Swansea University E-Theses

A Gadamerian hermeneutic study of nurses' experiences of recognising and managing patients with clinical deterioration and critical illness in a NHS trust in Wales.

Tait, Desiree J.R

How to cite:

Use policy:

A Gadamerian Hermeneutic Study of Nurses' Experiences of Recognising and Managing Patients with Clinical Deterioration and Critical Illness in a NHS Trust in Wales

Desiree J. R. Tait

Swansea University

2008

ProQuest Number: 10805326

ProQuest 10805326

Summary

Aim: To interpret nurses' experiences of caring for patients with clinical deterioration and critical illness in a Welsh NHS Trust.

Methodology: A Gadamerian hermeneutic study drawing on eight in-depth interviews using a purposive sampling technique of nurses who had experienced caring for patients with clinical deterioration. Data collection occurred during 2004. Other data sources included the historical context and the researcher's pre-understandings of the phenomena: clinical deterioration; suboptimal care and critical illness. Data were analysed using a dialogical approach and guided by conditions necessary for Gadamerian hermeneutic interpretation.

Findings: The interpretation revealed that recognition of clinical deterioration included general and focused perception of triggers. These included: vigilance in the observation and scanning of patients; perception of clinical deterioration informed by historical and experiential awareness of triggers; and the use of selective combinations of historical, behavioural, interpersonal and physiological triggers. Response to clinical deterioration was influenced by the professional knowledge and confidence of the nurse, organisational culture, workload balance and skill mix. A model of professional gaze emerged that involved a circle of scanning, focused observation, waiting and balancing conditions for an effective response.

Conclusions: What is known is that junior medical and nursing staff lack the knowledge, skills and support network required to recognise and respond effectively to patient clinical deterioration in acute hospital settings. The evidence base to support the clinical effectiveness of national guidelines, produced in 2007, for recognising and responding to physiological evidence of clinical deterioration was inconclusive at the time of this study.

What this research adds is a model of professional gaze that highlights the complex and professional clinical decision making process involved in nurses' recognition and response to triggers in patient clinical deterioration. This process begins before physiological changes occur and the model provides a structure for recognising clinical concern that can be applied and tested in clinical settings. The model also highlights nurses' strategies for facilitating effective management of these patients.

Declarations

DECLARATION

This work has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature for any degree.

Signed ....

Date .... *9th July 2009* ....

STATEMENT 1

This thesis is the result of my own investigations, except where otherwise stated. Where correction services have been used, the extent and nature of the correction is clearly marked in a footnote(s).

Other sources are acknowledged by footnotes giving explicit references. A bibliography is appended.

Signed ....

Date .... *9th July 2009* ....

STATEMENT 2

I hereby give consent for my thesis, if accepted, to be available for photocopying and for inter-library loan, and for the title and summary to be made available to outside organisations.

Signed ....

Date .... *9th July 2009* ....

Contents - 1

Contents - 2

Chapter 4
Methodology   74

Contents - 3

Chapter 5
A Hermeneutic Interpretation of Nurses' Experiences
of Caring for Patients with Clinical Deterioration   147

Contents - 4

Chapter 6
Conclusions   240

References   251

Appendices   275

Figures

Chapter 4

Chapter 5

Acknowledgements

Chapter 1

Introduction and Background to the Study

1.1 Introduction

The aim of this thesis is to undertake a study of nurses' experience of caring for critically ill patients who show the potential for clinical deterioration within an acute hospital trust. This is undertaken in the context of history and the developing clinical role of the nurse in caring for this group of patients. The purpose of the research is to interpret and present an understanding of how nurses experience the care of patients who become critically ill in both acute and critical care settings. The research was undertaken in Wales during a period of transition from central to devolved government. Prior to the commencement of this study there was evidence of literature on the impact and timing of technical and medical interventions on the morbidity and mortality of critically ill patients. Research concerning the nurses' experience of recognising clinical deterioration and managing these situations, however, was sparse. It is anticipated that the findings from this research will add to the body of knowledge that provides a historical and contextual understanding of the nurses' experiences of caring for this group of patients.

The research approach used is qualitative and is influenced by hermeneutic phenomenology with specific reference to the work of Gadamer ([1975] 1989). The study focuses on the interpretation of nurses' lived experience of caring for patients who become critically ill in a hospital trust in Wales. Gadamer's hermeneutic philosophy focuses on three constructs that provide the ontological, epistemological and methodological basis for interpretation. They include: the hermeneutic circle, dialogue and fusions of horizons. From an epistemological perspective, Gadamer claims language and history provide the shared sphere in the hermeneutic circle and that the aim of entering the circle is to understand differently, rather than to produce an understanding which is better (Gadamer, [1975] 1989). For Gadamer, the subject (individual or text) is always embedded in the play of history; as such an interpreter's understanding of text is always embedded in and influenced by history and tradition. This includes the interpreter's understanding of history in the context of pre-understandings or prejudices that emerge as a result of experiencing history, tradition, and the text. The relationship between language as text and history are particularly significant to this study as the researcher's interpretation of the findings has been influenced by the historical context of caring for critically ill patients, as well as a

personal tradition of caring for both acutely and critically ill patients from the perspectives of nursing practice and education.

Throughout the thesis, the author is referred to as "the researcher", although the researcher is cognisant of the arguments for writing in the first person when presenting qualitative studies, as they relate to demonstrations of accountability in the process of data collection and interpretation (Holloway and Wheeler, 2002; Wolcott, 2001; Webb, 1992). In this study, the adoption of Gadamerian hermeneutic philosophy to guide the process of interpretation challenged the authenticity of writing the study in the first person. In this research, the subject of inquiry is the text. The interpretation therefore is not concerned with understanding the original meaning and psyche of the producers of the text but rather how the text is interpreted in the light of a dialogue between the historically affected consciousness of the researcher and the data as text.

The historically affected consciousness of the researcher is demonstrated through the process of dialogue with history and tradition that highlights prejudices (pre-understandings) that have informed the interpretation. Indeed, according to Gadamer ([1975] 1989), the text must be allowed to speak, with the reader being open to it in its own right, rather than being interpreted as an object. In this sense the reader addresses a question to the text and the text, in response, addresses a question to the reader. This dialectic, according to Palmer (1969), should not be conceived in person-to-person terms but rather, in terms of subject matter.

The adoption of a research approach informed by Gadamerian hermeneutic philosophy is presented, critiqued and justified as an approach to interpretative research that allows the researcher to examine the context, process and findings of a hermeneutic interpretation in order to provide a different understanding of nurses' experiences of caring for patients who become critically ill. The methods of data collection for this study include the use of a historical and contextual review of the literature, the researcher's pre-understandings and in-depth interviews. The interpretative approach used is dialogical and focuses on the play of question and answer between the researcher and the text. The research findings presented are interpreted as a shared hermeneutic understanding of nurses' experiences of caring for critically ill patients based on the interpretation of the interrelationships between tradition, context and text.

1.2 Professional background and interest of the researcher

The researcher in this study has thirty years' experience in acute and critical care nursing as well as the education of both student and registered nurses in the care of the critically ill patients. During this period, the researcher has worked in England as a staff nurse in intensive and coronary care, acute medicine and surgical areas and as a night sister with a responsibility for elderly care and a burns and plastic unit, before becoming a sister in an intensive and coronary care unit. An early interest in the problem area for research began when working in intensive care in the 1980's. During this period, patients who showed signs of clinical deterioration on acute wards were transferred, as an emergency, to the intensive care unit (ICU). Sometimes patients were transferred because their level of deterioration had been identified by staff on the ward and, on other occasions, patients were transferred because of a direct intervention by a critical care nurse who happened to be on the ward at that particular time. On many occasions, this process was informal and involved either checking with the night sisters if they were worried about any of their patients or physically touring the wards and looking for patients who were showing signs of deterioration. This informal arrangement was accepted by ward practitioners and critical care staff in the local health authority as a means of "helping each other out". This often involved assisting with caring for the patient on the ward during a critical period when there were not enough ward staff. When ICU was busy, however, these informal structures were no longer maintained.

Several years later, the researcher once again came across the issue of how critically ill patients were managed on general wards when running a high dependency course for ward nurses in Wales. As part of the course, students were required to submit reflective accounts of how they achieved their competencies. These accounts often included anecdotal narratives of stressful, often distressing situations encountered by nurses managing critically ill patients in acute care areas. The critical incidents appeared highly significant to the nurses reflecting on the experiences and illustrated that ward staff were experiencing problems with the safe and effective management of patients who deteriorated on general wards. The report by the Audit Commission (1999) on the care of critically ill patients in acute hospitals highlighted similar concerns and this fuelled the researcher's interest in this area and influenced the direction of this research. The significance of the researcher's history and

tradition is discussed further in Chapters 3 and 4 when examining philosophical influences on the research methodology.

1.3 Background and historical context

Historically the role of the nurse in caring for the critically ill patient has expanded exponentially with the development of innovations in technology and medicine. This development has been particularly significant since the middle of the twentieth century and coincides with key events in history including the Second World War (1939-1945) and a worldwide polio epidemic (1952) that triggered challenges for individuals and groups to push the boundaries of research, innovation and technology in order to save lives (Ridley *et al.,* 2003; Lenihan, 1979; Lassen, 1953). The net effect of this was to change the understanding of critical illness from a situation that generally marked the progressive deterioration of the patient with the provision of only symptom support to a situation that provided patients with a measurable chance of recovery.

