Estates should confirm the formal procedure for handover and ensure that NW Energy staff are adequately trained at responding to alarms.

20. The Trust review its policy on restricted window openings for preventing falls, to ensure that precautions are commensurate with likely

risks. The Trust should draw up a planned preventative maintenance scheme for window restrictors, and simple records should be kept.

23. A powered hydraulic access platform used frequently on site has slots for optional outriggers. The supplier has advised that, given the generally level ground at the hospital, the outriggers are not needed. Given the high hazard, the exact conditions when outriggers are required should be established in writing from the supplier.

24. At the gas pressure boosters for the steam boilers, the Trust should confirm that there is a low pressure detector on the incoming gas supply. It is also thought that the Trust should instal a gas detection alarm, the alarm being set as low as practicable (eg 10% of Lower Explosible Limit is suggested).

25. The Trust should ensure that suitable planned preventative maintenance checks are undertaken on all ladders. Simple records should be kept of these checks.

26. The Trust should investigate the reasons for staff seen clambering on top of clinical waste bins and take action to prevent this practice.

29. The Trust should establish whether the fans and associated electrical equipment in fume cupboards where flammable liquids are used may provide a source of ignition of flammable vapours (this could not be confirmed during our inspections).

57. The Trust should consider installing "satellite" stores for clinical waste to prevent the waste accumulating in unsuitable places such as corridors.

62. Where practicable, lidded bins should be used for the temporary storage of clinical waste in public areas.

63. Good housekeeping should be maintained in designated storage areas. Arrangements should be made for any surplus equipment to be removed promptly from wards. Alternatively, equipment should be stored in a safe location. In general, sluice rooms and bathrooms should not be used as storage rooms.

9. The Trust must ensure that potentially high risk work such as cleaning in pathology areas is adequately monitored (in terms of health and safety) by appropriate Trust personnel. In the case of the above example this will involve monitoring at night when cleaners are working.

10. For potentially high risk work such as cleaning in pathology areas, the Trust should set up procedures to ensure that contractor personnel have received adequate training and instruction on the specific risks involved

before undertaking this work, and to ensure that the contractor provides adequate supervision to ensure safety.

b) Pathology Directorate

9. Centrifuge buckets in the clinical biochemistry department are currently cleaned using a glutaraldehyde method, involving a significant risk to health. The Trust's plan for switching to a safer, glutaraldehyde free method should be implemented as a matter of prioirity.

10. The potential health and safety problems in the old mortuary facility have been recognised for some time. The plan for the provision of new facilities which the Trust has drawn up should be implemented as soon as is reasonably practicable.

11 . Concerns were expressed by staff in pathology about hot working temperatures and inadequate ventilation in certain laboratories. These concerns should be investigated.

12. The Trust must implement the recommendations contained in the report by BioSafe Safety Services to rectify the existing problems in the containment level 3 laboratory, regarding sealability for fumigation and the ventilation system. It was understood that the required work was to be completed by 31 March 1998, and no slippage in this date should be considered.

13. The Trust should assess the possible contamination risks associated with the use of absorbent seat coverings in pathology areas and, if necessary, replace such upholstery with impervious materials which readily show contamination and may be easily decontaminated.

14. The risk assessment for possible violence/aggression in pathology should be reviewed in light of concerns expressed by staff about easy public access from heart
care.

12. The Trust should review the procedures used for thorough examination and testing of its microbiological safety cabinets (especially in the Containment level 3 laboratory), and seriously consider whether Operator Protection Factor tests should be carried out at regular intervals to determine whether control is adequate.

13. It was not clear when the contamination monitors used in unsealed radiation source areas were last calibrated (in immunology and clinical biochemistry). The expected frequency of calibration should be determined

with the aid of the radiation protection adviser and manufacturer. A check of Trust procedures should be made, to ensure that calibration checks are being performed at appropriate intervals.

14. Trust should ensure that appropriate monitoring of formaldehyde levels in histopathology has been carried out, and any necessary action taken to protect health.

15. The local exhaust ventilation systems associated with the histopathology specimen handling benches should be thoroughly examined and tested by a competent person in accordance with the Control of Substances Hazardous to Health Regulations 1994 (COSHH).

c) Emergency Medicine

31 . There is a significant risk to staff in Accident and Emergency who have to lift patients onto trolleys and/or who have to administer resuscitation while standing on a horizontal strut of the trolley. This is because the height of the trolley is fixed and is too high. We understand that a business case for ensuring that all trolleys are adjustable in height is being put forward. However, this matter should now be dealt with as a matter of priority and in the meantime measures need to be taken to reduce the risks as far as is reasonably practicable (particularly with regard to the need to stand on the strut). At least here it will probably be necessary to provide a platform on which to stand.

32. There is some feeling that the reduced level of staffing in Accident and Emergency at night, when violent occurrences are more prevalent, puts night staff at risk, particularly as it is not always possible to close the minor treatment area. In addition, some night staff feel vulnerable in the minor treatment assessment room and by the toilets. The Trust should investigate these matters and, if necessary, take remedial action.

33. There is some feeling among the staff in Accident and Emergency that there is insufficient visible support from or concern shown by senior management outside the Department. This is said to increase the feeling of stress and the Trust may wish to consider whether they can address this in their policy on management of stress (it was suggested by some staff that the Trust should send a warning letter to people who have been abusive).

53. The Trust should assess the apparent ventilation problem in the Accident

and Emergency department's resuscitation room and then identify and implement suitable corrective measures.

54. The Trust should review the adequacy of its provision of moving and handling aids in the Accident and Emergency department with a view to providing the necessary control measures to ensure their compliance with the Manual Handling Operations Regulations 1992.

10. The Trust should urgently review the manual handling situation in the Accident and Emergency department, where only 1 out of 23 trolleys is of the "rise and fall" type, with a view to providing suitable equipment in those areas where unacceptably high risks to health or safety of staff have been identified.

d. Gastroenterology Directorate

36. The sharps boxes on the gastroenterology ward should be repositioned at such a height that children who are not old enough to realise the danger cannot reach in.

39. Clinical waste awaiting collection from the end of the gastroenterology wards should be segregated.

e) Pharmacy

40. It is understood that in the new pharmacy, dispensers will not have to stretch quite so far to reach some of the products on the ready-use shelves as they did in the old premises, but that the need for reaching has not been removed and so there may be some risks of musculoskeletal disorders. The Trust should assess these risks promptly and ensure that any additional precautions are implemented.

41 . The "recipes" for the drugs the pharmacy makes up do not contain spillage procedures: this should be rectified.

42. The Trust should reconsider the type of container used for drugs surplus to requirements. If it decides to continue the use of bins these should be clearly labelled as to their contents.
43. In the CIVAS Unit in the pharmacy, highly flammable liquids should be stored in a half hour fire resisting container.

f) GIP Corrective Action

44. The examinations required by Regulation 9 of COSHH do not appear to have been completed for the fume cupboard used in GIP for work with glutaraldehyde: this should be rectified.

45. The carpet on the floor of the lab in GIP where glutaraldehyde is used should be removed and replaced with impervious material allowing easy cleaning of any spillage.

46. The Trust should review the procedure for emptying the right hand tray of glutaraldehyde in the fume cupboard in GIP, to reduce the risk of spillage caused by the position of the taps.

47. The type of mask being used in GIP to provide respiratory protection, mainly in the case of spillage, against glutaraldehyde has a "use by" date and is disposable, although not necessarily after one wearing. The unit did not appear to be aware of this. The same type of mask was being used in most of the other areas using glutaraldehyde which we visited, with similar problems. The Trust should ensure that these masks remain in their original packing until needed, that these masks are not out of date and that, if the masks are to be used more than once, staff are given adequate instruction on how to decide when to dispose of them.

48. The build up of fumes of glutaraldehyde in the room in GIP housing the fume cupboard should be prevented eg by putting a cover over the gap in the front of the cupboard at night.

49. The ventilation in the room in GIP where glutaraldehyde is used appears to be poor and should be reviewed.

g. Endoscopy Unit

50. In the Endoscopy Unit the mask in the spillage kit for glutaraldehyde was out-of date. There should be a procedure for ensuring it remains in-date.

51 . The cabinets for cleaning endoscopes in the Endoscopy Unit do not appear to have been subject to the annual examination required by Regulation 9 of COSHH : this should be rectified.

h) Theatres

52. In theatres 5, 6 and 7 open tanks of glutaraldehyde are still used to clean some of the camera equipment used in arthroscopy. This is unacceptable especially as it would seem that there is more than one solution to this problem already known. One of the available solutions should have been implemented some time ago. We were assured that the matter would be dealt with as a matter of urgency.

i) Radiology Directorate

55. The Trust should ensure that the Trust's generic local rules for the use of mobile x-ray sets are in fact applicable to all work areas where mobile sets may be used (eg Ladywell) or whether the generic local rules need to be 'customised' for certain work areas or in certain circumstances.

5. Concerns were expressed by some radiology staff about the resources available for investment in equipment for the long term patient dose reduction strategy. The Trust should continue its bench marking exercises in order to ensure doses remain as low as is reasonably practicable, with equipment being replaced where necessary for health and safety reasons.

4. The Trust should review the existing procedures for checking that staff who direct exposures to ionising radiations have adequate knowledge of the Ionising Radiation (Protection of Persons Undergoing Medical Examination or Treatment) Regulations 1988 (POPUMET). It is recommended that lists of all personnel who have been checked in this way are made available to clinical radiology staff.

j) University Departments

11. The Trust should satisfy itself of the adequacy of the local rules and procedures adopted by Manchester University in relation to their use of unsealed radioactive sources in shared buildings, and ensure that adequate liaison procedures exist between the two bodies.

k) Radioisotopes Department

6. In the non-imaging radioisotopes department, care should be taken to ensure that items of personal clothing (coats etc) are not stored in areas where unsealed radiation sources are handled and then worn around other parts of the hospital (to reduce the spread of any contamination). The relevant RPA should advise on this.

7. In the non-imaging radioisotopes department, the means of transporting waste which could present a risk of infection and a (probably low level) radiation risk should be reviewed. The present sack barrow lined with absorbent chip-board would be better replaced with a trolley which would contain any spillage and is lined with impervious material.

l) All Departments/Directorates

15. The Trust should review its compliance for first aid measures in accordance with the Health and Safety (First Aid) Regulations 1981, and document its arrangements for compliance.

16. The Trust should ensure that all workstations with display screen equipment (DSE) are assessed in accordance with the Display Screen Equipment Regulations 1992, and that appropriate action is taken to reduce, as far as reasonably practicable, any associated risks.

30. The Trust should ensure that all staff on call at night know that they can gain entry to the main hospital via Entrance 3 (with the appropriate door code) and that they can be escorted to their destination by a member of the security staff (some relevant staff were unaware of this).

38. Directorates and departments should ensure that storage areas are large enough to allow safe access, storage and removal of the contents and that those whose contents present a risk are locked.

60. The Trust should ensure that it has adequate monitoring safeguards in place for patients who may be prone to "wandering". Assessments of patients should include consideration of this issue and where patients may be at risk. This assessment, together with the appropriate control strategies, should be documented, brought to the attention of all relevant staff and implemented.

23. Directorates should set up a system of routinely checking hot water discharge temperatures at baths used for patients, as a means of monitoring the continued effectiveness of the thermostatic mixing valves used in

helping prevent scalds.

9. The Trust should review its equipment shortages with respect to moving and handling equipment and draw up a prioritised, Trust-wide action plan, based on a risk assessment approach, with the aim of providing those resources essential for ensuring it's compliance with the Manual Handling Operations Regulations 1992.

67. The Trust should explore mechanisms by which examples of good health and safety practice, already adopted in a part of the Trust, may be speedily and effectively communicated to other relevant parts of the Trust.

Appendix 4.26

Appendix 5 Main requirements of Clinical Governance 1999/2000

Main Components of Clinical Governance	Trust	HA	PCG	PCT
1. Clear lines of responsibility and accountability for the overall quality of clinical care through:				
• The NHS Trust Chief Executive carries the ultimate responsibility for assuring the quality of services provided by the Trust	✔			
• A designated senior clinician responsible for ensuring that systems for clinical governance are in place and monitoring their continued effectiveness	✔	✔	✔	✔
• Formal arrangements for NHS Trust, PCG and PCT Boards to discharge their responsibilities for clinical quality through a clinical governance committee	✔		✔	✔
• Regular reports to NHS Boards on the quality of clinical care given the same importance as monthly financial reports	✔		✔	✔
• An annual report on clinical governance	✔	✔	✔	✔
2. A comprehensive programme of quality improvement activities which includes:				
• Full participation by all hospital doctors in audit programmes, including speciality and sub-speciality national audit programmes endorsed by the Commission for Health Improvement	✔	✔		✔
• Full participation in the current four National Confidential Inquiries	✔	✔		✔
• Evidence-based practice is supported and applied routinely in everyday practice	✔	✔	✔	✔
• Ensuring the clinical standards of National Service Frameworks and NICE recommendations are implemented	✔	✔	✔	✔
• Workforce planning and development (i.e., recruitment and retention of appropriately trained workforce) is fully integrated within the NHS organisation's service planning	✔	✔	✔	✔
• Continuing Professional Development: programmes aimed at meeting the development needs of individual health professionals and the service needs of the organisation are in place and supported locally	✔	✔	✔	✔
continued				

Main Components of Clinical Governance	Trust	HA	PCG	PCT
• Appropriate safeguards to govern access to and storage of confidential patient information as recommended in the Caldicott Report on the Review of Patient-Indentifiable Information	✔	✔	✔	✔
• Effective monitoring of clinical care with high quality systems for clinical record keeping and the collection of relevant information	✔		✔	✔
• Processes for assuring the quality of clinical care are in place and integrated with the quality programme for the organisation as a whole	✔	✔	✔	✔
• Participation in well-designed, relevant R&D activity is encouraged and supported as something which can contribute to the development of an "evaluation culture"	✔	✔	✔	✔
3. Clear policies aimed at managing risks:				
• Controls assurance which promote self-assessment to identify and manage risks	✔	✔	✔	✔
• Clinical risk systematically assessed with programmes in place to reduce risk	✔			✔
4. Procedures for all professional groups to identify and remedy poor performance, for example:				
• Critical incident reporting ensures that adverse events are identified, openly investigated, lessons are learned and promptly applied	✔	✔	✔	✔
• Complaints procedures, accessible to patients and their families and fair to staff. Lessons are learned and recurrence of similar problems avoided	✔	✔	✔	✔
• Professional performance procedures which take effect at an early stage before patients are harmed and which help the individual to improve their performance - whenever possible - are in place and understood by all staff	✔	✔	✔	✔
• Staff supported in their duty to report any concerns about colleagues' professional conduct and performance with clear statements from the Board on what is expected of all staff. Clear procedures for reporting concerns so that early action can be taken to remedy the situation	✔	✔	✔	✔

Clinical Governance Reports – 1999/2000	Relevant To
• An explanation of the leadership, accountability, and working arrangements for implementing clinical governance	ALL NHS organisations
• Work to ensure that clinical decision making is increasingly evidence based. This should include local action as well as progress on implementation of National Service Framework (NSFs) and NICE guidelines	ALL NHS organisations
• Progress on integrated planning for quality including information establishing explicit links to HIMPs and where appropriate, National Service Frameworks	ALL NHS organisations
• Progress on continuing professional development and lifelong learning and on designing the ways in which staff development, educational, and workforce solutions are being used to support clinical governance	ALL NHS organisations
• Participation in and impact of multi-disciplinary clinical audit programmes – including national speciality and sub-speciality audits – and national confidential enquiries	ALL NHS organisations
• The identification of particular services in which there are identified shortfalls in quality and of deficits in other clinical governance support mechanisms (e.g., risk management, clinical audit)	ALL NHS organisations
• Evidence of active working with patients, users, carers, and the public	ALL NHS organisations
• An account of the mechanisms that have been established to ensure that lessons are being learned from complaints, adverse incidents, and enquiries into services.	ALL NHS organisations

Appendix 6

Salford Royal Hospitals NHS Trust

RISK MANAGEMENT POLICY
94TD(G)6

Originated By : Henry Stahr — Date:28/8/96 Issue 4 29/6/00
Authorised By: WH Sang — Date: 4/7/00

Master document held by Corporate Affairs Manager

Policy Statement

Controls assurance within Salford Royal Hospitals NHS Trust is achieved through an interdependent tripartite division of responsibilities for the management of all risk in which:

- All staff will act responsibly:

  Risk management will form part of the daily duties of all staff. They will be able to identify and assess risks, take local economic action to reduce those risks to an acceptable levels and inform appropriate lead clinicians and managers of unacceptable risks outside of their local ability to control.

- Lead clinicians and managers will manage risks responsibly:

  Lead clinicians and managers will assess their management of risk using the Trust's EFQM self-assessment framework and agree actions, as part of their business planning process, to minimize risks within their own areas of responsibility. They will ensure that agreed risk control measures are carried out and will ensure that all staff within their area of control understand and carry out their individual responsibility for the management of risk.

- Corporate management will ensure that standards of responsible risk management are applied at all levels within the Trust.

  Corporate management will apply controls assurance mechanisms to assure the Trust Board that risks are being managed adequately. The Corporate Risk Management Team will coordinate these controls assurance mechanism and through its specialist risk management teams will provide advice to lead clinicians and managers on effective risk control mechanisms, establish standards of responsible risk management practice and audit compliance with those standards.

Salford Royal Hospitals NHS Trust

RISK MANAGEMENT PROCEDURE SUMMARY

Originated By : Henry Stahr Date:28/8/96 Issue 4 29/6/00
Authorized By: WH Sang Date: 4/7/00

Master document held by Corporate Affairs Manager

Responsibility	Action	Frequency	Form	Controls Assurance Verification
All Staff	Protect self and others from risks	Continuous		
	Report hazards/incidents and near misses to responsible manager/clinician and to the Trust	Continuous	Hazard/Incident Report form	Internal audit External audit
	Ensure attendance at mandatory training	Annually	Personal Development Plan	Internal audit External audit

Directorate/departmental Managers (all areas)	Local risk assessment	Annually & when changes in practice have been introduced	Risk Assessment Form available from appropriate specialist risk management team	Internal audit External audit
	Prioritise risk identified	Annually & when changes in practice have been introduced	Risk Prioritisation Index	Internal audit External audit
	Local risk control plans based on risk assessment	Monthly review	Risk Management Action Plans	Internal audit External audit
	Local written policies and procedures for key risk areas which communicated and understood by all staff.	Reviewed annually	Trust policy and procedure format	Internal audit External audit
	Report to Risk Management Team serious risks which are outside of the Directorate/Department's ability to controls	Annually & when changes in practice have been introduced	Risk Management Highlight Report	Internal audit External audit

	Comply with Risk Management Standards, Health and Safety Standards and Standing Financial Instructions	Reviewed annually	Standards Checklists available from Risk Manager.	EFQM Self-assessment. Internal audit External audit
	Ensure staff attend mandatory Training	Reviewed annually	Local staff record	EFQM Self-assessment. Internal audit External audit

Clinical Areas (additional to Directorate/Departmental requirements	Have a local policy and procedure for reporting clinical hazards/incidents and near misses to Clinical Director.	Review annually	Trust policy and procedure format	Internal audit External audit
	Take part in Clinical Audit	Monthly	Audit record	Internal audit External audit

above)	Prioritise clinical risk identified	Annually & when changes in practice have been introduced	Risk Prioritisation Index	Internal audit External audit
	Local written clinical protocols and guidelines for key risk areas which communicated and understood by all staff.	Reviewed annually	Care pathways or protocols/ guidance notes	Internal audit External audit
	Report to Risk Management Team serious clinical risks which are outside of the Directorate/Department's ability to control	Annually & when changes in practice have been introduced	Clinical Risk Management Highlight Report	Internal audit External audit
	Provide patients with written information on risks and benefits of common elective treatments and procedures	Reviewed annually	Information leaflet	Internal audit External audit
	Comply with Clinical Negligence Scheme Risk Management Standards	Reviewed annually	Standards Checklists available from Risk Manager.	EFQM Self-assessment. Internal audit External audit

Specialist Risk Management Teams	Provide advice on assessment and management of risks.	Continuous		
	Review policies and procedures to ensure that they are in line with good practice guidelines	Annually	Audit record	Internal audit External audit
	Audit compliance with policies and procedures	Annually	Audit record	
	Carryout risk assessment	Annually & when changes in practice have been introduced	Risk Prioritisation Index	Internal audit External audit
	Report to Risk Management Team serious risks which are not being controlled adequately	Annually & when changes in practice have been introduced	Clinical Risk Management Highlight Report	Internal audit External audit
Trust Risk Management Team	Coordinates all risk management activities of the Trust and assesses their effectiveness	Continuous		Corporate EFQM Self-assessment
	Prioritises the risk portfolio of the Trust	Monthly	Risk Prioritisation Index	Internal audit External audit
	Report to the Trust Board serious risks which are not being controlled adequately	6 monthly	Trust Board Risk Management Highlight Report	Internal audit External audit

	Develops for Trust Board approval the Trusts Risk Management Strategy and Policies.	Every three years and reviewed annually.	Policy and procedure formats	Internal audit External audit
	Report to the Trust Board serious risks which are not being controlled adequately	Annually & when changes in practice have been introduced	Clinical Risk Management Highlight Report	Internal audit External audit
	Monitors actions that actions required by the Trust Board and Management Board are carried out by the Trusts responsible officers	Monthly	Risk Management Action Plan	& when changes in practice have been introduced

Trust Board	Signs off Controls Assurance Statement that risks are being adequately managed.	Annually	Controls Assurance Statement	External audit
	Determines budgets to be applied to control the overall risk portfolio of the Trust	Monthly	Risk Prioritisation Index	Internal audit External audit
	Ensures that risk control measures agreed are carried out by its officers'	6 monthly	Trust Board Risk Management Highlight Report	Internal audit External audit
	Reports to Regional Office serious risks which are outside of the Trust's ability to control	Annually		External audit

Salford Royal Hospitals NHS Trust

CONTROLS ASSURANCE & RISK MANAGEMENT GUIDANCE NOTES

Originated By : Henry Stahr Date:28/8/96 Issue 4 29/6/00
Authorized By: WH Sang Date: 4/7/00

Master document held by Corporate Affairs Manager

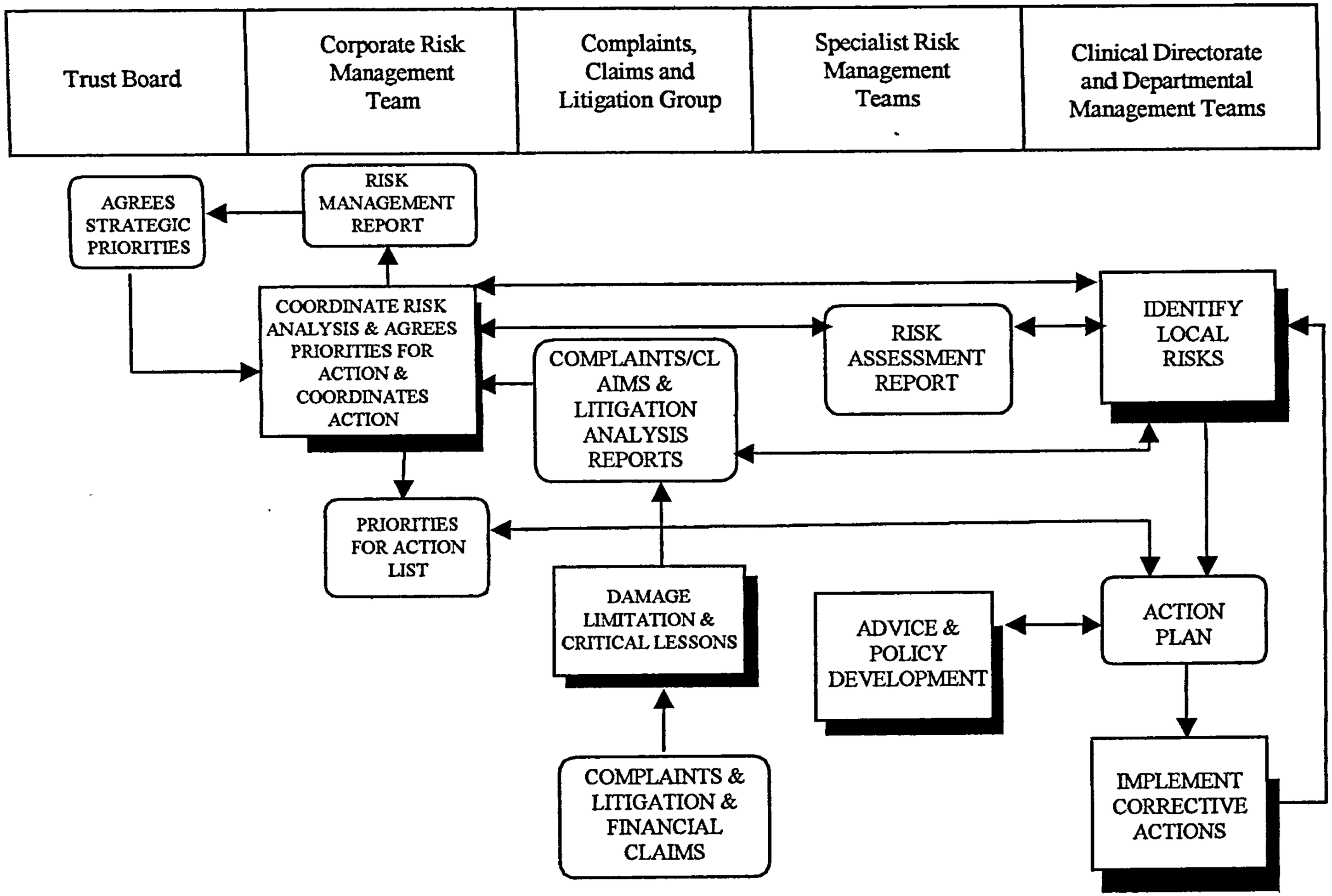
1.0 Salford Royal Hospitals NHS Risk Management System

1.1 The risk management system consists of processes and structures which help to identify risks, then ranks them in order of importance, evaluates the options for control of these risks and then ensures that agreed action is taken. Finally it evaluates how effectively the agreed control measures have been.