As potential advances in medicine, technology and knowledge of physiology were realised, the advantages of concentrating human and mechanical resources to support this group of patients outweighed the disadvantage of diluting specialist nursing knowledge and experience on the wards (Atkinson, 1987). The advantages cited focus on cost effectiveness as well as effective use of resources, both human and material, particularly the maintenance and development of nursing expertise in the management of these patients, in what was an innovative and developing area of practice. In 1962, the Ministry of Health reinforced this view by recommending that patients in acute care should be grouped according to their illness and dependence on the nurse. They also recommended the development of intensive care units in acute care hospitals, with a proposal that between two and five per cent of acute care beds should be allocated for this purpose (Ministry of Health, 1962). The grouping and managing of these patients within a defined area of speciality subsequently led to the relocation of experienced nursing staff and a corresponding reduction in the level of experienced nurses in acute care. Those nurses who wished to stay in acute care were subsequently deprived of opportunities to care for patients who develop and experience critical illness (Atkinson, 1987). As a consequence of this development, the roles of nurses, doctors and paramedical staff have expanded in response to local health care demands and often without strategic planning. This has led to an imbalance in the provision of critical care facilities in England and Wales, with some

trusts having greater scope for critical care services than others (Department of Health, 2000; Audit Commission, 1999).

By the 1980's, care of the critically ill had become the care and management of patients with acute physiological deterioration and a potentially recoverable pathology who required the support of one or more organ systems (Ledingham, 1989). Subsequent definitions of critical illness in this context are generally described in relation to the patient's level of dependency and the level of critical care provision required in order to support the patient's physiological condition, rather than as a defined clinical measure of the patient's illness (Intensive Care Society, 2002; Department of Health, 2000).

In the 1990's, following a review of critical care provision in England and Wales, the Audit Commission (1999, p. 3) highlighted concerns about the incidence of suboptimal care and, while drawing attention to the "vital, life-saving importance" of critical care, they also expressed concern about the fragmentation and cost of critical care services.

According to McQuillan *et al.* (1998), suboptimal care includes evidence of deficiencies in the clinical assessment and interpretation of life threatening dysfunction of a patient's airway, breathing and/or circulation. The consequence of suboptimal care is an increase in related patient morbidity and mortality following diagnosis and treatment of their condition. The extent of the problem gained recognition particularly during the 1990's and has been evidenced in a number of studies (Buist *et al.,* 2002; McQuillan *et al.,* 1998; Goldhill *et al.,* 1999; McGloin *et al.,* 1999; Franklin and Mathew, 1994). The majority of these studies are retrospective and include the analysis of data already collected and recorded in the patients' notes to determine the course of events leading up to a critical episode. The course of events for each patient was then judged by an expert panel in order to determine the evidence or otherwise of suboptimal care. The quality and generalisability of the findings from these studies are therefore dependent on the quality of documentation in the patients' records and audit data, as well as the process utilised for choosing an expert panel (Michaels, 2006; Campbell *et al.,* 2003; Campbell *et al.,* 2002).

In response to the concerns raised by the Audit Commission (1999), the Department of Health (2000) published a review of critical care services for adults in acute hospital settings in England and Wales and made recommendations for practice. This document, while recognising the contribution of the Audit Commission (1999),

set out a plan for the modernisation of critical care provision that went beyond the original recommendations made in 1999.

A core element of the modernisation programme was related to the government's cognisance of suboptimal care and the development of strategies to prevent and reduce the risk of such deficiencies in clinical management from occurring. This process began with the production of a revised classification of acute and critical care patient dependency levels, ranging from nought to three. The dependency levels cited in this context are concerned with the level of support required to maintain a standard level of safety for the patient concerned and include reference to minimum standards of technology and human and material resources required to maintain a safe environment for the patients and to promote recovery.

Patients who are classified at dependency level zero are those whose needs can be met through care provision on a ward in an acute hospital. Those patients who meet the criteria for level one are according to Department of Health (2000, p. 10):

> patients at risk of their condition deteriorating, or those
> recently located from higher levels of care, whose needs
> can be met on an acute ward with additional advice and
> support from the critical care team.

It is this group of patients that the government has focused the most attention on and, as a consequence, the plan for modernisation includes recommendations for the development of critical care outreach services in each National Health Service (NHS) Acute Care Trust that provides a hospital wide approach to critical care. This service provides a team of staff with critical care skills to support the care and management of patients classified as level one on general ward areas and to ensure the provision of critical care facilities for those patients who meet levels two and three criteria. It is proposed that the system should exist within an integrated and collaborative network of acute, specialist and critical care services in a designated geographical area (Intensive Care Society, 2002; Department of Health, 2000).

An outreach service may include a number of support mechanisms for the critically ill patient in an acute care setting. Those recommended by the Department of Health include the provision of physiological track and trigger tools to recognise and manage clinical deterioration (Goldhill, 2000; Goldhill *et al.*, 1999; Stenhouse *et al.*, 2000), multidisciplinary competency based critical care education (Smith *et al.*, 2002) and outreach teams to provide support and advice at ward level for patients at

risk and those recently discharged from critical care areas (Strahan *et al.,* 2003; Haines *et al.,* 2001). The objectives of this strategy are three fold and include the monitoring of patients in ward areas with the aim of preventing the patients' progression to critical illness, effective discharge planning from higher to lower levels of care and finally the sharing of critical care skills with ward nurses when necessary (Department of Health, 2003, 2000).

Levels two and three criteria refer to those patients who are traditionally managed in high dependency units and intensive care units. According to Department of Health (2000, p.10), level two patients are:

> patients requiring more detailed observation or
> interventions including support for a single failing organ
> system or post-operative care and those 'stepping down'
> from higher levels of care

while those patients who meet level three criteria are:

> patients requiring advanced respiratory support alone, or
> basic respiratory support together with support of at least
> two organ systems. This level includes all complex
> patients requiring support for multi-organ failure.

The Department of Health (2000) recognised that the provision and application of increasing levels of care would depend primarily on the services provided by each individual hospital but they also placed a strong emphasis on the Trusts to assess service need in each hospital as well as the provision of services in adjacent hospitals.

To that end, they recommended that the development of comprehensive critical care provision should include: evidence of integration between services, personnel and units of care; networking between several NHS Trusts; workforce development to provide comprehensive education and training of new and existing staff; and, finally, practice in a culture of evidence based practice. The Intensive Care Society (2002), endorsed by the Department of Health, submitted expanded guidance on assessing patients according to their required level of care but stressed that the standards set related to the assessment of patients based on clinical need and did not regard the location of patients or the skill mix of nursing staff as organisational factors influencing this process. The question remains, therefore: what happens when the location, resources and skill mix are lacking?

In the UK, the publication of the report "Critical to Success" (Audit Commission, 1999) coincided with Government legislation on devolution of

administrations in Scotland and Wales (Andrews and Martin, 2007, Pollock, 1999). A core element of this process was the devolution of health, education and training, local government, social work and housing, economic development and transport to the Welsh Assembly Government. When the Department of Health in England published Comprehensive Critical Care in 2000, it became the responsibility of the Welsh Assembly Government (WAG) to interpret and review the recommendations in the context of Welsh health care needs. In Wales, without a history of strong professional medical education and research, as is evident in Scotland, the model adopted for managing health care was based on localism (Greer, 2004). Localism is based on the concept of integrating health and local government towards policy that facilitates the coordination of care based on local determinants of health rather than disease, thus influencing the development of policy in health and social care, housing and economics that promoted health rather then the management of disease (Greer, 2004).

The NHS historically has a focus of managing ill health and, while focusing on strategies to promote health can reduce ill health, the core management of disease remains crucial. As a consequence, in Wales, following a report by the Emergency Pressures Task Force in 2000, the Welsh Assembly Government recommended a review of adult critical care provision across Wales, the aim of which was to develop an all Wales strategy for critical care. This led to the commissioning of the "All Wales Critical Care Development Group" to consider the requirement for effective critical care provision in Wales. A large part of the remit for this group was the development and publication of quality standards for critical care in Wales that provide minimum requirements for professional, occupational and technological provision for care at all levels of dependency. The first draft of "Standards for Acute and Critical Care" was published in 2003 (All Wales Critical Care Development Group, 2003). The draft standards include some provision for outreach services being part of the minimum care provision for dependent patients in ward areas although they do not specify the extent of the services to be provided or how it should be operationalised. The final draft of the standards was published by the Welsh Assembly Government as part of the document "Quality Requirements for Adult Critical Care in Wales" in March 2006, five years after the group was originally commissioned. In this document, more attention has been paid to the provision of outreach services, the use of risk assessment protocols is recognised as a process for assessing patient dependency level

and there is also recognition of the skill required by the critical care team to manage identified level one patients.

In summary, the aims and objectives of outreach are well described. The operationalisation of such a service, however, has been left to individual acute care NHS Trusts and determined by local need (Welsh Assembly Government, 2006; Department of Health, 2003, 2000; Groom, 2001). The requirement for national standards for critical care provision has also been recognised along with the need for a strategic approach to the management of patients in both acute and critical care settings in England and Wales, although the operationalisation and timing of the recommendations does vary between both countries, with England taking the lead in funding for research and development as well as policy implementation. In spite of devolution, Wales continues to be measured against outcomes and targets set by English policy, seeing England as a template for best practice (Greer, 2004). What this principle fails to recognise, however, is how policy implementation and outcomes in Wales are measured against its own health care policy rather then that of England (Drakeford, 2006; Greer, 2004).