1.2 The risk management system is supported by the following key elements of the management structure:

1.2.1 Trust Board and Chief Executive
1.2.2 Risk Management Team
1.2.3 Claims Management Team
1.2.4 Specialist Risk Management Groups
1.2.5 Directorate & Departmental Managers and Clinicians

Salford Royal Hospitals NHS Trust Risk Management System



Appendix 6.10

2.0 Trust Board and Risk Management Steering Group

2.1 The overall responsibility for risk management lies with the Chief Executive and the Trust Board which co-ordinates its responsibilities through its Risk Management Steering Group which is a formal sub-committee of the Trust Board.

2.2 The members of the Trust Board Risk Management Steering Group are:

2.2.1 Chief Executive
2.2.2 Non-Executive Director
2.2.3 Director of Finance
2.2.4 Executive Medical Director
2.2.5 Risk Manager

2.3 This group receives assessments of how well significant risks are being controlled across the Trust as a whole and is able to help prioritize action sensitive to the balance of overall clinical, organisational and financial needs and circumstances faced by the Trust as a whole. They can bring resources to resolve unacceptably high risks faced by the Trust and can directly monitor how well risks are being managed on the Trust Board's behalf by its lead clinicians and operational manager.

2.4 The Trust Board receives once every six months a report on the status of the Trust's risk control measures together with recommendation for action which needs to be taken by the Board to ensure acceptable risk control measures are in place. The report uses the Risk Management Trust Board Highlight Report Form Appendix 1

2.5 Because within Salford Royal Hospitals clinical, organisational and financial risk management are integrated, the Board level responsibility for Controls Assurance is taken by the Chief Executive with Board level responsibility for clinical governance taken by the Executive Medical Director and Board level responsibility for financial controls being with the Director of Finance.

2.6 The key responsibilities of the Board and Chief Executive are to ensure:

2.6.1 There is a strategy for risk management and that the strategy is implemented.
2.6.2 Compliance with the requirements of legislation and other regulations.
2.6.3 Achievement of standards set for health and safety, clinical, organisational and financial controls.

2.7 Achievement of these responsibilities are assessed and reviewed under the following section of the EFQM Excellence Model:

Policy and Strategy – based on present and future needs and expectations of stakeholders (EFQM 2a)		
Approach	**Deployment % Implemented**	**Measured effectiveness**
Risk Management Policy and Strategy		Percentage compliance with all: a) Risk Management Standards b) CNST Standards: Level 1 Level 2 Level 3 c) Health & Safety Standards d) Standing Financial Instructions

3.0 The Risk Management Team

3.1 The Risks Management Team coordinates the identification of risks and any agreed action taken to deal with and reduce such risks across the Trust. It also develops the risk management system in line with the Trust's strategy and the changing environment in which the Trust operates. The membership of the team is made up of core members and specialist members.

3.2 Core members attend all meetings and provide continuity and coordination between the whole portfolio of risks being managed by the Trust. Core Membership of the Risk Management Team is:

3.2.1 Risk Manager
3.2.2 Executive Medical Director
3.2.3 Management Accountant
3.2.4 General Manager - Surgical Services
3.2.5 General Manager - Medical Services
3.2.6 General Manager - Diagnostic and Therapeutic Services
3.2.7 General Manager - Facilities
3.2.8 University/Research & Development Liaison
3.2.9 Human Resources Manager
3.2.10 Training and Development Manager
3.2.11 Corporate Affairs Manager - Policies and Procedures
3.2.12 Trust Solicitors
3.2.13 Internal Audit

3.2.14 Professional Nursing Lead
3.2.15 Health & Safety

3.3 Specialist members provide expertise in a particular field of risk management and provide expert advice to the team on the best way to manage those particular areas of risk. Every six months each specialist team provides a risk management highlight report on risk within their specialism, using Specialist Risk Management Highlight Report form (Appendix 2) The specialist include the chairs of specialist risk management groups and people with particular areas of expertise.

3.3.1 Clinical Governance

3.3.1.2 Senior Midwife - Obstetrics and
3.3.1.3 Emergency Resuscitation Officer
3.3.1.4 Infection Control Officer
3.3.1.5 Clinical Director of A&E Major Incident Planning
3.3.1.6 Medical Equipment Committee Chair
3.3.1.7 Senior Pharmacist - Drugs and Medicinal Products
3.3.1.8 Blood Transfusion Committee

3.3.2 Organisational Controls

3.3.2.1 Health and Safety Adviser
3.3.2.2 Fire and Security Issues Adviser
3.3.2.3 Radiation Protection Adviser
3.3.2.4 Assistant General Manager Facilities - Building, Plant, Installed Services, Non-Medical Equipment
3.3.2.5 Catering Manager -Catering and Food Hygiene
3.3.2.6 Manual Handling Officer
3.3.2.7 Complaints Manager
3.3.2.8 Information Technology and Records Management
3.3.2.9 Senior Manager - Capital Projects

3.3.3 Financial Controls

3.3.3.1 Internal Auditor

3.4 Role of the Risk Management Team is to manage the risk management system on behalf of the Chief Executive in order to:

3.4.1 Coordinates all risk management activities of the Trust.

3.4.2 Ensures that standards for risk management and control and related legislation and regulations are brought to the attention of the responsible clinician/manager and through its specialist risk management audits compliance with these standards.

3.4.3 Standardises the Risk Priority Index using the Risk Priority Index form (Appendix 3) set by Specialist Risk Management Teams.

3.4.4 Assesses the whole risk portfolio of the Trust and recommends risk control priorities to the Trust Board and Management.

3.4.5 Evaluates risk control measures available to control agreed risk priorities and recommends the action to be taken by the Trust Board and Management Board.

3.4.6 Bring to the attention of the Chief Executive and responsible manager/clinician inadequately controlled risks identified via the risk management system.

3.4.7 Assures the Trust Board that risk control mechanisms are effective.

3.4.8 Ensure coordination between systems of insurance and claims management's, complaints handling, litigation, hazard, occurrence and adverse incident reporting and managerial/clinical decision making.

3.4.9 Recommends key performance indicators related to risk management and controls assurance which should form part of the EFQM Self-assessment and review process. For the Risk Management the corporate indicator is:

Key Performance Results – Key Performance Indicators (EFQM 9b) (Key operational results which make it likely that key outcomes are achieved)		
Results	**Trends**	**Targets**
Value of claims (number) against the Trust for clinical negligence.		

Society Results – Performance Indicators (EFQM 8b) (Internal measured used to give an indication of the perception of society of the organisation)		
Results	**Trends**	**Targets**
Average Risk Priority Index of top ten risks facing the Trust		
Value of claims (number) against the Trust for Public Liability.		

People Results – Performance Indicators (EFQM 7b) (Internal measured used to give an indication of the perception of people of the organisation)		
Results	**Trends**	**Targets**
Value of claims (number) against the Trust for Employers Liability		

4.0 Criteria for Reference to the Risk Management Team

4.1 Risks should be managed by the ward, department or directorate in which the risk arises. However, some risks cannot be effectively managed within a specific clinicians or managers span of control. In such cases those risks should be reported to the risk management team. The following risks should be reported to the Risk Management Team:

4.1.1 Any significant risk which cannot be managed within the Directorates own resources or budgets.

4.1.2 Any significant risks which cross more than one of the General Manager's/Executive Directors spans of control.

4.1.3 Any risks control decisions to retain risks which could result in a breach of legislation, associated regulations or risk management standards.

4.1.4 Any risk control decision which may result in the transfer of that risk to another's clinical or management areas of responsibility.

4.1.5 Any significant risks whose control requires cooperation which cannot be gained from others at the operational level.

5.0 Claims and Litigation Management

5.1 Claims and litigation management is represented on the Risk Management Team by the Corporate Affairs Manager.

5.2 The Corporate Affairs Manager reports to the Executive Medical Director on claims and litigation management issues and specifically:

5.2.1. Develops and maintains a policy on handling of clinical negligence, personal injury and insurance claims against the Trust.

5.2.2. Ensures that procedures comply with standards set by NHS Litigation Authority.

5.2 3 Determines when legal advice, related to claims against the Trust should be sought.

5.2.4 Agrees settlements up to a specified figure determined by the Trust Board.

5.2.5 Reviews claims after closure and ensures, through the Risk Management Team, that preventative actions are taken and general lessons are learned and disseminated.

5.2.6 Maintains records and a database relating to claims and their outcomes.

5.2.7 Provides regular reports to the Risk Management Team on the number and aggregate value of claims, their progress and eventual outcome. For major claims this should be made within 3 months of notification, with updates every 3 months

on those in which proceedings have been served or in which settlement is expected within the next 12 months.

5.2.8 Ensures that the checklist in Annex C of EL(96)11 is complied with for all settlements likely to be between £1,000 and the Trust's delegated upper settlement limit.

5.2.9 Notifies the NHS Litigation Authority of claims which have unusual and new features which if not correctly handled might set an unfortunate precedent for other NHS litigation or, which appear to represent a test case for potential class action.

5.3 If litigation for alleged negligence or failure to comply with statutory requirements is considered to be a possibility, this must be reported in writing to the Chief Executive. A register of potential litigation will be kept by the Corporate Affairs Manager.

5.4 Legal advice can be commissioned by the Corporate Affairs Manager or any Executive Director. In addition the Human Resources Manager and the Capital Development Director can commission legal advice within their area of responsibility.

5.5 The point of contact for solicitors and clients involved in litigation within the Trust will be the Corporate Affairs Manager who will:

5.5.1 Provide support for staff involved

5.5.2 Coordinate agreed action

5.5.3 Provide an analysis of the key learning points for the organization

5.5.4 Keep the Risk Manager informed of progress, issues and recommended action to avoid future incidents.

5.6 The Claim Manger can agree out of court settlements up to £20,000.
The Chief Executive can agree out of court settlements between £20,001-£50,000.
Out of court settlements above £50,001 requires Trust Board approval.
All such payments must conform to Standing Financial Instructions.

5.7 All incidents related to Employer and Public Liability, Clinical Negligence and other potential losses must be reported to the Corporate Affairs Manager.

5.8 The Corporate Affairs Manager can, following an investigation of a complaint made by the public which involves a loss, make a recommendations for settlement of :

Up to £99.99 Corporate Affairs Manger
£100 - £499 General Manager
£500 - £999 Exec Director
£1,000 - £10,000 Chief Exec of Director of Finance
Over £10,000 Trust Board.

All such payments must conform to Standing Financial Instructions.

5.9 The Corporate Affairs Manager will provide a six monthly report on themes and trends in financial losses to the Risk Management Team

6.0 Specialist Risk Management Teams

6.1 Specialist Risk Management Teams comprise a membership of experts within a predefined field of risk management. The role of these teams is to ensure that:

6.1.1 A strategy and policies related to the management of predefined area of risks across the Trust are developed and maintained.

6.1.2 Formal risk assessments related to that area of risk is carried out across the Trust and prioritized using the Risk Priority Index (Appendix 3)

6.1.3 Advice on the management of specific risks is available to staff across the Trust.

6.1.4 Appropriate training is available to staff in the prevention and management of specified risks.

6.1.5 A set of key indicators related to the risk area is developed and maintained.

6.1.6 That auditing of compliance with policies on the management of the risk is carried out.

6.2 The following is a list of specialist risk management teams:

6.2.1 Clinical Governance

6.2.1.1 Obstetrics and Gynaecology
6.2.1.2 Emergency Resuscitation
6.2.1.3 Infection Control
6.2.1.4 Major Incident Planning
6.2.1.5 Medical Equipment and Devices
6.2.1.6 Drugs and Medicinal Products

6.2.2 Organisational Controls

6.2.2.1 Health and Safety
6.2.2.2 COSSH
6.2.2.3 Fire and Security Issues Adviser
6.2.2.4 Radiation Protection
6.2.2.5 Building, Plant, Installed Services, Non-Medical Equipment
6.2.2.6 Catering and Food Hygiene
6.2.2.7 Manual Handling
6.2.2.8 Occupational Health
6.2.2.9 Complaints Management
6.2.2.10 Capital Projects

6.2.3 Financial Controls

6.2.3.1 Internal Audit

7.0 Directorates and Department Management Teams (All Areas)

7.1 All staff have a responsibility for the management of risks but managers and senior clinicians have specific responsibilities to:

7.1.1 Have a local written policy and procedures on the management of risks within that area and to ensure they are communicated and understood by staff.

7.1.2 Have plans to deal with non-routine, new work and serious risks such as fires, spillage, exposure to ionizing radiation, pathogens and genetically modified organisms.

7.1.3 Have allocated responsibility for health and safety to specific people.

7.1.4 Have a health and safety plan with objectives which are specific, measurable, achievable, realistic and with target dates for completion.

7.1.5 Ensure that all employees are competent and have the necessary physical and mental abilities and facilities to do their job and that they have access to competent health and safety advice.