The general problem area of this study is concerned with the nursing assessment and management of patients with clinical deterioration leading to critical illness in Wales and is considered in the context of the existence of 'suboptimal care' (Intensive Care Society, 2002; Department of Health, 2000; Audit Commission, 1999). The focus of this study is concerned with how nurses manage and experience the care of patients who deteriorate and become critically ill in acute and critical care settings in Wales. It is recognised, however, that much of the data concerning critical care services up to 2000 have been collated jointly with England. As a consequence, there is a considerable overlap in the findings and application of research in this area to both England and Wales. It is pertinent to recognise that Scotland and Northern Ireland have also focused on developments in this area and this will be addressed in the literature review.

1.4 Rationale for the study

Prior to the commencement of this study, the majority of research studies related to managing patients when they develop critical illness focus on patient outcomes and measures of patient morbidity and mortality (Ball *et al.,* 2003; Goldhill *et al.,* 1999; McGloin *et al.,* 1999; McQuillan *et al.,* 1998). Findings from these studies offer some guidance into what is clinically effective although the external validity of the studies is limited by factors such as accuracy of documentation, equality of skill mix ant other extraneous variables. Measures related to the context and process of care for these patients are scant and factors affecting the process of managing patients are often highlighted but rarely explored in depth. It can be accepted therefore, that some management and organisational issues have been identified as factors influencing the care of this group of patients. By 2003 however there had been little in depth analysis of how caring for critically ill patients is experienced by individual members of the health care team and how knowledge, clinical skill and organisational issues impact on the nursing management of these patients (McQuillan *et al.,* 1998).

It can be argued that nurses are the primary assessors and communicators of patient problems in acute and critical care areas (McArthur-Rouse, 2001; Audit Commission, 1999; Department of Health, 2000). This is accepting that in some circumstances, health care support workers may be the first to alert the nurse to a problem, but it is primarily the nurse who makes the decision to contact the medical team (Rheaume, 2003; Thornley, 2000). A deeper understanding, therefore, of the nurses' experience of managing patients with clinical deterioration will add to the body of knowledge concerning the process of managing critically ill patients in a variety of areas.

In Wales, as a result of devolution, there have been differences in policy development and implementation compared to that of England. The timing and historical context of the study are considered in this context as the pace of change and policy implementation are different. Data collected for interpretation in this study have therefore focused on the recognition of historical context, the timing and related context of data collection and how this can be considered in the context of current practice. The study commenced in 2003 and data collection occurred during 2004.

1.5 Introduction to the chapters

The problem area and focus for this study is concerned with understanding nurses' experiences of situations when a patient has a clinical deterioration in their condition leading to critical illness in Wales. The role of the nurse in relation to the care of critically ill patients is analysed and interpreted from a historical perspective and critiques the development of critical care services in England and Wales from the period when critical illness could be recognised and managed in such a way as to promote a measurable chance of recovery.

In Chapter 2, the review of the literature includes a critical analysis of suboptimal care, its definition, causes and factors related to the management of critically ill patients in acute care hospitals. A number of reasons why acute care services seem to be failing patients in some cases are examined. This includes issues regarding the education and training of doctors and nurses, changes in the specification and delivery of health care, and increasing evidence of specialisation which impacts on skill mix and workload (Intensive Care Society, 2002a, 2002b). In order to gain a contextual understanding of the nurses' role, the researcher has reviewed the literature from a historical perspective and mapped key trends that have informed and guided both policy recommendations and practice. The review spans the period 1960 to 2004, from the development of modern nursing, the inception of critical care provision and its subsequent development and the recognition of suboptimal care in acute care services. The recognition of history and pre-understandings is interpreted as part of the process of coming to understand the experience of nurses caring for critically ill patients and is expanded upon in Chapter 5 during the interpretation and discussion of findings. Literature published from 2004 onwards is therefore discussed in the context of the research findings in Chapter 5. The chapter concludes by demonstrating how the literature review has led to the research questions and objectives of the research.

In Chapter 3, the researcher examines the philosophical basis for the research. The choice of an interpretative paradigm is defended and arguments for basing the ontological and epistemological foundation for the research in the hermeneutics of Gadamer ([1975] 1989) are discussed.

In Chapter 4, the researcher begins by offering an introduction and summary of the research process. The methodological basis of the research is examined by

interpreting and presenting seven conditions necessary for phenomenological hermeneutic understanding after Gadamer ([1975] 1989). A critical examination of how the application of these conditions for hermeneutic interpretation can be presented as high quality and responsible interpretation is included and leads to the adoption of Madison's (1988) guiding principles for hermeneutic interpretation.

The remainder of the chapter continues by presenting and arguing the methodological basis for each stage of the research process. This begins with analysing the choice of population and sample and discusses the use of a criterion based or purposeful sampling technique. The ethical considerations required for the research are presented and examined from a philosophical and practical basis. Data collection through the use of interviews as dialogue is examined and the interview process is presented with arguments to support the process used. Finally, the chapter concludes by presenting and arguing for the dialogical process used to interpret the findings and then presents a model of how this has been used during the interpretative process.

Chapter 5 presents the interpretation and discussion of the findings by following the conditions necessary for hermeneutic interpretation and adhering to the principles of responsible interpretation. This begins with an interpretation of the researcher's pre-understandings that have informed the research process and proceeds to the presentation and discussion of the themes that have emerged from the text. These include six themes that together present an interpretation and understanding of how nurses in one hospital in Wales experience caring for patients with clinical deterioration.

The final chapter presents a summary and discussion of the findings and returns to explore this in the light of the aims and objectives of the research. The strengths and limitations of the study are critically analysed and discussed in relation to the application of the findings to clinical practice and the development of questions for further research.

Chapter 2

Literature Review

2.1 Introduction

The idea for this research was triggered by studies published concerning the existence of suboptimal care (Audit Commission, 1999; McQuillan *et al.*, 1998) and by personal encounters with nurses who had experienced critical incidents when caring for critically ill patients. The aim of this literature review is to define and clarify the problem area for the research, critically analyse the quality of the evidence to support the choice of research question and critically examine the historical context of the role of the nurse when caring for patients who progress to critical illness. The first focus of this review is to establish the timing and strength of evidence to support the existence of suboptimal care in England and Wales, the reasons cited for its existence and proposals for reducing its incidence. The second focus of the literature review is to critically examine the reasons cited up to 2004 why acute and critical care services seem to have been failing to provide optimal care for patients at dependency level one and two (Department of Health, 2000). The reasons cited include changes in the specification and delivery of health care, evidence of an increasing incidence of specialisation, changing demands on nursing skill mix and developments in clinical practice and education. The literature published after 2004 is critically discussed in the context of the research findings and is not included in this chapter. This is consistent with the aims of the chapter.

The structure of this chapter is presented through a series of questions in relation to the developing role of the nurse in the practice of caring for critically ill patients and examines the historical and contextual nature of these issues. The purpose of undertaking a historical review is to identify and discuss the theoretical basis for pre-understandings that have informed the researcher from the development of the research proposal to the operationalisation of the research process. This is consistent with adopting an interpretative hermeneutic approach to the research; these pre-understandings are identified as an integral part of the data and are interpreted in context as part of the presentation and discussion of findings in Chapter 5.

2.2 Search strategy and inclusion criteria

In order to define the problem area for the research and to critically analyse the quality of the evidence to support the research question, the first literature search focused on gathering evidence to support the definition and existence of suboptimal care in the UK and to clarify the role of the nurse in that context. The focus and range of literature for inclusion therefore comprised primarily British research papers, including qualitative and quantitative studies during the period 1980 to 2004, which focused on the quality and provision of care given to acutely ill, seriously ill or critically ill patients prior to and after transfer to specialist critical care units. Attention was also given to the morbidity and mortality rates of patients admitted to critical care units as well as audits concerning quality of care for critically ill patients. Following this provisional review of the literature, the researcher identified the international recognition and concerns related to the phenomenon of suboptimal care and the search was widened to include similar research in Europe and Australia where critical care provision is comparable to the United Kingdom (UK). American research papers were considered and included or excluded based on their comparability and compatibility with British studies in relation to the temporal, political, social and economic context. To that end and for this section of the review, the focus and range of literature included quantitative and qualitative research papers, audit and policy publications related to the key words: patient, intensive care, critical care, acute care, seriously ill, suboptimal care, nursing and medicine, medical emergency, outreach, policy, management and quality. Within this context, key search phrases included: acute care and suboptimal care, severity of illness and critical care, seriously ill and nursing management, seriously ill and medical management, medical emergency teams, severity of illness and acute care, outreach and nursing, outreach and medicine. Papers were included and/or excluded on the basis of the quality and applicability of the research to the key words.

Specific inclusion criteria for collating the evidence to support the existence of and reasons for suboptimal care included: all research papers from the UK, Europe USA and Australia in the context of the key search phrases above. This included all research papers using quantative, qualitative, systematic reviews or mixed methods research that occurred during the incremental dates stated below. For research papers where there was insufficient content to judge the quality or applicability of the

research, the papers were excluded. The researcher also included government funded research projects and policy informed by research. Papers were excluded if they were not in written English due to the researcher's limited access to translation services.

From a historical perspective, the emergence of critical care units in the UK began in the 1960's and 1970's and this is identified as a critical time for the development of both acute and critical care provision. It was during this period that developments in medicine and technology pushed the boundaries of health care to reduce patient morbidity and mortality rates by the introduction of new techniques and therapies (Ridley *et al.*, 2003). The published literature was therefore reviewed in increments of time, the final dates coinciding with the commencement of data collection for this research. The first of these increments covers the period between 1850, when the development of modern nursing began, and 1960, corresponding to the inception of critical care units. This set the historical context. The second period spans the 1960's and 1970's and covers the development of specialist critical care units. The third period covers the 1980's and the recognition of the impact of specialist skills and technology on the management of seriously ill patients. The final period is from the 1990's up to 2004 when the recognition and proposed resolution of suboptimal care in acute care was researched. Any literature pertaining to quality of care for seriously ill patients prior to this is, however, included as part of the historical context of the review in order to identify and present patterns of tradition in health care. Any research papers published during and after 2004 have been included and discussed in relation to the findings of the research in Chapters 5 and 6. These studies were selected using the inclusion criteria described above.

The search strategy involved a combination of approaches to search for and refine the content for inclusion. This included a computer based search for papers using the key words and combinations listed above using the following databases: the University Library catalogue, the Cumulative Index of Nursing and Allied Health Literature (CINAHL), the Cochrane Library, PubMed including Medline, search engines including Google Scholar, and related Web sites including those of the Welsh Assembly Government, Department of Health and Intensive Care Society. The electronic search was managed and directed according to the key words and phrases above. Provisional findings were then cross referenced with a hand search, guided by references cited in the existing literature, as well as a search of specialist journals for relevant papers that may not have been identified through the electronic search.

18

The search strategy for the historical review of the literature, on the provision of critical care services and the role of the nurse in the management of patients who develop critical illness, involved a wider focus of data sources in order to gain a historical and contextual perspective. These included all the key words above with the addition of history and involved a hand and electronic search of journals, text books, and policy documents to map, compare and contrast the emergence and development of critical care provision in the UK, Europe and United States of America (USA). The type of papers and documents included in this section are research studies, historical references, theory and discussion papers, policy documents and old text books that offer contextual data. Specific inclusion criteria for the historical review focused on the relevance of the context to the key words, applicability to the research problem, and accessibility and legitimacy of the content to its source.

The literature review is presented as a culmination of the findings from both searches and focuses on four key questions. First, what is suboptimal care? Second, what is the strength of evidence to support its existence and has this changed with time? Third, what are the causes and factors influencing the incidence of suboptimal care? Fourth, what is known about the work of the nurse in the context of suboptimal care? These questions provide a guiding path through the literature and lead to the development of the research questions and the choice of the philosophical framework that underpins the research process. The review will conclude by clarifying the problem area for research and summarise the justification for the choice of research questions, as well as the aim and objectives of the research.

2.3 What is suboptimal care?

In the most general sense, suboptimal care refers to an aspect of care that is below the optimal standard. According to the Collins English Dictionary, optimum "is a condition, degree, amount or compromise that produces the best possible result" (Butterfield, 2003, p. 1146). When the term 'suboptimal' is utilised in context therefore, there is an assumption that a measure of the optimal result or condition is available as an outcome and that this is the standard against which the process of care is measured. The concept of suboptimal care as a manifestation of sub-standard management in health care began to emerge in the 1980's and was cited in a number of quality audits and reviews of patient morbidity and mortality published during the 1990's. Key examples of this include: a National Confidential Inquiry into Perioperative Deaths (NCIPD) (Buck *et al.,* 1991); Babies' Deaths During 1991 to 1992 (Dillner, 1995); Avoidable Deaths from Stroke and Heart Disease During 1990 and 1991 (Payne *et al.,* 1993); and the Impact of the Quality of Acute Care on the Morbidity and Mortality of Patients Prior to Admission to Critical Care Units (McQuillan *et al.,* 1998).

The focus of this thesis is the clinical, particularly nursing, contribution to the care of patients who develop serious and unstable illness in acute wards leading to admission to critical care. Therefore the researcher has limited the scope of defining and understanding suboptimal care to the management of patients in acute care settings where, should they become seriously ill, the most likely referral location is a critical care unit. An acutely ill patient who develops serious illness is recognised by clinical evidence of physiological dysfunction of the airway, breathing or circulation that, when left unrecognised or mismanaged by clinical staff, can lead to the patient's death (McGloin *et al.,* 1999; McQuillan *et al.,* 1998). This encompasses the patient dependency levels one, two and three and includes patients who are at risk of clinical deterioration and patients requiring the support of at least one body system (Welsh Assembly Government, 2006; Department of Health, 2000). According to McQuillan *et al.* (1998), suboptimal care in this context may be described as the evidence of deficiencies in the assessment and interpretation of clinical situations when there is life threatening dysfunction of a patient's airway, breathing and/or circulation.

Other definitions of suboptimal care include more direct operational measures that match evidence of patients' vital signs against actions or intervention given or omitted. For example, McGloin *et al.* (1999, p. 256) define suboptimal care as:

- Non-recognition of an abnormality *clearly* (original authors' emphasis) apparent from physiological recordings or laboratory data, but which had either not been identified in the case records or not acted upon with any obvious therapeutic intervention (i.e. no entry on the drug chart).
- *Clearly* (original authors' emphasis) inappropriate or inadequate treatment, although the case records showed that the abnormality had been identified by nursing or medical staff

Although these definitions vary in their precision and complexity, the significant factor remains that, in order to recognise suboptimal care, there is a requirement to define optimal care in that context. The quality of any evidence of suboptimal care therefore is reliant on the existence of accurate measures of optimal standards that have been verified and evidence based. In studies that have highlighted the existence of suboptimal care, definitions of optimal practice have relied on a combination of measures to determine the optimal care including operational definitions and expert opinions. In the majority of cases, the interpretation and measurement of suboptimal care has relied on consensus between experts rather than an absolute measure of the difference between optimal and suboptimal practice (Buist *et al.*, 2002; McQuillan *et al.*, 1998; Goldhill *et al.*, 1999; McGloin *et al.*, 1999; Franklin and Mathew, 1994). This does not appear to have minimised the significance of the findings in these studies, however, as each study has been consistent in identifying some degree of evidence to support the existence of suboptimal care. As a result, the findings from these studies have had a dramatic impact on policy direction and development even though the quality of much of the evidence is classified as category two (b) or category three, i.e. studies that focus on retrospective cohort or case studies in which correlations between interventions and outcomes are difficult to determine due to the number of extraneous variables influencing outcome (Phillips *et al.*, 2001; Charny, 2001). For the purpose of this review, the focus of suboptimal care will be directed at those patients who have developed serious illness that can be categorised as dependency level one, two or three (Department of Health, 2000) and who have recorded evidence of receiving suboptimal care in relation to airway,

breathing and/or circulation either through omission or inadequate treatment of their clinical situation when measured against defined standards of care and management.

2.4 What is the strength of evidence to support the existence of suboptimal care and has this changed with time?

For the purposes of this review, the researcher has chosen to begin the mapping of evidence of suboptimal care from the 1960's based on the premise that this period signified the development of advanced knowledge and technology designed to treat and prevent morbidity and mortality in patients with serious and acute, cardiac, pulmonary and neurological conditions. Standards of care prior to this date would therefore not be comparable.

From a historical perspective, however, it is significant that, although patient outcomes were poor prior to the 1960's, the process of undertaking clinical assessment and recognition of clinical deterioration in seriously ill patients was practiced by health care practitioners, particularly nurses, even when the potential for treatment or recovery of the patient was poor. For example, there is evidence to suggest that nurses recognised and monitored seriously ill patients as early as the 1850's, although it was not until the middle of the twentieth century that clinical knowledge and technology offered wider and more favourable solutions to the plight of the seriously ill.

This is illustrated by Nightingale (1860, p. 105) who, writing on "what nursing is and is not", recognised the significance of clinical observation and monitoring and argued that it was a nursing responsibility to recognise and consider the cause of any change in a patient's clinical condition in order to save life and promote health. She writes:

> The most important practical lesson that can be given to nurses is to
> teach them what to observe - how to observe - what symptoms
> indicate improvement - what the reverse - which are of importance -
> which are of none - which are the evidence of neglect - and what kind
> of neglect. All this is what ought to make part, and an essential part,
> of the training of every nurse. At present how few there are, either
> professional or unprofessional, who really know at all whether any
> sick person they may be with, is better or worse.

Nightingale (1860) also discussed the appropriateness of having a specific area set aside, located next to the operating theatre, where patients may be watched more closely and recover from the immediate post-operative period. Similarly, in 1863, Alcott referred to her ward being divided in levels of dependency so that she could observe the more highly dependent patients more closely (Fairman, 1992).

It was during the twentieth century that considerable developments were made in the fields of medicine, pharmacology and electronic technology to the extent that patients developing critical illness had a greater chance of recovery. The impact of these advances were far reaching and gradually the care of the seriously ill moved from being dominated by nurses to being managed by a collaborative, multiprofessional team of specialist health care professionals (Welsh Assembly Government, 2006). For example, Lenihan (1979) refers to efforts made during the Second World War to provide facilities in the United Kingdom for the treatment of the large numbers of civilian casualties predicted to occur as a result of bombing raids and possible invasion. He goes on to describe how teams of doctors and nurses were organised to provide intensive care for soldiers with injuries sustained in battle. This included the setting up of an emergency medical service to manage the anticipated number of air-raid casualties in order to improve and co-ordinate the acute and casualty services in existing public and voluntary hospitals (Webster, 2002; Baly, 1995). This initiative is similar in essence to the government's current recommendations regarding the use of medical emergency teams and outreach services (Department of Health, 2000).