7.1.6 Assess the health and safety risks to staff and others and identify preventative and protective measures required by health and safety law.

7.1.7 Establish priorities using the Risk Prioritization Index (Appendix 3) for the management of identified risks within the resources available to deal with them.

7.1.8 Report serious risks which are beyond their ability to control to the Trust's Risk Management Team.

7.1.9 Ensure training and instruction on all aspects of health and safety appropriate to that area of work is provided on recruitment, and at periodic intervals following recruitment and whenever staff are exposed to a new or increased risk due to changes in responsibility, the environment or the introduction of changes in technology.

7.1.10 Consult with the health and safety adviser and specialist risk management teams to ensure that risks are being managed appropriately.

7.1.11 Have a recording system for injuries, ill health and other incidents with assessment of associated costs so as to be able to audit performance in the management of risks and compliance with health and safety regulations.

7.1.12 Ensure all staff attend mandatory training and maintain a record of that training.

7.2 Each department/directorate should include the following in their local EFQM Self-assessment:

Policy and Strategy – based on present and future needs and expectations of stakeholders (EFQM 2a)		
Approach	**Deployment % Implemented**	**Measured effectiveness**
Local Risk Management Policy		Percentage compliance with all: a) Risk Management Standards b) Health & Safety Standards c) Standing Financial Instructions

People – Knowledge and competencies identified, developed and sustained (EFQM 3b)		
Approach	**Deployment % Implemented**	**Measured effectiveness**
Mandatory Training		Assessed competencies following training

8.0 Directorates and Department Management Teams (Additional Requirement for Clinical Areas)

8.1 Clinical areas directly involved in the treatment of patients will need to comply with the standards set under the Clinical Negligence Scheme for Trusts and specifically will need to:

8.1.1 Have a policy and procedures for the reporting of clinical incidents and specific clinical occurrences.

8.1.2 Ensure that the policy is part of the induction training of all clinical staff.

8.1.3 Ensure all clinical staff attend a specific induction training appropriate to the specialty in which they work.

8.1.4 Carry out detailed investigations of all serious clinical incidents and take action to prevent recurrence as far as reasonably possible.

8.1.5 Provide patients with information on risks and benefits of common elective treatments.

8.1.6 Ensure consent forms comply with NHS Management Executive Guidelines for design and use.

8.1.7 Ensure consent for elective procedures is obtained by a doctor capable of performing the procedure.

8.1.8 Take part in regular clinical audit and develop methods for improving clinical practice.

8.1.9 Ensures entries in medical records follow best practice in the recording of information and are signed and dated correctly.

8.2 Each clinical department/directorate should include the following in their local EFQM Self-assessment:

Policy and Strategy – based on present and future needs and expectations of stakeholders (EFQM 2a)		
Approach	**Deployment % Implemented**	**Measured effectiveness**
Local Clinical Risk Management Policy		Percentage compliance with all: a) CNST Standards: Level 1 Level 2 Level 3

9.0 Individual Staff Personal Responsibilities

9.1 Individual staff are personally required to make the management of risk part of their daily duties and to act responsibly by:

9.1.1 Taking action to protect themselves and others from risks.

9.1.2 Bringing to the attention of others the nature of the risks which they are taking in order to ensure that they are acting with informed consent.

9.1.3 Co-operating with others in the management of risks

9.1.4 Timely and comprehensive of hazard/incidents and accident reporting using the Hazard/Incident Reporting form (Appendix 4).

10.0 Hazard/Incidents and Accident Reporting.

10.1 All staff but especially managers and clinicians have a responsibility for reporting any observed risks to the manager/clinician responsible for the area in which the risk exists.

10.2 Incidents should be reported on an Hazard/Incident Reporting form (Appendix 4) as soon as possible following the incident or identification of the hazard. If the incident/hazard occurs elsewhere than in a department (ie hospital corridor, car park etc.) then the report should be completed by the nearest department or by the department to whom the incident/hazard was first reported.

10.3 The person completing the report should take time to examine the scene whilst contributing conditions still exist. Names and addresses of witnesses should be taken as well as a brief statement.

10.4 In case of serious incidents the scene should be preserved and equipment maintained until further examination by senior staff, or the police, have completed any necessary enquiries. If possible photographs should be taken of the relevant area.

10.5 The person completing the form should specify the immediate action taken to safeguard others and prevent recurrence.

10.6 The Hazard/Incident form should be completed as fully as possible and sent immediately to:

10.6.1 White copy to Health & Safety Advisor who will inform the necessary statutory bodies (eg Health and Safety Executive).

10.6.2 Pink copy to the Head of Department who will review that the corrective action taken has been effective.

10.6.3 Yellow copy is retained as the ward/departmental record for 10 years

11.0 24 Hour Hot Line Reporting System

11.1 Serious incidents and hazards which cannot be managed locally should be reported using the Hazard/Incident Hot Line during normal working hours Bleep 3092 and at other times through the switchboard.

11.2 During normal working hours this will be staffed by the Health and Safety Manager. At all other times the call will be transferred to the Trust's duty site coordinator.

11.3 The designated manager on receiving a Hot Line call will:

11.3.1 Check with the caller that it is a serious incident/hazard and that priority calls, if applicable, have already been made to:

Cardiac Arrest	2999
Fire	2999
Security	5555

11.3.2 Check that other appropriate immediate action has been taken.

11.3.3 Ensure that the an adverse incident form has been completed and agree further corrective action with the person reporting the hazard/incident.

11.3.4 Bring to the attention of the appropriate manager responsible for the management of that risk.

11.4 The responsible manager will then take appropriate action, or delegate that action to the appropriate departmental head/manager/clinician, to minimize the hazard and reduce any further chance of the incident recurring.

11.5 The department head/manager/clinician responsible for the corrective action will report back to the Trust's Risk Manager on what initial action has been taken within 24 hours. For serious incidents this initial action may involve the establishment of an inquiry team to investigate the incident. The Trust's Risk Manager will agree any further central reporting on progress that may be required.

11.6 If the incident/hazard relates to the malfunctioning of medical equipment or device then this should be preserved and not used until examined and released as safe by the Medical Physics department.

11.7 If the incident is reportable under RIDDOR to the Health and Safety Executive (HSE) this should be done by the Health and Safety Manager by telephoning 0161 952 8200 stating 'RIDDOR REPORT' and specifying 'National Health Service'. The HSE ask for brief details of incident. Staff incidents which become reportable because it resulted in an absence of more than 3 days need not be reported by telephone. However, all RIDDOR reportable incidents should be reported using F2508 which must be sent within 10 days to the HSE at:

H.M. Principal Inspector of Factories,
Health and Safety Executive
Quay House
Quay Street
Manchester
M3 3JB

11.8 The following should be informed by phone if serious incidents/hazards occur which involve:

11.8.1 Incidents which potentially have adverse effects or publicity on the Trust.

Chief Executive Office (5186)

11.8.2 RIDDOR incidents

Health and Safety Adviser (5677)

11.8.3 Malfunctioning of medical equipment or devices

Medical Equipment Maintenance Manager (4870)

11.8.4 Fire

Fire Officer (Ext 4230 or Bleep 5213)

11.8.5 Security including assaults and violence

General Manager Facilities (5190)

11.8.6 Radiation

Radiation Protection Advisor (4878)

11.8.7 Food and food hygiene

Catering Manager (4440)

11.8.8 Drugs and medicinal products

Chief Pharmaceutical Officer (5219)

11.8.9 Infections

Control of Infection Officer (5034)

11.8.10 Buildings, plant and non-medical equipment.

Estates manager (4504)

11.8.11 Potentially involving litigation or claims.

Corporate Affairs Manager (4551)

11.9 A number of officers have special responsibility for reporting of adverse incidents and defective products and these should be notified according to procedures laid down in Health & Safety Policy No 2.

12.0 Confidential Clinical Occurrence Reporting:

12.1 The following clinical occurrence should be reported via a locally agreed confidential Clinical Occurrence Reporting system to the Clinical Director:

12.1.1 A significant error in diagnosis which in retrospect could have been avoided.

12.1.2 Incorrect interpretation of X-rays or other diagnostic images.

12.1.3 Unplanned return to surgery due to complications.

12.1.4 Variation from prescribed medication/I.V. therapy causing or potentially causing ill effects/trauma.

12.1.5 Variation from standard prescription of medical/I.V. therapy which led to ill effects.

12.1.6 Foreign body inadvertently left in situ

12.1.7 Equipment failure/misuse causing or potentially causing injury.

12.1.8 Tests/treatments carried out on the wrong patient or body part.

12.1.9 Hospital acquired infection

12.1.10 Other clinical incidents not pre-specified.

12.1.11 Specialty pre-specified clinical incidents.

12.2 The Clinical Director and team will analyze the data in search of 'Hot Spots' and common clinical practice errors. A review of this analysis will be carried out by a Directorate Clinical Management Team and appropriate corrective action agreed and implemented.

12.3 Local clinical risk assessments together with corrective actions implemented should be reported to the Executive Medical Director using the Clinical Risk Highlight Report form (Appendix 5) in order for Trust wide issues and recommended action to be considered as part of the Trust's overall risk portfolio.

13.0 Dealing with the media in a crisis

13.1 The detailed policy is given in the Corporate Communications Strategy Appendix 2 Media Relations in a Crisis.

14.0 Serious Incident Review

14.1 Some clinical and non clinical incidents will be of such a serious nature that an independent review of the incident and its management will be need to be carried out on behalf of the Chief Executive.

14.2 The following types of incidents are likely to initiate a Serious Incident Review:

14.2.1 Serious injury or harm to a member of staff, patient or other person could have occurred and systems to prevent such occurrence either do not exist or failed to function properly.

14.2.2 Breaches of duty of care or potentially negligent treatment or activity.

14.2.3 The Trust is likely to receive serious public criticism.

14.2.4 The event revealed a serious breach of the Trusts legal obligations

14.2.5 The financial consequences could result in the Trust's inability to meet its financial obligations.

14.2.6 However, the final decision as to what constitutes a need for a Serious Incident Review will be that of the Chief Executive.

14.3 Serious Incident Reviews are carried out on behalf of the Chief Executive by a designated senior manager with the overall process coordinated by the Trust's Risk Manager. The aims of the review is to provide:

14.3.1 A detailed understanding of the factors leading to the serious incident,

14.3.2 An assessment of likelihood of the event occurring again,

14.3.3 An appraisal of the ways in which such incidents can be prevented in future,

14.3.4 A set of recommendation for Management Board action.

14.4 Within the Trust a number of key groups may identify the need for a Serious Incident Review at an early stage. Therefore, the following groups can make a request the Chief Executive for a Serious Incident Review:

14.4.1 Trust Board,

14.4.2 Management Board,

14.4.3 Clinical Governance Committee

14.4.4 Audit Committee

14.4.5 Risk Management Team,

14.4.6 Executive Directors,

14.4.7 Clinical Directors

14.4.8 General Managers.

14.5 All requests for a Serious Incident Review should be via the Trust's Risk Manager who will discuss all requests for Serious Incident Reviews with the Chief Executive. The Chief Executive will make the final decision whether or not a Serious Incident Review is warranted. Information gathered as the result of a Serious Incident Review may be made available to other organizations lawfully entitled to request information.

14.6 The scope of the Serious Incident Review and timetable will be agreed between the Risk Manager and the person with lead responsibility for the review. The methodology used in the review will be as determined by the review leader however they will ensure, as far as possible, that:

14.6.1 All those involved in the incident are given an opportunity to explain how the incident occurred and how it might be avoided in the future.

14.6.2 Formal risk analysis techniques, such as Risk Prioritisation Index, Failure Mode and Effect Analysis, Fault Tree Analysis etc, are used to determine the causes and degree of risk present.

14.6.3 An option appraisal is carried out on potential methods by which the risks could be controlled.

14.6.4 A set of recommended actions are developed out of the best options available.

14.7 Once the review is completed a Serious Incident Review Report will be presented to the Chief Executive for consideration. The report will comply with the Serious Incident Report Guidelines available from the Trust's Risk Manager:

14.8 Actions agreed by the Chief Executive will then be implemented by a designated manager and monitored via the Trust's Risk Management System using the Risk Management Action Plan form (Appendix 6).

15.0 Learning from experience

15.1 The Risk Management Team will analyze failures in risk management. Lessons learned will be shared with appropriate staff.

15.2 Any organizational training needs identified will be reported to the Human Resources Director for action.

16.0 Independent Verification and Monitoring of Controls Assurance

16.1 Internal audit, supported as necessary by in-house specialist expertise in fields such as estates, facilities, health and safety, risk management and infection control, and by 'external' expertise from organisations such as the NHS Litigation Authority and NHS Estates, will be responsible for the verification of organisational controls assurance statements. It is envisaged that the Audit Commission will play a role in externally reviewing the arrangements in place for controls assurance and this will be explored during 2000/2001.

17.0 Conclusion

17.1 Risk management is a systematic approach to taking care of the welfare of staff, patients, visitors and the organization. It is the common thread through which the responsibilities of the Trust Board for Corporate Governance is assured through system for Clinical Governance, Organisational and Financial controls.