The poliomyelitis epidemic in Europe in 1952 can also be identified as a landmark period in that the epidemic triggered the development of new techniques for treating respiratory failure that produced dramatic improvements in patient outcome. This involved the use of manual intermittent positive pressure ventilation via a cuffed tracheostomy tube (Sykes *et al.,* 1995). In this instance, large numbers of doctors, nurses and medical students were required to provide the necessary manual assisted ventilation of patients during the acute phase of the disease. This technique, as opposed to the use of negative pressure ventilators such as the iron lung, led to a reduction in mortality rate from 87% to 40% (Lassen, 1953). The perceived success of using intermittent positive pressure ventilation led to the rapid development of machines and technology to provide respiratory support for patients with respiratory failure on a worldwide scale, even though the short and long term effects of these techniques on patient outcome had not been fully researched (Sykes *et al.,* 1995; Hillman, 1990; Snider, 1983; Lassen *et al.,* 1954; Lassen, 1953).

The 1960's and 1970's

It was during the 1960's that widespread use of external cardiac compression and defibrillation during resuscitation was introduced although initially this was almost exclusively for patients with acute cardiac disease (Naeem and Montenegro, 2005; Ayres, 1994). Subsequently, by the mid 1960's, the perceived advantages of putting patients at risk of having a cardiac arrest together in a single unit were realised and led to the development of intensive and coronary care units.

The use of new technologies and expansion of nursing and medical roles to accommodate new and more complex interventions was met with enthusiasm. Reports published during the 1960's highlighted the advantages of using new and innovative techniques particularly in Europe with little reference to increasing demand on resources and the potential for litigation when difficulties or mistakes arose while developing new techniques and technology (Ridley *et al.*, 2003). In the USA and Canada, however, the enthusiasm for new technology and innovation in medical care was tempered by the impact of the insurance boom, public affluence and hospital reorganisation and particularly the increased use of private rooms. In an attempt to reduce costs, maximise on the nurse's role in the triage of unstable patients and reduce the risk of errors, they created architecturally discrete intensive care units and utilised a systematic approach to grouping patients according to degrees of patient illness and dependency (Fairman and Lynaugh, 1998; Fairman, 1992). An evaluation of an intensive respiratory unit during this period identified the tremendous impact of assisted positive pressure ventilation on the survival of patients with respiratory insufficiency (Fairley, 1961). The unit, originally set up in the 1950's, was designed to manage patients with neurological disease. However, in the four year period covered by the audit, they found that 78% of their patients had been admitted with respiratory insufficiency related to medical conditions other than neurological disease. This finding can be partly explained by the development and widespread use of vaccines that reduced the incidence of polio and tetanus but it also suggests that clinical deterioration of patients in acute care was evident and that these patients benefited from intensive respiratory care (Hopkinson, 1996). What was not considered at this time, however, was a possible correlation between the patients' clinical deterioration and suboptimal care.

In the UK, the first report on the use and development of intensive care was produced by the British Medical Association (BMA) in 1967. With this report came the recommendation that an intensive therapy unit (ITU) would not only improve the outcome of each patient's critical illness, it would also promote improvements in levels of nursing and medical intensive care. The report also recognised that there were risks associated with these recommendations and highlighted two key concerns. The first was related to the impact of the new units on the division of resources between acute and critical care and the concern that ITUs would draw away the care and resources previously provided in acute wards. The second concern focused on the impact of the new units on staff training and skill development. Junior staff would no longer be exposed to the management of seriously ill patients on a routine basis and this could have a negative impact on their ability to care for these patients in an emergency (Hopkinson, 1996).

Three years after the BMA's report, the Ministry of Health (1970) recommended that critical care units should be development in acute general hospitals and stipulated a general structure for these units. It was, however, another seventeen years before a formal review of the risks and benefits of these units was undertaken by the King's Fund Panel, chaired by Ledingham (1989). Significantly, the panel highlighted that, when undertaking this analysis, the availability of data in the UK to report on the risk:benefit ratios of intensive care in relation to patient outcome, cost and resources was insufficient to draw any formal conclusions. As a consequence, the authors of the report called for an urgent review of the type and process of data collection that is needed to inform clinical and economic audit as well as the development of clinical guidelines to inform and provide a minimum standard of care for critically ill patients (Ledingham, 1989).

The 1980's

A review of clinical research studies regarding care of the seriously ill during the 1970's and 1980's supports the findings of the King's Fund Panel (Ledingham, 1989). In the studies reviewed in the UK, the dominant concerns were related to measuring and refining techniques and interventions associated with resuscitation, respiratory support and the exploration of possible uses for the advancing technology, rather than the clinical and economic evaluation of such advances on patient care.

There were, however, several retrospective studies, predominately American, that analysed the experiences and outcomes achieved through the use of cardiopulmonary resuscitation (CPR) (DeBard, 1981; Wildsmith *et al.,* 1972; Roser, 1967). The findings from these studies provided evidence that, since the development of cardiopulmonary resuscitation, the anticipated improvement in patient outcome had not been realised although some patients did benefit, showing improvements in reduced morbidity and mortality at the time of hospital discharge. This was often dependent, however, on the cause and timing of the cardiac arrest, rather than intervention with CPR. Following these findings, subsequent studies began to focus on the choice of patient to be resuscitated, the techniques and training of staff and the location of the patients at the time of cardiac arrest (Taffet *et al.,* 1988; McGrath, 1987; Hershey and Fisher, 1982). A meta-analysis of 98 studies from 1966-1990 by Schneider *et al.* (1993) indicated that, out of the outcomes of the 19,955 patients who had a cardiac arrest and in-hospital CPR, only 15% survived to discharge. The positive view of this statistic is that 15% of patients who would have died had cardiopulmonary resuscitation not been attempted did survive to discharge. The negative view, however, finds that 85% of patients who received in-hospital CPR did not survive. There is evidence to suggest that this overall measure of patient outcomes post CPR has not significantly changed in subsequent years indicating that CPR alone cannot provide a dramatic improvement in patient outcome unless managed in the context of other factors that influence patient morbidity and mortality (Naeeme and Montenegro, 2005; Hodgetts *et al.,* 2002a; Tunstall-Pedoe *et al.,* 1992).

The conclusions drawn from these studies highlighted two areas of concern. The first recognised the lack of standardisation and consistency of training for junior nursing and medical staff. The second recognised that some patients in clinical situations would always have a higher potential for successful resuscitation than others and that this should be standardised and defined (Wynne *et al.,* 1987; Skinner *et al.,* 1985; Casey, 1984). These findings ultimately led to the development of clinical standards and guidelines on a world wide basis for cardiopulmonary resuscitation (Resuscitation Council [UK], 2004).

The growing body of evidence of poor outcomes for patients who suffer cardiac arrest also triggered a change in focus for clinical research to one that was directed towards the recognition and potential for prevention of situations leading to clinical deterioration and cardiac arrest. Research involving a retrospective analysis of

patient data prior to their cardiac arrest highlighted the presence of clinical indicators occurring some hours before the cardiac arrest in the majority of the patients studied, indicating that, if clinical signs existed prior to cardiac arrest, the situation may have been prevented if appropriate assessment and action had been taken (Dubois and Brook, 1988; Sax and Charlston, 1987).

For example, Dubois and Brook (1988) undertook a retrospective study of 12 hospitals and identified a sample group of 182 patients who had died from cerebral vascular accident, pneumonia and myocardial infarct. The investigators prepared a summary of the events leading to each patient's death and asked for independent judgements from each member of an expert panel comprised of specialist consultants. When majority opinions were used in each case, they concluded that 27% of the deaths had been preventable, when the unanimous rule was applied only 14% of the deaths were deemed preventable. The conclusions drawn were that, in spite of the limitations of using an expert panel and basing opinions only on the evidence available, there was a group of patients whose deaths might have been prevented.

By the end of the 1980's, there was evidence of a shift away from the unchallenged optimism of the 1960's and early 1970's for new treatments and innovations towards a more tempered analysis and evaluation of the effect of clinical interventions on patient outcome. This trend coincided with the NHS attempting to manage health care with severely limited resources, caused by a prolonged period of underfunding related to underambitious estimations of the projected costs of health care in the 1970's (Webster, 2002; Ham, 1999).

In summary, there was recognition that preventing clinical deterioration in adults had the potential to be more effective in reducing patient mortality than the use of cardiopulmonary resuscitation. There was also evidence that non-recognition or lack of action in cases where patients present with clinical deterioration was associated with poor quality care and could be considered to be an error of practice. While the majority of studies cited are retrospective and focus on audit of patient outcomes, it is important to reinforce that, at this point, medical management was highlighted as the problem in many cases but nurses were also recognised as not having acted in an effective manner particularly with regard to cardiopulmonary resuscitation (Wynne *et al.*, 1987; Skinner *et al.*, 1985; Casey, 1984).

Research during the 1980's therefore informed practice in two key areas. The first focused on antecedents to hospital deaths and cardiac arrests in acute care areas,

the second on the relationship between the skill of the practitioner and the standard of care implemented. Based on these findings, the research priorities focused on two areas. The first included the audit of patient outcomes following hospital admission and the second the relationship between effective clinical intervention and patient outcome in the management of seriously ill patients.

The 1990's

In the UK, the strong focus on clinical audit coincided with the inception of clinical governance that placed the patient at the centre of development in the National Health Service. In this context, health care providers "hold a statutory duty for quality improvement" (Scott, 2001, p. 39) which is standardised at both a national and local level. Clinical governance at a national level is monitored through the National Service Frameworks and the National Institute for Clinical Excellence, and locally through the health improvement programmes and clinical audit (Scott, 2001; Department of Health, 1998). This includes the notion of evidence based practice in relation to the clinical practice of all health care professionals, evidence based management and research.