Salford Royal Hospitals NHS Trust			RISK MANAGEMENT TRUST BOARD HIGHLIGHT REPORT			
Issue Status:			Checked: Chief Executive			Page 1 of 1
Risk Priority Index	**Risk Summary**	**Controls Established**	**Area of Concern for the Trust Board**	**Recommended action to achieve satisfactory risk control**	**Executive Responsible**	**Trust Board Report Back Date**

Trust Policy: 94TD(G)6	RISK MANAGEMENT SYSTEM	Authorization Date: 4/7/00

Insert name of specialist risk management team	**RISK MANAGEMENT SPECIALIST RISK MANAGEMENT TEAM HIGHLIGHT REPORT**	
Issue Status:	Checked: Chair Specialist Team	Page 1 of 1

Risk Priority Index	Risk Summary	Controls Established	Area of Concern for the Risk Management Team	Recommended action to achieve satisfactory risk control	Responsible Officer	Report Back Date

Trust Policy: 94TD(G)6	RISK MANAGEMENT SYSTEM	Authorization Date: 4/7/00

Risk Prioritization Index	**Risk Assessment Team:**											**Date:**
Description of Risk:		**Control Measures Agreed**						**Target Date**				**Responsibility**
Risk Criteria	**Judgement Criteria**	**Low**			**Medium**					**High**				**Score**
(A) Most Seriousness Consequence	Estimate based on research literature/litigation or adverse incidents recorded in the Trust	0	1	2	3	4	5	6	7	8	9	10		
	Estimate based on subjective judgement of expert panel	0	1	2	3	4	5	6	7	8	9	10		
(B) Likelihood of most Serious Consequence	Estimate based on research literature/litigation or adverse incidents recorded in the Trust	0	1	2	3	4	5	6	7	8	9	10		
	Estimate based on subjective judgement of expert panel	0	1	2	3	4	5	6	7	8	9	10		
(C) Ability to avoid serious consequences by controlling incident just prior to a critical event	Estimate based on research literature/litigation or incidents recorded in the Trust	0	1	2	3	4	5	6	7	8	9	10		
	Estimate based on subjective judgement of expert panel	0	1	2	3	4	5	6	7	8	9	10		
(E) Risk Score Possible Maximum Loss = (A)x(B)x(C) =														
(F) Seriousness of most frequent consequence	Estimate based on research literature/litigation or adverse incidents recorded in the Trust	0	1	2	3	4	5	6	7	8	9	10		
	Estimate based on subjective judgement of expert panel	0	1	2	3	4	5	6	7	8	9	10		
(G) Likelihood of most frequent consequence	Estimate based on research literature/litigation or adverse incidents recorded in the Trust	0	1	2	3	4	5	6	7	8	9	10		
	Estimate based on subjective judgement of expert panel	0	1	2	3	4	5	6	7	8	9	10		

Trust Policy: 94TD(G)6	RISK MANAGEMENT SYSTEM	Authorization Date: 4/7/00

(H) Ability to avoid most frequent consequences by controlling incident just prior to a critical event	Estimate based on research literature/litigation or incidents recorded in the Trust	0	1	2	3	4	5	6	7	8	9	10	
	Estimate based on subjective judgement of expert panel	0	1	2	3	4	5	6	7	8	9	10	
												(I) Risk Score Most Probable Loss = (F)x(G)x(H) =	
												Risk Score = ((E+I)/2000)x100 =	

Instructions:

Risk scores are made up of three key variables (1) Seriousness of the potential loss to the Trust, (2) the frequency which such a loss could be experienced by the Trust and (3) how likely is it that the loss could be prevented by action taken to control critical events just prior to the loss occurring. In addition to these variables the score needs to take account of the quality of the data which is being used to make such judgements. Where possible there should be supporting evidence for the judgement, for example, case law, incident reports in the Trust or held by the Clinical Negligence Scheme or Health and Safety Executive, research literature. Judgements based on this type of data is scored using the top line for each criteria. Where such data does not exist an expert panel can make the estimation but are restricted to using one of the three non shaded scores on the second line for each criteria.

Score guide for seriousness of loss criteria

score		score		score		score	
0	No loss	3	£10,000 - £25,000	6	£100,000 - £250,000 or professional body recommendation	9	£750,000 - £1,000,000 or serious criminal offence
1	£1 - £5,000	4	£25,000 - £50,000	7	£250,000 - £500,000 or enforcing agency recommendation	10	More than £1 million or imprisonable criminal offence
2	£5,000 - £10,000	5	£50,000 - £100,000	8	£500,000 - £750,000 or criminal offence		

Trust Policy: 94TD(G)6	RISK MANAGEMENT SYSTEM	Authorization Date: 4/7/00

Score guide for likelihood of loss criteria

score		score		score		score	
0	once in more than 20 years	3	once every 5 years	6	once every 6 months	9	once every week
1	once every 20 years	4	once every 2 years	7	once every quarter	10	daily or more often
2	once every 10 years	5	once every year	8	once every month		

Score guide for avoidability of loss by action taken to control critical events just prior to the loss occurring.

score		score		score		score	
0	Always avoidable	3	70% avoidable	6	40% avoidable	9	10% avoidable
1	90% avoidable	4	60% avoidable	7	30% avoidable	10	Not avoidable
2	80% avoidable	5	50% avoidable	8	20% avoidable		

In order to ensure that this risk is included in the Trust's total portfolio of risks a copy of the completed risk score should be sent to the Trust's Risk Manager, Trust Executive, 10th Floor, Worthington House, Hope Hospital Salford M6 8WH or email hstahr@hope.srht..nwest, nhs.uk
Copies are available on the Trust's Intranet

HAZARD/INCIDENT REPORT REF.....

1. Details of person involved in Incident

Full Name:

Home Address:

Post Code:

Tel:
Male/ Female* Date Of Birth:

2. Category

☐ In-Patient ☐ Out-patient
☐ Volunteer ☐ Contractor (resident)
☐ Visitor ☐ Contractor (visiting)

Purpose of visit

☐ Staff
Post:

Ward/ dept:*

3. Witness

Full Name:

Contact Address:

Post Code:

Tel:
Statement Attached:
Yes/ No*

4. Location of incident

Date:

Time:

Exact location:

Ward/ dept*:

Directorate:

5. Details of incident

a.

☐ Non-injury incident ☐ Injury incident

☐ Property Damage/ Loss

☐ Striking object
☐ Struck by object
☐ Exposure to harmful substance

☐ Needlestick/ sharp object

☐ Manual handling
☐ Patient handling
☐ Slip/ trip/ fall
☐ Clinical incident (please specify)

☐ Other (please specify)

b.

☐ Assault/ verbal/ physical abuse

☐ Vandalism/ criminal damage

☐ Accidental property damage

☐ Break in/ theft

☐ Intruder

☐ Fire

☐ Contact electricity

☐ Contact with machinery/ equipment

☐ Hot/ cold contact

6. Details of injury

☐ None
☐ Bruise
☐ Swelling
☐ Loss of consciousness
☐ Sprain/ strain
☐ Internal injury
☐ Other (please specify)

☐ Laceration
☐ Abrasion
☐ Skin puncture
☐ Burn/ scald
☐ Fracture/ dislocation

Part of body (please specify)

7. Details of treatment

☐ None
☐ First aid
☐ A&E
☐ Occupational health
☐ Admitted to hospital
☐ Advised to see own GP
☐ Other (please specify)

☐ Seen by Doctor

8. Absence

☐ None
☐ Likely to be less than 3 days
☐ Likely to be more than 3 days
☐ Not yet known

Hours expected to work

Hours actually worked

9. Details of occurrence

10. Action taken to prevent recurrence:

Trust Policy: 94TD(G)6	RISK MANAGEMENT SYSTEM	Authorization Date: 4/7/00

11. Completed by:
Name: Signature:

Job title: Dept/ Ward:* Date:

Reported to:
Name: Signature:

Job title: Dept/ ward:* Date:

Office use only		
Processed	**Legal external**	**Internal investigation**
Received by:	***Phone HSE: yes/no****	**Further enquiries: yes/no***
Date:	**Date:**	**Copy to:** 1. 2. 3.
Entered by:	**Form F2508: yes/no***	
Date:	**Date:**	

Insert name of clinical directorate	**RISK MANAGEMENT CLINICAL OCCURRENCE HIGHLIGHT REPORT**	
Issue Status:	Checked: Clinical Director	Page 39 of 1

Risk Priority Index	Risk Summary	Controls Established	Area of Concern for the Risk Management Team	Recommended action to achieve satisfactory risk control	Responsible Officer	Report Back Date

Specialist Risk Management Team Highlight Report Form VERSION 1 (30/11/99)

Risk Priority Index	Risk Summary	Action agreed (date)/ Target completion date/ Responsible Officer	Check Date	Progress/Comments

Risk Management and Controls Assurance

1.0 Introduction

1.1 The United Kingdom National Health Service is one of the largest and most complex organisations in the world. It employs about one million people and deals with about *14 millions patient attendances in its accidents and* emergency departments, 34 million in its outpatient departments and 8.6 million in its in-patients acute hospital facilities Twenty four hours a day the service is dealing with vulnerable people. Concerned relatives and friends swell the numbers of people flowing through its doors. Healthcare activities require staff with high levels of skills because of the complexity of the procedures involved in treating and caring for people. In support of these activities there is sophisticated equipment and a large, complex physical infrastructure. Such a large scale complex activity has large risks associated with it.

2.0 Cost of Failure to Manage Risks Effectively in the NHS

2.1 There are over 5000 new claims for compensation against the NHS for clinical negligence each year resulting in about £200,000,000 per year paid out in compensation. In addition legal fees can add another 20% to these costs.

2.2 The National Audit Office has estimated that there are over 1,000,000 injury accidents within the health service per year with an immediate cost of around £12,000,000. A further £54,000,000 is paid out to NHS staff because of early retirement due to occupational ill health.

2.3 The Audit Commission reports that detected fraud rose from £1.4 million in 1996/97 to £2.6 million in 1997/98. However, this is only the small proportion of detected fraud the real level of fraud is likely to be much higher. The biggest area of fraud is thought to be prescription fraud which is estimated to be in the region of £150 million per year.

2.4 These financial losses hide the pain and suffering of thousands of people directly affected by these losses as well as the anxiety and extra work created for clinicians and managers who have to manage the consequences of these failures of risk management. In addition officers of the Trust are open to fines and imprisonment for breaches of the Health & Safety at Work Act and other related legislation.

3.0 Corporate Governance

3.1 Corporate governance is the system through which an organisation is directed and controlled in order to ensure that its activities are economically, efficiently and effectively managed and that the risks it is facing are properly assessed and controlled.

3.2 The importance of effective corporate governance was highlighted when in the early 1990's a series of serious failings in financial control, in a number of major private sector companies led to the establishment of the Cadbury Committee. The Cadbury Code (1992) identified three fundamental requirements of good corporate governance:

3.2.1 Internal financial controls
3.2.2 Effective and efficient operations
3.2.3 Compliance with applicable laws and regulations

4.0 Controls Assurance

4.1 The Greenbury and Hampel Committees developed the 'Cadbury Code' further and consolidated their findings into one 'Combined Code of Principles of Good Governance' published by the London Stock Exchange. The key requirement of these principles is that "...the board should maintain a sound system of internal control to safeguard shareholders' investment and the company's assets" and that "the directors should, at least annually, conduct a review of the effectiveness of the group's system of internal control and should report to the shareholders that they have done so.

4.2 Controls assurance review should cover all controls, including financial, operational, compliance and risk management controls. The Turnbull Committee (1999) makes reviewing the effectiveness of internal control the responsibility of the board having regard to any information provided by the audit committee, or any other board committees.

4.3 The essential features of an effective board is that there is a balance of power between executive and non-executive directors; effective systems of monitoring and controlling the activities of the organisation, effective systems for managing risk and uncertainty and accurate information and statements on the financial status of the organisation verified through independent audit. Company directors on the Board of private companies are responsible for corporate governance and they achieve this through setting a company strategy, implementation of this strategy through effective leadership and ensuring that management carries out their delegated duties in line with the requirements of the Board. The shareholders appoint the board and receive reports from the board that they are controlling their company

appropriately. In addition the shareholders appoint auditors to verify that appropriate controls are in place and are effective.

4.4 Though the concept and key principles of controls assurance were developed to deal with specific failures in control within the private sector, the NHS has agreed that these good practice guidelines apply equally to the NHS. The NHS has therefore, embraced the principles of good governance. For the National Health Service, corporate governance is achieved in a similar way to that of the private sector with Parliament acting as the shareholder and the chief executive of the NHS Executive having overall responsibility for ensuring that the NHS keeps proper accounts and is prudent, economic, effective and efficient in the use of NHS resources. The NHS chief executive is supported in this role as accountable officer by local accountable officers, the chief executives of Trusts and Health Authorities.

4.5 Clearly, an effective controls assurance system will save resources for use in providing direct patient care but the most important reason for an effective controls assurance is a moral one. The NHS is there to provide a public service which prevent unnecessary ill health, suffering and wasted resources which are the result of poor clinical and non-clinical practices.

5.0 The New NHS: modern, dependable

5.1 The government's White Paper 'The New NHS: modern, dependable sets out a ten year vision for ensuring that the focus of all activity within the NHS is on the delivery of continually improving treatment and care for patients. This vision will be achieved by building on the historic NHS principles of access based on need alone and not on ability to pay, or the area in which the patient lives. Quality will be assured through a new statutory duty for quality which will compliment the duty for effective financial management. Three key and interrelated mechanisms: Clinical Governance, Organisational Controls and Financial Controls, will provide the means of achieving good corporate governance of the NHS.

5.0 Clinical Governance

5.1 Healthcare professionals have always been and will continue to be responsible for ensuring high standards of clinical practice and the management of clinical risks associated with that practice. However, chief executives now have a statutory responsibilities for ensuring that all healthcare professionals achieve the quality of clinical treatment and care which is expected of them. The key mechanism by which chief executives

will discharge their legal obligations clinical management is through clinical governance.

5.2 Clinical governance is defined as "a framework through which NHS organisations are accountable for continuously improving the quality of their services and safeguarding high standards of care by creating an environment in which excellence in clinical care will flourish" (HSC(99)065).

5.3 A senior health professional at board level must be appointed as the person responsible for ensuring proper processes which ensure high quality care and these will include:

5.3.1 Clinical risk assessment and management.
5.3.2 Evidence based practice.
5.3.3 Involvement of all clinicians in clinical audit and continuing professional development.
5.3.4 Using high quality data to monitor clinical care.

6.0 Organisational Controls

6.1 Clinical excellence cannot flourish unless the environment in which that treatment and care is provided is also excellent. The boundary between clinical and organisational controls is blurred. For example, some aspects of medical device management, radiation protection and infection control clearly fall under the direct responsibility of individual clinicians, while others aspects are the responsibility of the organisation as a whole. However, there are many other aspects of care of patients, staff and visitors which are not directly clinical but which if not managed well will affect there wellbeing. These areas include:

6.1.1 Health & Safety
6.1.2 Manual Handling
6.1.3 Fire and Security
6.1.4 Catering and Food Hygiene
6.1.5 Building, Plant, Installed Services and non-medical equipment

6.2 Many of the organisational control requirements are imposed by civil and criminal law on individuals and organisations. Failure to comply can result in fines and/or imprisonment.

6.3 Organisations must be able to show that they have done their "reasonable best" to manage themselves so as to protect patients, staff, the public and other stakeholders against risks covered by their activities.

6.4 The basic requirements of organisational controls is that there is evidence of regular risk assessments being carried out. That risks identified are prioritised and that reasonable steps have been taken to effectively control them

7.0 Financial Controls

7.1 For financial matters chief executives must sign a statement in the annual accounts outlining their responsibility as accountable officers and that they assure that the accounts have been properly prepared under principles and rules directed by the Secretary of State with the approval of the Treasury. They must also sign a statement of assurance that the systems of internal control as laid down in NHS Executive circulars and should address issues of risk management.

7.2 Standing orders describe how business is conducted, including board membership and voting rights, delegated powers, rules on declaration of interest such as directorships and conflicts of interest, rules on tendering and contracting. These fulfil the dual role of protecting the Trust and Health Authority and the staff from possible accusations that they have not acted properly.

7.3 Standing financial instructions identify the financial responsibility of everyone working for the health authority and includes financial management and audit, negotiation of contracts, non-pay expenditure, information technology and data protection and payments to independent contractors.

8.0 A Model for Corporate Governance in the NHS

8.1 Clinical Governance focuses on ensuring appropriate standards of clinical treatment and care are delivered. Organisational controls focus on ensuring that the total environment of care supports and enhances clinical care while at the same time is safe for staff, patients and visitors. Financial controls focus on ensuring that healthcare resources are used appropriately to provide the services required by the NHS.

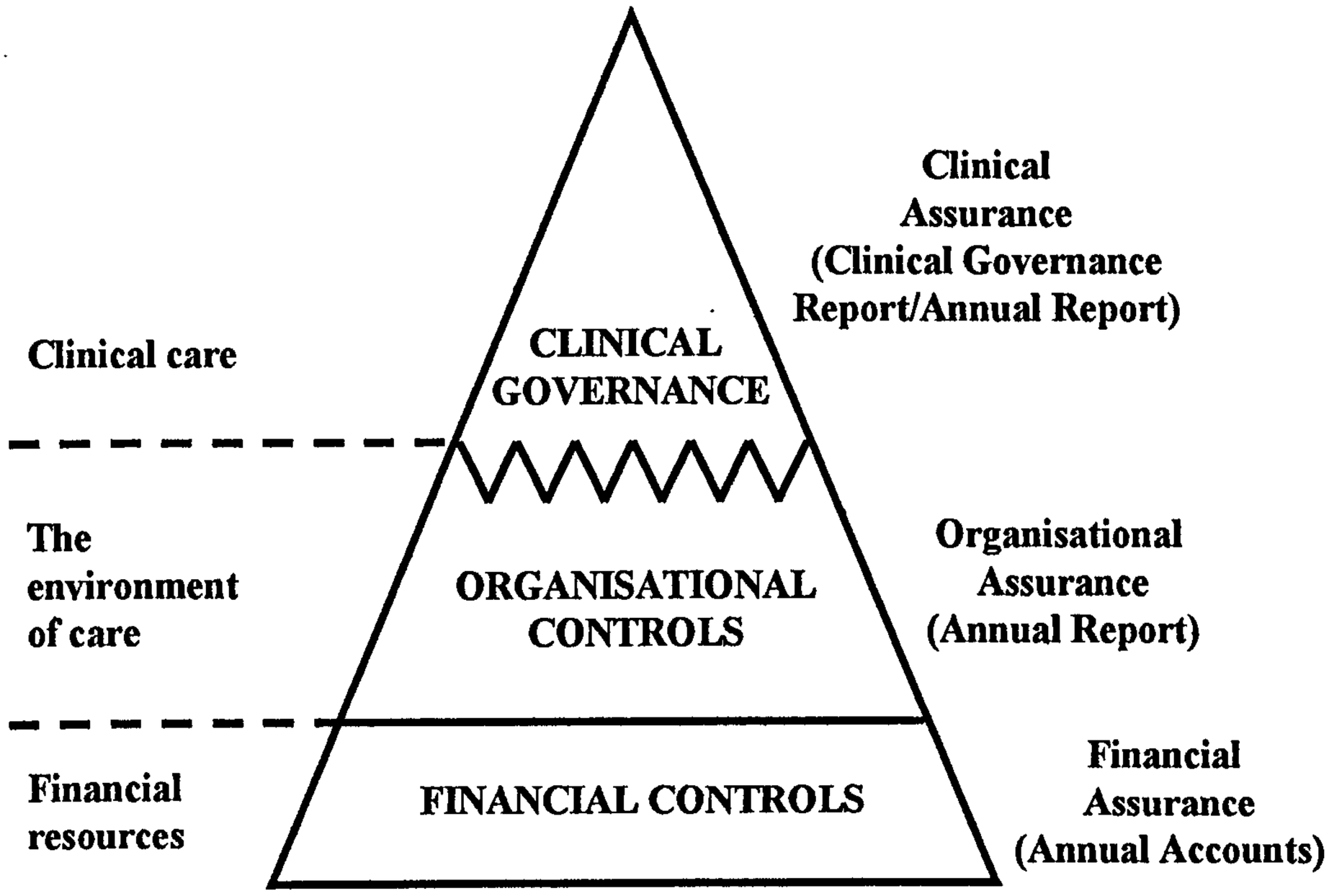


Fig 1

8.2 Clinical governance, organisational controls and financial controls, when integrated and effectively carried out, fulfil the requirements of effective Corporate Governance of the NHS required by Parliament (fig 1).

9.0 Risk Management

9.1 The 'common thread' running within each elements of the Corporate Governance framework is risk management. Risk management is defined as "the culture, processes and structures that are directed towards the effective management of potential opportunities and adverse effects" (Australia/New Zealand Standard 4360:1999 Risk management). The Australian Model of risk management (fig 2), outlined below, contains the key elements of a good risk management system. This together with a national NHS risk management standards and assessment criteria will be used to assess the degree of compliance of all NHS organisations with the requirements of NHS Controls Assurance.

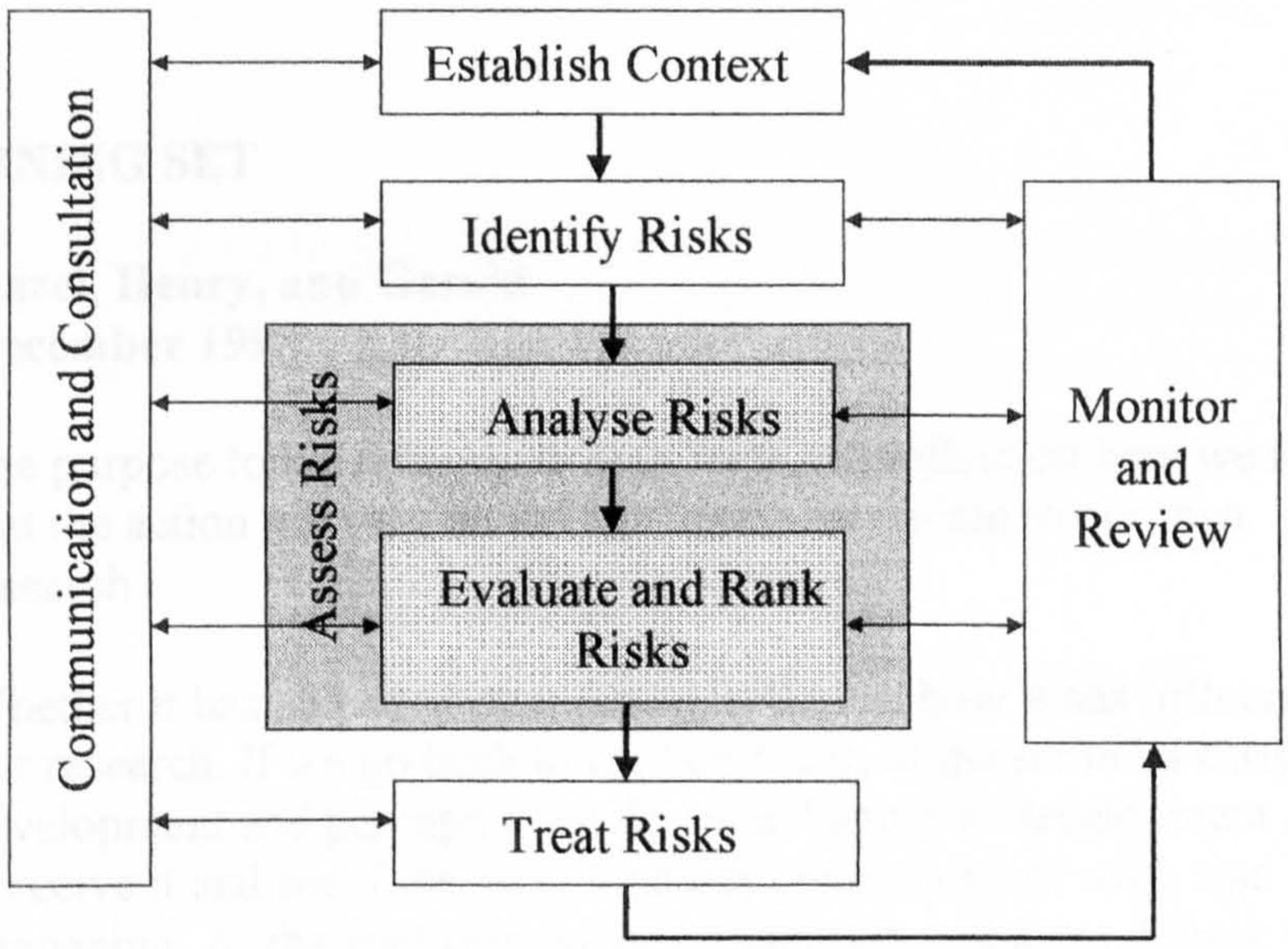


Fig 2

9.2 The effectiveness with which risks are managed within the Trust is assessed as a key component of the European Foundation for Quality Management (EFQM) Excellence Model so as to ensure that risk management is fully integrated into all aspects of the Trust's activities.

Appendix 7

ACTION LEARNING SET

Present: **Hazel, Henry, and Gerald**
Date: **December 1998**

Hazel The purpose today is for us to look back and reflect on how we feel that the action learning model has been appropriate to our own research.

Whether it has helped us to develop further or how it has influenced our research. If we go back to the beginning of the set in its early development and perhaps if we do some historical development as we perceive it and see if we've got similar perceptions of what was happening. At the start there were originally 5 members. I think that is an appropriate place to start.

Gerald I think sharing what our initial perceptions were will be useful. My feelings were an element of philosophy as well as an element of activity and that differentiates Action Learning and Action Learning PhD from conventional PhD so that even if nothing else, that before I walked into the Set, I had different expectations and one of these expectations was that Action Learning was an easier route to getting a PhD and it was quite ambiguous as it turned out to be, but there was a lot more freedom so there was a lot less academic constraints. People weren't saying 'you must do this or you must do that.' It was actually quite difficult, quite painful at times, but it was difficult and I wondered if anybody else felt that they had expectations going down the Action Learning route as against going down the conventional PhD route.