In the early 1990's. research related to the recognition of clinical antecedents to hospital cardiac arrest and critical illness was predominately American. These studies focused on the recognition of clinical antecedents to in-hospital arrests and the role of doctors and nurses in the management of patients prior to their arrest (Franklin and Matthew, 1994; Fieselmann *et al.,* 1993; Bedell *et al.,* 1991; Schein *et al.,* 1990).

The study by Schein *et al.* (1990) focused on defining evidence of clinical antecedents to in-hospital cardiopulmonary arrests in one American hospital over a period of four months. During this period, 64 patients were identified as meeting the criteria for the study and all had a review of their patient records within 24 hours of the arrest and prospectively until the patient died or was discharged from hospital. Of those patients studied, only 8% survived to hospital discharge. Of the 64 patients, 70% had shown evidence of deterioration in respiratory or neurological function and 25% showed deterioration on both neurological and respiratory function prior to cardiac arrest.

The authors concluded that, in light of the high mortality rate consistently found in this study and similar studies, it was reasonable to focus on assessing and

managing antecedents to cardiac arrests with the aim of preventing catastrophic cessation of respiratory and cardiovascular function, rather than treating the patient after the event. These findings were supported by Fieselmann *et al.* (1993) when they established a clear relationship between elevated respiratory rates and an increased incidence of cardiac arrest when compared to the respiratory rates of other patients who did not have a cardiopulmonary arrest on the same unit.

An extra dimension to antecedents to cardiopulmonary arrest however was added by Bedell *et al.* (1991) in that, out of 203 cases of cardiac arrest in one hospital, 9% were found to be related to preventable causes. These included lack of attention to detail when taking a history and assessing patients, medication errors and toxic effects of drugs and suboptimal response to clear signs of clinical deterioration.

These findings were supported by Franklin and Matthew (1994) who studied the frequency of premonitory signs and symptoms before cardiac arrest by studying the patterns in nurses' and doctors' responses to signs and symptoms in the hours before 150 patients' cardiac arrests. The data were collected on a medical unit in one hospital and included information on patient outcomes and survival rates following cardiopulmonary arrest and a review of written documentation in the patients' notes which created three more data sets. These included whether the patient had previously been admitted to intensive care, whether there were preceding signs and symptoms identified and finally whether doctors were notified of a change in the patient's condition and if they had been treated pre-cardiac arrest. Of the patients studied, there was a 5% survival rate to hospital discharge with no evidence of existing morbidity; patients previously admitted to intensive care had an arrest rate of more than twice that of the general medical patients.

In relation to medical and nursing responses, they found that in 25% of cases the nurse documented deterioration but did not inform the doctor and in 43% of cases the doctor saw the patient but did not contact intensive care for advice. In addition, there was evidence of doctors not taking arterial blood for analysis of respiratory function or failing to act on the results if the blood was taken, and of patients being discharged from intensive care before they were stabilised for transfer and safe to discharge. Significantly, these data were collected retrospectively and as such were not compared with other variables and, particularly, the findings relied only on the evidence of what had been documented by nursing and medical staff.

In Australia during this period, there is also evidence of the existence of suboptimal care and measures taken to reduce the incidence of cardiopulmonary arrests by introducing tools for assessment of patients at risk and the introduction of medical emergency teams (Hillman *et al.*, 2001; Hourihan *et al.*, 1995; Lee *et al.*, 1995). There are also studies that focus on the role of the nurse in influencing the assessment and clinical decision making associated with these patients (Cioffi, 2000a; Cioffi, 2000b; Daffurn *et al.*, 1994). This is discussed in Section 2.6.

In summary, the early evidence for the existence of clinical antecedents of cardiac arrest and serious clinical deterioration was from American and Australian studies. By the end of the 1990's, there was evidence, particularly from Australia, of the implementation of clinical actions, standards and guidelines to limit the risk of unrecognised and suboptimal management of this group of patients.

In the UK, studies to recognise the existence of suboptimal care were slower to emerge and many were not published until the latter half of the 1990's. The most frequently cited study is by McQuillan *et al.* (1998) who undertook a prospective study of the medical care patients received in the period during which there was evidence of patient deterioration and subsequent transfer to intensive care. The aim was to examine the prevalence, nature, causes and consequences of suboptimal care before admission to intensive care. In this study, there was no direct reference to measuring the outcome of patients who had cardiopulmonary arrests; instead, attention was paid to the severity of illness of patients being transferred and the processes involved in the decision to transfer them. The study monitored the care of 100 patients in two hospital trusts and utilised a combination of methods for data collection including questionnaires, interviews, patient records and severity of illness scores. Patient data were then scrutinised by independent experts in the management of critically ill patients who determined whether the care met an acceptable standard. The study's findings indicated that there was evidence of suboptimal care in the management and monitoring of patients' airway, breathing and circulation in more than 50% of the cases studied. The major causes of suboptimal care identified included organisational failure, lack of knowledge and failure to appreciate the clinical urgency of the patient's condition, lack of supervision and failure to take advice.

The validity of the research, however, must be questioned in that the researchers did not include an operational definition of suboptimal care that could be

measured or identified with any consistency; instead, the researchers relied on the opinions of assessors on what constituted suboptimal care and its causes. In order to test the relationship between the concept of suboptimal care and patient morbidity and mortality, the concept needs to be defined and measurable so that causes and consequences of the concept can be identified with clarity (Bowling, 1997).

McQuillan *et al.* (1998) argued that, in this case, an objective definition of suboptimal care was impossible due to the wide variety of clinical scenarios included in the study. It was not possible from the published study to identify whether the medical and nursing skill mix and staffing levels in ward areas were taken into account in the context of each case study analysed. Finally, the use of a clinical expert panel to determine evidence of sub-optimal care led to differing views in up to one third of the cases reviewed. In spite of these limitations, the research findings did meet with considerable support and interest from clinicians, researchers and national government (Department of Health, 2000; Wood and Smith, 1999; Youngs, 1999; Ringrose and Gerrard, 1999; Audit Commission, 1999; Goldhill and Sumner, 1998).

A similar study by McGloin *et al.* (1999) added to the weight of McQuillan *et al's* (1998) findings when the existence of suboptimal care was identified in 30% of the patients in the study who were admitted to intensive care. The study also showed that, of the patients who died on the ward, there was evidence of prior clinical deterioration in 4% of the cases. The purpose of this study was to determine the incidence and circumstances of unexpected deaths occurring on general wards. The objective was to determine whether the unexpected deaths were avoidable, in relation to the quality of care provided on wards prior to admission to intensive care.

In this instance, the researchers defined suboptimal care and blinded the assessors to patient outcome before the data were scrutinised. In this study, data collected included skill mix of the ward staff, patient case records, observation charts, nursing and physiotherapy care plans, chemical pathology, haematology abnormal values set against patient's normal range.

Similarly, Goldhill *et al.* (1999a) in their study of physiological values and procedures in the 24 hours before admission to intensive care from the ward identified evidence of clinical deterioration, particularly respiratory rate, in the 24 hours prior to the patients' admission to intensive care. Their analysis of the pattern of clinical interventions in the patients studied suggests that either nursing or medical staff had recognised the patient as seriously ill but this did not equate with optimal care in the

cases identified. Reasons cited for this included the lack of an intensive care bed when requested, patients having to be transferred between buildings due to the hospital being on multiple sites, unsatisfactory handover of patients by nurses and doctors, poor continuity of care and inexperienced and poorly supervised trainees.

In summary, by the end of the 1990's, there was recognition of evidence to support the existence of suboptimal practice related to the care of acutely ill patients in hospital on an international scale. In Britain, the retrospective studies highlighting evidence of suboptimal care informed the audit and review of critically ill patients in England and Wales and the subsequent recommendation for practice by the Audit Commission (1999) and Department of Health (2000). More recent British studies have continued to add weight to the previous findings regarding evidence of suboptimal care in acute care areas. They have also begun to quantify an evidence base for clinical antecedents and risk assessment of vulnerable patients (Hodgetts *et al.*, 2002a; Hodgetts *et al.*, 2002b). Due to the nature of the retrospective studies undertaken and the data collected, it is possible to identify reasons cited for the existence of suboptimal care. Although the strength and consistency of the factors identified can only be considered in the context of the case studies included in the research, it is possible to judge the frequency of occurrence of the factors and how this has impacted on policy and recommendations.

2.5 What are the causes of suboptimal care?

Research that focuses on the existence of suboptimal care predominately measures patient outcome rather than analysing in detail factors and issues that may have influenced the process. Most studies, however, have cited factors that have influenced the quality of care provided. These tend to focus on the skills and experience of the health care team responsible for the patient's care or organisational issues concerning continuity of care and the effectiveness of communication networks.

For example, Neale (1998) analysed 40 medico-legal claims arising from the care of patients admitted as medical emergencies to medical wards to determine evidence of adverse events in medical practice. He concluded that there was evidence of suboptimal care in the cases he reviewed and found in the examples cited details of incorrect interpretation of clinical evidence and failure to focus on very sick patients. There was also evidence of investigations that appeared to have been misread or ignored, radiological evidence missed, standard procedures not followed and a failure to provide the correct treatment once a diagnosis was made.