Henry Really, right from the beginning I confused Action Learning with Action Research and I assume Action Research to be the heart of my research because it had to be done in the field of practical use immediately and so I saw the Action Learning element as being a support group, a group that could reflect aspects of Action Research on it and get the support of colleagues that that process whereas a conventional PhD route meant that I would have acted in isolation of anyone other than the Supervisor and so my attraction was working with a group of people who could support me through Action

Research. That is how I saw it at the time.

Gerald — Was it difficult to convert in your mind from Action Research to Action Learning?

Henry — It took quite a long time to do that and in fact it really developed as I developed the methodology and tried to understand the Action Learning element of my work. One of the things I learnt was that Action Learning itself was a way of gaining knowledge, about how the different elements of research came together as a whole.

Gerald — How does that experience fit in with your experience Hazel?

Hazel — I was looking for something completely different because I think it's fair to say Henry was driven by the research primarily -the tasks that you had to complete (Henry agreed) and I think it was at a particular point in my life where because I'd experienced Action Learning and found that to be such a powerful personal development that I wanted to continue, so I almost thought that this PhD was ,a continuation of what I had done at Masters' level. (in terms of my own personal development,) and the research came somewhere in there and I've had to adjust considerably and had to become much more task-focused as the time has gone on. Because that was really just an almost very flippant approach to what I was doing at this level and I think that it was just a reflection of the stage I had got. So, when I joined the Set originally, I was at a loss because I assumed that we would be all at a similar level in terms of Action (in our understanding of Action Learning and in our experience) and that we would then continue with the Action Learning being the uppermost focus of everyone, and when we came together we had such very different backgrounds and experiences and expectations. I don't think that we shared those I think we stumbled across them accidentally from time to time when we perhaps found a lack of shared understanding about what we were discussing and it was almost a blockage to some extent as far as my understanding initially. I think somewhere in between your stance and my stance might have made something a bit more appropriate.

Gerald — I found, like you I came from an Action Learning background. I can actually detask myself because I've been running a MDA Programme which is a very task orientated degree and so I had to get out of the model of this traditional, academic, rigorous, conventional, scholarly conservative activity. I found that as a group we were all expecting

something different in terms of how much we were going to have to do with each other, and so my background in Action Learning meant you shared everything with your Action Learning Set where as I think other people's background said 'No, we're not too sure that Action Learning Sets do, but one thing we're sure about is we don't want to share that, and my feeling was that in the early days it was almost a Tutorial as against an Action Learning Set that weren't being facilitated because we were making demands on the Academic present to tutor us and so there was a bit of resistance. Some people said 'Oh that's really good let me make lots of notes, and some of us were saying 'No, this is not what we really want."

Henry

I think that reflects the two extreme positions of perhaps me and Hazel that if you come into an Action Learning Set and expect to achieve a task then in a sense you are looking for people to help you to choose the task and if there is someone in the room who can ask the right questions from the right direction or challenge your views in such a way that you find new things to do then it's quite different than if you are coming into the Set to develop an individual, and it really was only about half way through the three year period that I realised that Action Learning was about personal development not simply achieving the task and that took quite a while. I think the problem for a lot of people in the Set, some people were looking for the learning element and other people were looking for an achievable task and because we were looking in entirely different areas it appeared there was something wrong with the Set in a sense that it wasn't taking us through where we expected to go because in fact we were in different directions not purely because of our initial expectations of the Set or of the approach.

Gerald

I totally agree with that. I wonder though how much the three of us left in the Set have exploited the freedom. Speaking personally I exploited because I approached this saying I wanted to do some unconventional research so it did not sit comfortably with a conventional research background not having a director of study telling me what to do. I found that the Action Learning Set, when it worked was tremendously powerful. I could bring questions in and say what do you think of this? and when it worked it worked very well and I went out with a great deal of clarity and I felt good about what had gone on. It didn't always work of course, but I was conscious of the fact that as I think for myself and I suspect for you two as well you would have found it far more difficult to do the research you wanted to do it you had gone down the conventional route, if you'd gone and got an expert on x or y to supervise you.

Hazel — I don't think it would have been possible for me to explore the areas that I've explored following a conventional route. One thing I didn't want were doors closing. So I found that the freedom offered of this approach has been extremely beneficial. Now as the day of judgement approaches I'm a little bit worried that that freedom might have been not necessarily so advantageous but that's probably just the stage that I'm at.

Gerald. — That's one of the prices of action learning in as much as at no point have we had somebody in authority take us by that hand and say, in a parental way, 'That's good enough' or 'That's not good enough' or we should do it this way or that way, which has led us all on occasions to being quite vulnerable.

Hazel — Yes, I would agree.

Henry — I feel because of the treatment, because of different approaches, and different ways of exploring, that in fact we get a broader, more realistic picture of the situation and that's even more clear in terms of the person involved. I think, on reflection, going back or doing it the traditional way would have meant a) would have poorer b) that it would have been simpler but the result in the task of research, the quality of research, it probably wouldn't be practical in reality. c) I think I've developed an understanding of what knowledge is, and what research is. That really is the key advantage .the difficulty is that without that structure we feel more vulnerable about succeeding.

Gerald — If it makes it high risk it also makes it more fun, so you get more high's and more low's. What I've thought more and more is as the process has gone on is that what I'm interested in researching into has driven the way I've researched it, and I have a sneaky feeling if we'd gone down the more conventional route we would have said 'This is the conventional way that academics research this level. We would tailor and modify our research to fit into the methodology' Because very often a PhD is seen as a qualification to say you're a researcher and the thing that we all have in common is we want to address issues and so I can't plan exactly the right way to do it, in the methodology books, so I bring it to the Action Learning Set and say this, this and this everybody say no to this or yes to that, so suddenly we've got the core of the research driving the way we're researching it. Which I think is immensely powerful and having gone through two years of muddled PhD where I've been driven, very much more conventionally. "Go away and read those 10 books and then I'll test you," where it was a radical thing for John Morris to say 'Don't read

	yet just think, just find out, don't read at the moment. And that is just reinforcing what your saying, that personal learning and the task go very much hand in hand. I suppose the other thing that might be worth mentioning is the concern we've got that when we submit this piece of work is it too 'touchy- feeling,' because all of use have this feeling that PhD should be x or y and our PhD's are going to be a & b
Henry	A small part of my research will be touchy-feely' but because of the nature of the research there will be plenty of non'-touchy feeling bits as well to get the data. There are elements for the conventional type of research but refined, if you want, or elaborated on, with the touchy-feeling bits I've tried to combine the two together rather than be one or the other. I've to find where it's appropriate to get the hard data, facts as they appear that are there, but there's all the rest of it as well. I don't maintain special objectivity for everything, as I would have done. I would have produced a piece of research that would have claimed to be objective and I would have claimed to maintain some sort of disembodied precedence, but I don't, I recognize that my subjective influence on what is clearly the objective truth but I haven't excluded objective measures, I've just been honest about it. Where I think many researchers, conventionally, would not have been honest about it. Where as I think in conventional research you would have claimed, almost by default, what they are saying is an objective reality.
Hazel	I found that as the research developed that my research has been more rigorous than probably it would have been, had it gone down a conventional route, because I felt it necessary to justify what I was doing. Perhaps because of the fear that it may be not conform to what I had in mind. So, I found that I thought much deeper about what I was doing than I would have done otherwise. Because I think if I had a prescription, a Proforma that I was just going to follow, I would never have even considered any other option. Or even the most powerful thing I think about the Set is that, the ability of somebody just to ask a very simple question so simple, so basic, that I'd never even considered it. That is the most challenging part of following research in this way.
Gerald	If any of us had to talk to somebody who was thinking about doing a PhD and they said 'Well you've gone down this route, what would you pick up as being the key elements of the type of research you'd done that was very significant, and influential in what you'd done. What would we sell if we were trying to sell this centre.

Hazel — I think I'd say that the depth of research, the quality of research that I've been able to carry out.

Henry — I think it's significantly higher, than conventional PhD's it's the quality of support I've been offered by the set, and the challenges enable you to go beyond the boundaries of conventional routes.

Gerald — I agree with both of you. I'd add on to it that what it's allowed me to do, and feel a little more legitimate about it, has been to find out things which are not necessarily measurable, not necessarily provable and not necessarily replicable, and that to me was what academic research should do -measure and prove what we say is so, and replicate it. Now, as social scientists, we know that's not reality but nevertheless in the back of our minds because we've gone through the system we all know that was something we should be able to do. The set has said, 'if there's something that's not measurable, talk about it, learn about it, but if you can't measure it, it's still valid; If you can't prove it, it's still valid. And that's been tremendous. It's left me feeling very insecure because I now look back and say, 'I've done all this research, and it's been a lot of years, I can't prove it, measure it. I can'tsay x is better than y. I can just say I did x, and that's what happened. That's a very significant thing to me. But you need a certain academic maturity I guess. It's quite uncomfortable at times but we've all seen it in each other that I ought to perhaps revert back to classical research methodology, just in case, because it's safer.

Henry — From my experience, I no longer feel that the classical way of doing things is rigorous, is reliable, is really replicable, because I think that the things we're dealing with can't be dealt with in that way. It's a myth that's been created within academia that there's such a thing as absolutely, rigorous, valid proof for anything and I think that having had this experience that I've lost any belief in that even though I was searching for it at the beginning. I think there's degrees of understanding which further our knowledge. There are lessons to be learned and I'm not sure that there's anything we can record as truth in its absolute sense.

Hazel — No it's security to be able to see our world so simply, isn't it? But I think what we've done is to look at the complexity of the reality. Once we started to look at the various facets and then start to think about our personal perceptions influencing these it then became very difficult to try to analyse what was happening with any clarity, certainty, consistency and coherence. So, if you're not careful, you

can get stalled and I think this is where the set is so valuable because it stops us getting lost in those labyrinths of reflection.

Gerald — I've been trying to find an analogy in my own mind, and there's always a danger with analogies that you'll take them too far. What I've come up with is that we're all drivers and we've all got Instruction Manuals for our cars which tell us to check this or that, once per week, month, etc. Put this dipstick in, which is very much the positivist thing to do, to measure the height of the oil. If you're going on a long journey, instinctively from our knowledge and our learning over the years we know that we'd check the oil and we know even if there's enough oil, measurably, it may not be good quality. So it seems to me that we went from being positivists when we were first learning to drive, when we were changing gear we thought about changing gear. Now we don't, which doesn't make us poorer drivers, we are now using instinct and that seems to me to be something of an analogy between what classical academia says and (use the dipstick and put measurements on) as against what we're doing. We're saying, 'Right, we've got a long journey ahead of us, we need to put the oil here, or empty the ashtray there'. To me that was the analogy I had to come up with so I could understand what was going on.

Hazel — I saw myself as a helicopter. The helicopter going down, touching base from time to time, and then I could look down to see what was happening, so that kind of free movement. Whereas, if you're in a traditional programme you'd be constantly in that helicopter and never touching base at all so you seize up'.

Henry — I must admit I found the set didn't actually do what I expected with the research and that once I understood a lot more about action learning and that the set was meant to be a group of people in adversity learning together. I expected the set to help, challenge and provide some sort of verification of the learning that was taking place in the research I was doing. That didn't work out because the place that I managed to find that was with the other people I was working with the other "set", who were actually doing the risk management with the trust, and that was where the learning, the verification, the development of new ideas, and so on, actually took place, and that was that I was expecting the set to do, but that didn't work. But what the set did was to give me more of the Meta analysis of the overall approach that I was doing. In effect there were two sets of sets. There was a set of sets at work dealing with various aspects of risk management, comrades in adversity trying to get the trust to develop a way of managing this and we learned together what risk management was. We learnt what worked, and the standard nature of the reality,

what we could do, and couldn't do, and set up conceptual models of that, and so on. But what they couldn't do was to check that the learning, the approach, the philosophical basis, was right. And that's what I found the set was useful for.

Hazel — I like the idea of the meta analysis. I think that's a super concept.

Gerald — I agree. I think that Hazel and I did that with each other. At one time I think that we were perhaps a learning pair as opposed to a learning set. At one time you were using your other resources heavily, the other two were fairly isolated and I'm thinking about the conversion from MIPhil!PhD. Suddenly there was 'them' and 'us' and a lot of hostility around. You and I, Hazel, we were talking, were bouncing ideas off each other a lot. And all of us, because we're adults because we have a network, and that network includes people we trust, we all dip into our own networks as well. I suppose if we've answered the question of how we sell it, what would be the 'down-side', what would we say. I wish we'd done this, or perhaps it hasn't achieved that.'

Hazel — But before we go on to that, may I just ask, because we've all talked about personal development, and one thing we haven't mentioned is "personal development" because presumably this is something we'd want to sell on. Do you feel you have achieved personal development, as opposed to intellectual development? Something that's transferable to all aspects of your life.

Henry — I find it difficult to separate intellectual and personal development. I don't think the two can be separated, so I have to combine the two. I'm not sure, in a 3 year process, has changed me in a way that I'm more.... I've got a better understanding of the nature of the reality of which I'm developing: I'm developing skills and competence in that. I'm not sure of how it has changed me as a person, as a human being, and I'm not sure that I would have expected it to have done very much of that because I don't think I've changed because my reality has not changed in any way. I'm still married, I've still got the same sorts of problems, the same level of confidence, same sorts of ambitions, same sorts of comfort with myself I didn't come thinking I was not coping in some areas, or tensions, some aspect of my [personality has changed so that I'm better off in that sense. If you combine that with my ability to think around things, which is still part of me, I think I'm better able to think about things and I'm more sensitive about other people. I think I couldn't say it's just this set, because of the rest of the sets I've been working with at work. But being in a situation where

I've had to drive things through and deal with crises, and so on, that that ability to reflect that I am more sensitive. I have noticed I think much more carefully.

Hazel

I don't know whether it's the point I'm at with writing up because I'm still trying to come to terms with what things actually mean. I'm questioning now what I thought was reality and absolute truth, that it isn't as easy to understand the world in which we operate, it is so complex. If you remember, my research is examining the nature of the relationship between the change manager and the change project. In terms of what I think I understand about organisational development, I have now an entirely different perspective of what organisational life is all about, and how we seek to influence it, and so on. What has been impressed upon me is how little I actually know, and how little I'm capable of I don't know whether that's personal development, or personal regression. It's a reflection of my writing at the moment, which is very introverted.

Gerald

It's very difficult for me because two significant things have happened which have nothing to do with this process. I don't know how much those 2 significant events have impacted upon me, or how much is the learning. Becoming a parent and becoming disabled have been 2 significant factors. Now I am different to what I was 3 years ago because I don't feel such a need to provide evidence for the research that I'm doing on the way we ought to behave, and an alternative way of behaving in groups. I suppose 3 years ago I would have been saying, 'I'm teaching about Belbin, but I'm not convinced it's the best way, but everyone else is convinced about this so I feel quite defensive, it's like bringing a ham to a Barmitzva, not too sure.' Now I feel, I've done a lot of research on this dance card business, and if people want to go down the Belbin route, 'fine', or D/C, 'fine', but I've now done enough research, I've had enough feedback to say, 'It does work on certain occasions.' If you want to use it, that's fine with me. I think I'm much more mellow than I was 3 years ago. I would never research this subject under a conventional environment, that's why I'm so pro-the Revans Centre. I would have done a conventional PhD. *It's a much easier route. It's far easier* to be told what to do and have some measurement. I'm now 5/8 of the way through, finished', where really and truly, we don't know where we are, it's not incremental, so what, it doesn't really matter, we feel that we're moving along, so what, we're getting towards an end where we feel it's right, as opposed to know it's right, so what? I've had significant changes and I've enjoyed it.

Hazel — So, how would we sell 'personal development'? Would we actually sell 'personal development'?

Henry — I wouldn't. I think it's probably over sold, that some people come to Action Learning for personal development per se. I came into it as a means of helping me, with personal development a part of that. It was more than about personal development -about developing new vision, new skills, new ways of working. Some people say Action Learning has made them a better person. I must admit that I did psychiatry many years ago, so I've done all my personal development., had all my deep insights many years ago. I've got very good insights into what I'm like. I've got the badge! As part of a package, that's fine but it shouldn't be over-sold.

Gerald — Could I just re-frame that? I think your point about the development being a part of your education is a valid one. But it seems to me that my personal development over the 3 years is that I would use this approach to learning about lots of other subjects. Now if I want to try and understand and learn about a subject, I won't necessarily say the only way to do it is to go to a book. The only way to do it is to go to an author who is recognised as being an expert -as being -ight. I don't think of it as being therapy, or feel a more whole human being, or anything like that, I think the Action Learning element of it has said you can apply this idea of living and sharing and discussing with other people who are interested, and not just to look at risk analysis or O/D, it may be quite a useful way of understanding the world in a whole range of things. Now I think that's what Action Learning is about -not about making great friendships, or bonding. I think there was some resistance from our colleagues earlier, because they did not understand what Action Learning was about. It was like another methodology for research. Action Learning doesn't need to be labelled. It is an efficient way of operating -that is development whether professional, intellectual, academic, I don't know....

Hazel — I'm glad you both mentioned "therapy" because I think that was one issue connected with our other two colleagues -who may have been using the research for personal therapy perhaps, and that governed their interaction within the set. It's quite interesting that, although Action Learning is sometimes perceived by some as being therapeutic, our two colleagues were not receiving therapy from our set. Indeed, I did not feel, they were able to 'engage' with us.

Henry — I'm not sure about that, I didn't get a sense that they wanted therapy. To me, they wanted a lot of guidance and direction of professional research, and support. I don't feel we managed to do that for them. It was quite a shock when they didn't progress with us through the interim's. We hadn't really explored their work alongside our own at that stage. I don't think we had formed a group that felt comfortable with supporting each other. In hindsight, if we had been a more together set, they may not have failed their interim's.

Gerald — I think I'd like to put a counter argument. Looking back, when we came to the interim's (about 24 months into the process) I did not know what the other two were doing. Now, is that my failing because I did not know what they were doing or theirs? It seemed to me, one of them did not want support from the group. In fact, she said: "I don't want support from this group. I can get support from my family.' It was only after that the groups dynamics changed. There were three of us, not five. We were all pleased to get rid of the "aggro" / the "baggage" so we could do our work. There was never a feeling of shared interest, even at an academic level.

Henry — I agree with that -there wasn't any clarity of the work. But somehow that was what the group should be about. I was happily doing my work. And I must admit, when someone was a bit vague, I didn't really know what sort of questions to ask to make it clear. But I think if the group had been 'right', if there is such a thing, we should have been able to say, 'What are you trying to get at here?' But the group hadn't "gelled" at that stage -I wouldn't have felt comfortable. I would have felt I was attacking, insensitive. I didn't feel that at that stage it would not have been taken as being helpful. and I think that was part of that problem.

Hazel — What about the size of the group for this purpose? Is a 3 better than a 5 irrespective of membership? I think we've achieved a lot more in a smaller group

Gerald — In some ways, it's more difficult not to participate in a smaller group - far fewer hiding places. But the point you made, Henry, about the group at the interim's is significant because I don't think we were a group. One of the definitions of a group is "psychologically aware of

each other" which we weren't. Another is, if you believe you're a group, you're a group. We didn't. We were paired, or a triad and a couple of isolates. Yes, I felt I was a member of this Action Learning set but it was only a title, it didn't have any real meaning. I wasn't psychologically aware of L, for example, I didn't know what she was doing, I didn't feel I had any input into what she was doing, or that she wanted me to have any. By the time we got to 3, we were much more focused on the task, because groups don't work well when the task is vague. By that time, we had all invested a lot of time, and became prepared to trade with each other. The question should be whether the group should have been formed in a different manner. Whether someone should have said, 'This is a bit about groups. We're going to get to know each other first before we start.' We never did.

Hazel — Would you not expect anyone doing research at the "Revans Centre" to have read around Revans and Action Learning before they came? Perhaps, also, then a facilitator capable of influencing group dynamics and help the group to mature, might have been appropriate, but in terms of Action Learning I would have thought that they would have undertaken pre-reading.

Henry — I think it's always worth repeating what the basic principles are. It doesn't matter about your level of understanding, there's always more to learn. Even if you read around it. All will bring to the group different things, it is important group to come to agree an agenda. I think that was missing.

Gerald — But Henry, don't you think some people don't want to be in a group, which is quite reasonable. Some people want to be told what to do. some people want to go down a positivist route or have a much more positivist attitude towards life. But if you come into an Action Learning set you should at least be prepared to work in a group. So it was a bit surprising when, 18 months into the thing, when 1 of our colleagues said 'I've never read anything by Revans.' It's such a big emotional commitment, it's so expensive in terms of time away from your family, just to sit at a keyboard. I think someone would say, 'I want to know what this is before I do it.' Yet 18 months, and 1 colleague still didn't know what it was.

Henry — Sometimes people think that they want something, but when they get into it, it isn't. The sooner that that is made clear, the better for the

group.

Hazel — Perhaps, then, we should have started with some input, perhaps about Revans's work,. to enable the group to get to a, say, plateau of shared understanding from which it could have moved forward.

Henry — A shared agreement.

Hazel — I recall one set meeting when I suggested that we share our understanding of how our Action Learning set might work, and from that draw up some "rules", what we wanted from the set, and were prepared to give to it.

Hazel — It was an attempt to gain some shared understanding, agreement. At that stage, I was told "No, we don't want to do that."

Gerald — In the early days, I think because we all felt so uncomfortable, we tried to establish some ground rules, for example, we would all have 20 minutes. That didn't happen. I think we did not "gel" because, one of the reasons, we didn't have a common aim. I think in the first year, the group didn't have a common aim. I don't think we were comrades. I don't think we saw any similarities in our adversity. We didn't see any advantage in helping somebody else .we didn't see how that could benefit us.

Hazel — How did that effect our research? Did it, in fact, affect what we were doing?

Henry — I didn't think we did not wish to help each other. I thought that helping others helped me to clarify my position, to move on with my research. I never got that sense that we were not trying to do that. I got a sense of a clumsiness in doing that.

Gerald I strangely agree with you. But your argument supports what I originally said. That colleague did not see any added value in sharing what she was doing.

Hazel I didn't think she had anything to share.

Henry I agree. My problem was I did not know how to raise that without intimidating her. I couldn't challenge her. Perhaps we were too sensitive to be of any help.

Hazel I agree with that. I did not want to ask the challenging question because I knew it would cause her stress. So I didn't.

Henry It hasn't affected it in that sense. It did not affect it because the meta analysis has been going on all the way through. The pace of the research has been dictated by the field.

Gerald I can't answer that because I don't know. It's like saying, 'How much has it affected you being white and not black?. I just don't know. I'm sure it has affected. I think all of us spent quite a lot of time trying to get the group "named". We seemed to get jammed in the "storming" stage. At certain points I did shut myself off and get down to work. I think at points it was easier just to sit down at the keyboard, do some research, or open a book, than to talk to somebody.

Appendix 8

Topics covered in the programmed learning element of the research provided by the by the Institute of Risk Management Associateship Examinations

Within the topic Business Organisation and Finance the nature of risk and risk management was placed in the context of the business environment and how it created risk. Business topics such as the cycle of production, supply and demand, market conditions and macroeconomics were explored in relation to how these generated risks and how businesses tried to manage these risks.

In addition to the business economic factors related to risk the topic included an understanding of the English legal system, rules of contract, insurance and legal remedies available to businesses and the public.

Finally, the social and political factors influence on risk and risk management were introduced along with an introduction as to how risks could be classified and measured. Utility theory was introduced as a way of trying to explain attitudes to risk and risks on organisations.

Within the topic of Risk Analysis the use of statistical analytical methods was extensively covered as was the cost of carrying out the process of risk analysis.

Risk identification techniques and programmes such as:

- Physical inspections
- Check lists

- Organisation charts
- Flowcharts
- HAZOP's (Hazard and operability studies)
- Fault tree analysis
- Hazard Indices and consequence analysis

Statistical methods for measuring and evaluating the level of risk was also extensively explored and covered topics such as:

- Probability theory
- Probability by using A Priori and Relative Frequency techniques
- Probability trees and effects of different combinations of probabilities
- Balance of risk and benefits
- Sampling and data analysis and presentation techniques.

The debate about the relative value of scientific versus subjective judgements of acceptable risk and the role of the effects of preconceived ideas on the perception of risk raised serious questions about the limitations of statistical techniques. Also explored was the role of attitudes, perception, moral values, legal requirements and group dynamics on risk decision making and risk taking behaviours.

Following Risk Analysis the topic Risk Control introduced the differences between risks and hazards and introduced specific risk control techniques for the following risks:

- Fire
- Subsidence and earthquakes

- Burglary
- Public liability
- Motor and mobile plant
- Engineering
- Contractors and temporary erections
- Fidelity guarantee
- Worker injury
- Marine

The role of insurance within the risk control toolkit of the risk manager was also extensively explored and covered areas from an insurance perspective on:.

- Loss Forecasting
- Time Value of Money
- Unfair Contracts Terms Act
- Forms of contractual transferral
- Forms of risk financing transfer
- Management of non-insurance contractual transfer.
- Methods, incentives and conditions for self insurance
- Organising and managing the self-insurance funds including determining retention levels and financing the fund.
- Determining levels of deductibles
- Types of captives, preconditions for their formation, benefits and problems associated with them.
- Managing a captive

Appendix 8.3

- Risk transfer and financing
- Types of insurance
- Analysis and evaluation of insurance cover
- Use of brokers
- Special situation of multinational organisations

Under the topic of Corporate Risk Management the techniques of risk analysis and control were brought together and focussed on the nature and role of risk management within organisations and how the function fitted into and related to other organisational roles and responsibilities. Included in this topic was included risk management decision making probabilistic and non-probabilistic methods, contingency, business recovery planning and disaster management.