He concluded that medical emergencies were not assessed by sufficiently experienced staff or a second opinion was not obtained, patients were not always adequately assessed before discharge, radiographs were not discussed with radiologists, protocols were not used for standard situations, and ongoing assessment was inadequate. In spite of the qualitative nature of these findings, both previous and subsequent studies have produced similar findings and can arguably add to the weight of evidence supporting the reasons found for the existence of suboptimal care. The majority of these studies indicate that both doctors and nurses are cited as being instrumental in the cause of suboptimal care and include data suggesting that, although nurses may recognise and record signs and symptoms of patient deterioration, they did not always inform the doctor. In other examples, the doctor had seen the patient but didn't always undertake all the necessary investigations or refer the patient to the intensive care team (McGloin *et al.*, 1999; Franklin and Matthew, 1994).

In an American study by Franklin and Matthew (1994), the responses of doctors and nurses were analysed using data from patient records and case histories of 150 patients who suffered a cardiopulmonary arrest. Two of the study objectives

focused on the frequency of premonitory signs and symptoms before cardiac arrest and the characteristic behaviour patterns of doctors and nurses in the hours before the patient had a cardiopulmonary arrest. Descriptive statistical analysis of the findings identified that in 25% of cases the nurse documented deterioration but did not inform the doctor. When the doctor was made aware of the patient's condition, they decided either not to undertake a more detailed assessment of the acid-base balance and respiratory function of the patient or, if they did pursue further investigations, they failed to act on them. In 43% of cases, the doctor saw the patient but did not contact specialist intensive care staff for advice. The authors of the study recommended that there should be improved specialist acute and critical care education for both doctors and nurses involved in the care of patients who have the potential for clinical deterioration.

In a similar British study by Smith and Wood (1998), a review of the patients' records 24 hours preceding cardiopulmonary arrest revealed that in 51% of the patients there was evidence of deterioration in their clinical signs. This information had been recorded or reported by the nurse in the majority of cases and the doctor alerted; however, in spite of this action, many of the patient cases showed no documented evidence of definitive medical action. Factors cited for this drew on work by Sackett *et al.* (1991) who highlighted that doctors are often too busy, too inexperienced and/or have unrealistic expectations of their clinical skill and are consequently unable to recognise the clinical significance of the signs and symptoms.

Similarly, Goldhill *et al.* (1999a) undertook research to describe the reasons in-hospital patients were referred to intensive care and to examine the relationship between recorded physiological values of those patients and the clinical interventions prescribed. In most cases of patients admitted to intensive care, nurses had recorded temperature, pulse, blood pressure and respiratory rate. Notably, in the majority of those cases, the patient's respiratory rate and sometimes pulse had deteriorated in the twenty-four hours prior to admission to intensive care. When this was mapped against the pattern of clinical intervention, the findings suggested that either nursing or medical staff had recognised the patient as seriously ill, but this had not always led to optimum management of the patient and transfer to intensive care.

The reasons identified for late admission to intensive care in this study included: a lack of available intensive care beds; difficulties associated with moving patients around a multi-site hospital; unsatisfactory handover of patients associated

with poor continuity of care; and inexperienced and poorly supervised nursing and medical trainees. The subsequent outcome of delayed admission to intensive care for these patients meant that they had a higher severity of illness and a correspondingly higher mortality rate (Goldhill and Sumner, 1998). Other factors identified that increased the rate of patient mortality included a longer length of stay in intensive care, increasing age, having received cardiopulmonary resuscitation before admission to intensive care and previous recent admissions to intensive care. Goldhill and Sumner (1998) concluded that, if the outcome of patients admitted to intensive care is to improve, attention must be paid to improving the recognition and management of clinical deterioration before patients are admitted to ITU and to better provision of specialist support following discharge.

In summary, all of the findings regarding the factors leading to suboptimal care of in-hospital patients who present with clinical deterioration are consistent with the findings of the confidential inquiry into the quality of care before admission to intensive care in Britain (McQuillan *et al.,* 1998). In this study, reasons for suboptimal care were related to failures in the organisation of care, lack of knowledge, failure to appreciate clinical urgency, lack of supervision and failure to seek advice. The recommendations from this study highlight the need to improve the education and training of junior staff in the assessment and reporting of clinical deterioration, to increase the visibility of senior and specialist staff and their accessibility to junior staff for support and advice, and to review the organisation of how and where acutely ill patients are managed, located and supported.

In all the studies reviewed, there appears to be consistency between the factors identified and the existence of poor quality or suboptimal care. However, the reasons for suboptimal nursing and medical response to clinical deterioration appear to be complex and multi-factorial. They include issues to do with skill mix and staff ratio, lack of clinical experience, knowledge and practice of junior medical and nursing staff and, finally, failure to appreciate the urgency of clinical/physiological deterioration.

In the studies reviewed, the general objective was to consider the evidence for suboptimal care and the impact on patient outcome. The reasons identified for suboptimal care have been recognised as part of the data for identifying and mapping the evidence of suboptimal care rather than an analysis of how and why clinical decisions are made and acted on. These factors, however, have formed the basis for the recommendations for change in the assessment and management of acutely and

critically ill patients produced by the Department of Health (2000). These have been summarised in Chapter 1 and focus on three key areas. The first is the education of staff; the second is the implementation of protocols for risk assessment of patients who had the clinical features of deterioration; and the third is organisational change to facilitate earlier recognition and the fast tracking of patients to facilitate optimal care (Department of Health, 2003, 2001a, 2000; Audit Commission, 1999).

British studies published following the Department of Health (2000) recommendations for comprehensive critical care have continued to reinforce and add weight to the conclusions drawn in the report and have added validity to some of the factors identified. In a study by Hodgetts *et al.* (2002a), the incidence, system and organisational causes of avoidable cardiac arrests were mapped and measured over a year in 1999. Data collected were measured against optimal standards in the form of performance indicators by an expert panel, in a similar way to the study by McGloin *et al.* (1999). They found that, in a study of 139 cardiac arrests, the majority were avoidable. With regard to organisational causes, the authors found that cardiac arrests in the wards were more likely to occur during the weekend than in the week and that patients in acute care were five times more likely to have an avoidable cardiac arrest but were less likely to survive. There was also evidence that if patients were nursed outside the area that specialised in their medical complaint, their chances of having an avoidable cardiac arrest increased 12 times.

With regard to failures of the system, when measured against the performance indicators, these included: delays in nurses informing the doctors of changes in the patient's condition; failure of house officers to respond adequately to information from nurses, laboratory findings or x-ray results; and inadequate management of the patient's acute condition. In 48% of the cases, clinical signs had not been acted on in the preceding twenty-four hours and, in 45% of the cases, the assessment and review of the patients was confined to the house officer (Hodgetts *et al.*, 2002a). The knowledge of house officers has clearly been cited as an area for concern and subsequent studies regarding knowledge and skills of trainee doctors have focused on recognising the problem and providing solutions in the form of skills based courses such as the ALERT (Acute Life-threatening Events - Recognition and Treatment) course (Smith and Poplett, 2002; Smith *et al.*, 2002). In both papers, reference is made to nurses' lack of knowledge and skill in the management of acutely ill patients

although, in both papers, the authors provide no evidence in their findings to support this.

In summary, the policy to support improvements in practice and reduce the incidence of suboptimal care continues to include: the education of staff; the development of protocols for risk assessment of patients who had the clinical features of deterioration; and organisational change to facilitate earlier recognition and the fast tracking of patients to facilitate optimal care (DOH 2003, 2001a, 2000; Audit Commission, 1999). These areas in themselves appear relevant to the issues identified in the literature; however, at the time, many of these changes were based on exemplars of good practice cited by the Audit Commission (1999) but with little or no evidence of the clinical effectiveness of such ventures. The majority of the studies reviewed that have cited factors related to suboptimal care have also relied on retrospective data from documented or recorded sources. In these studies, little attention has been paid to the informal processes involved in communicating and managing patient care and as such they cannot provide a detailed examination of all the factors involved in the development of suboptimal care.

This trend has so far continued and, by 2004, little substantive evidence existed to support the organisational changes recommended. With regard to the development of outreach services in critical care, any advantages shown in the studies to date have been confounded by small sample size, lack of control of external variables and the questionable validity of the tools used to predict mortality (Ball *et al.*, 2003; Odell *et al.*, 2002; Buist *et al.*, 2002). A similar pattern is evident when reviewing the literature on patient at risk scoring tools where there appears to be no consensus over the criteria used to determine when the patient is at risk although most tools rely on a scoring system related to changes in physiological parameters. This appears contradictory to some studies that suggest that nurses with five or more years' experience often rely on gut feelings, pattern recognition and knowledge of the patient over a period of time to trigger concern (Cioffi, 2000a, 2000b). This concern was also highlighted by Hodgetts *et al.* (2002b), Goldhill *et al.* (1999a) and Franklin and Matthew (1994) who recognised that knowledge and experience of the nurse and doctor are often critical in the decision making even though their responses to a clinical change may not be open to scrutiny. This suggests that the skill mix and experience are factors that influence decision making when assessing critically ill patients and this should be reflected in both the education and practice experience of

junior and newly qualified staff (Hodgetts *et al.*, 2002a; Smith and Poplett, 2002; Smith *et al.*, 2002; Goldhill *et al.*, 1999a; Daffurn *et al.*, 1994).

2.6 What is known about the work of the nurse in the context of suboptimal care?

When these issues are put into a historical context, a pattern of increasing complexity of practice coexisting with massive innovation and change becomes evident. Historically, information regarding the role of the nurse in Britain as the speciality of intensive care developed is scant and often presented from a medical perspective (Tinker, 1978; Lenihan, 1979; Tinker and Porter, 1980; Snider, 1983). Generally, though, the nurse is frequently described as having a specific extended role that centres on monitoring vital signs and maintaining patient safety during the doctor's absence (Fairman and Lynaugh, 1998; Fairman, 1992; Zalumas, 1995, 1989). As a consequence, within ten years from the development of the early intensive care units, nurses had formally established a specialist role in the care of the critically ill, supported by a standardised educational structure (Baly, 1980; Allan and Jolley, 1982). The British Association of Critical Care Nurses, founded in 1977, provided further validation of the role, the aims of which were to promote the art and science of intensive care nursing and to provide opportunities for education and research (Atkinson, 1986).

As varying types of specialist intensive care units began to emerge in the majority of general hospitals, nurses with critical care skills moved to specialist units where their skills could be utilised more effectively. Advances in technology and medical management have added to the complexity of the critical care nurse's role and as a result the education of nurses with regard to critical care skills has been focused almost exclusively on nurses working in critical care areas (Allan and Jolley, 1982). The net effect of localising and specialising patient care in this way has led to critical care nurses having increased status associated with the technological aspects of their role (Fairman, 1992; Melia, 1987; Smith and Redfern, 1989). This has also led to a relative deskilling of acute care nurses in the care of unstable and critically ill patients, to the extent that ward based nurses are no longer able to care for such patients with confidence in ward areas (Northcutt, 1997; Ayres, 1994).

The change in the type of patients cared for in acute hospital wards since the development of critical care has also had an impact on the learning experiences of student nurses, particularly in their preparation as registered nurses in their final year of training. This was highlighted by White (1999) in her study on the impact of

student nurses' clinical placements on their initial career choice on qualifying. She argued that changes in nurse education since 1986 have led to reduced exposure of students to critically ill patients and a subsequent negative attitude towards gaining knowledge and expertise in these areas after qualification. The sample size used in this research is small and cannot be generalised to the wider population of newly qualified nurses in England and Wales. When these findings, however, are viewed in the context of other studies, there is a general trend showing a reduced exposure of students to critical care environments and the failure of newly qualified nurses to have core competencies in the care of critically ill patients and limited opportunities to develop them in acute care, unless in a crisis situation (Wood *et al.,* 2004; Scholes *et al.,* 2004). There is evidence to suggest, therefore, that insufficient attention to the difficulties associated with the development of specialist critical care units at the time of their inception and particularly the impact of this on the preparation and updating of nurses can be considered as factors that have influenced the development of suboptimal care for patients who deteriorate in acute care settings.

This, coupled with an increase in the use of temporary staff and a reduction in the amount of paid study leave accessible to nurses undertaking post registration education, has led to a further dilution in skill mix in acute and critical care areas (Audit Commission, 1999; Coad and Haines, 1999). At the same time, there has been an increase in the number of patients undergoing surgery that can be considered to be at a high risk of post-operative complications associated with multiple-pathology and increasing age, often with corresponding shorter lengths of stay in hospital (Ebrahim, 2002). There is also evidence of an increase in the demand for specialisation and advancement of nursing roles influenced by the European working time directive for doctors in training (Albarran and Fulbrook, 1998; Quinn and Thompson 1995; Council Directive 93/104/EC, 1993).

According to McArthur-Rouse (2001), the net effect of these factors is an increase in patient dependency with a corresponding decrease in the number of experienced nursing and medical staff to provide their care, the consequence of which is suboptimal care. This argument is supported by Goldhill (2000) who, reflecting on a series of studies where he has examined the causes of suboptimal care and solutions to reducing its incidence, highlights that, while there is a higher concentration of sick patients in hospital due to the early discharge of patients and day case surgery, there is a corresponding reduction in real terms of trainee doctors,

student nurses and senior staff to support these patients. When this is considered in the context of increasing trends towards specialisation, the outcome can only be a greater potential for suboptimal care.

Although nurses have been highlighted as being instrumental in the development of suboptimal care, the majority of the studies reviewed have not explored the role of the nurse specifically. Many of these studies highlight the nurse as being central to the clinical assessment, recognition and reporting of clinical changes in the patient's condition but fail to explore in depth why or how this occurs (Goldhill *et al.,* 1999a; Goldhill *et al.,* 1999b; Franklin and Matthew, 1994). Research that does focus on the role of the nurse includes studies from Australia, USA and England. At the time of this research, no studies had been undertaken in Wales.

Australian studies that analyse the relationship between the role of the nurse and suboptimal care have focused on the impact of introducing risk assessment tools and the medical emergency team on the process of the nurses' clinical decision making on acute wards (Cioffi, 2000a; Cioffi, 2000b; Lee *et al.,* 1995; Hourihan *et al.,* 1995; Daffurn *et al.,* 1994). For example, Daffurn *et al.* (1994) undertook a quantitative analysis of nurses' attitudes and knowledge towards the implementation and use of the medical emergency team (MET) in one hospital after the MET had been active for two years. The sample included nurses from all acute and critical care practice areas available on the afternoon shift on a prescribed day (n141). Questionnaires were distributed and collected on the same day, ensuring a high response rate (92%). Half of the nurses had been practising nursing for five years or more while the remainder had less than five years' experience. Nurses were also asked to complete a scenario section where they were asked to analyse the case studies and identify in which situations they would call the medical emergency team. In all cases, there was disagreement about whether nurses would call the medical emergency team and a unanimous decision was not identified among the study participants in any of the scenarios. The authors concluded that, although the nurses were aware of the MET, they were often hesitant to call the team for fear of calling them unnecessarily, unsure of the appropriate criteria.

Later studies by Cioffi (2000a, 2000b) involved a qualitative analysis of the experience of nurses in the decisions made in calling for emergency assistance. Five categories were identified from the data and included: the uncertainty nurses felt when

deciding whether or not to call the MET; criteria used to identify a change in the patient's condition; identification of at-risk situations; feelings of nervousness, panic, excitement and confidence; and other issues related to when they called the MET. Of the changes in the patient's condition that triggered the concern, these included the nurse's gut feeling, knowing something is going to happen, knowing the specific patient, past experiences with similar patients and pattern build-up. The clinical triggers identified as part of this included the patient saying that they didn't feel right, patient agitation, alterations in patient colour and changes in haemodynamic observations.

These findings highlight the significance of practice experience in clinical decision making as well as the complexities involved in the recognition and response to clinical deterioration in acutely ill patients. The findings from this study are qualitative and have little generalisability. They do, however, raise questions about the efficiency of risk assessment tools that do not recognise the contribution of personal knowledge and experience in the assessment and management of patients. As a result, some authors recommend the use of risk assessment tools that identify clinical concern as a reason for calling the medical emergency team (Hodgetts *et al.*, 2002b; Goldhill *et al.*, 1999b; Franklin and Matthew, 1994).

In Britain, research into the relationship between nurses and suboptimal care has predominately focused on the elements of outreach and, in particular, the education and support of clinical staff (Cutler, 2002a, 2002b; Coad *et al.*, 2002; Haines and Coad, 2001; Haines *et al.*, 2001; Coad and Haines, 1999). The research by Haines *et al.* (2001) was a small study that focused on identifying the difficulties faced by staff in acute wards when caring for patients recently transferred from intensive care. Their role as clinical educators involved supporting and educating staff in situations where patients experienced critical illness (Coad and Haines, 1999). While it is not clear how many nurses took part in the study, the authors do highlight that the study is a pilot and has no generalisability. However, there are some findings that can be supported by other studies and these include evidence of staff experiencing high levels of stress associated with lack of control, increased pressures on workload and difficulties with providing support and follow up for patients and relatives (Whittaker and Ball, 2000).

Similarly, Cutler (2002b), in an ethnographic study of ward based critical care on an acute surgical ward, identified increased levels of workload as being a factor

influencing stress. In a presentation of the ward as context, Cutler (2002b) highlighted the high workload of the staff in relation to the management of all the patients on the ward. He recognised that, for those staff who believed they have the knowledge and skills to care for critically ill patients, they felt that they did not have time to use them. Nurses described having feelings of letting their patients down because they have to try and divide their time between the high dependency patients and the general ward patients. Nurses in this ward perceived their role as being assessors and communicators of changes in the patient's condition. They identified that often this involved teaching and explaining the findings to junior doctors who were the first line of medical support. They described the need to be one step ahead of the doctor, anticipating the cause of the patient's problem, so that they could advise the doctor on what might be appropriate management. However, the danger in this approach was that the nurse may not recognise the limitations of their knowledge and this may lead to suboptimal care. The nature and size of this study limits the generalisability of the findings, although the findings from Cutler's (2002b) study do little to challenge the assumption that the ward nurses appear to be under high levels of pressure to perform clinically effective care in an environment where the skill mix of nursing and medical staff appears inadequate to meet the needs of the patients.

In summary, while there has been much debate about the role of the nurse in the recognition and management of critically ill patients, the majority of the research findings that can be generalised to the nursing population in England and Wales have focused on patient outcome and the work of the nurse is cited as a factor influencing this process with little in depth understanding of how nurses recognise and manage critically ill patients. Those studies that do provide a more in-depth understanding of nurses' experiences have been undertaken in Australia and England. These are qualitative studies with a small sample size and limited generalisability to the general nursing population. The findings from these studies add to the recognition of complex processes in the nursing management of this group of patients that highlight the influence of experience on the process of clinical decision making, as well as the recognition of an increasing workload on the practice of acute care with what is perceived by nursing staff as having no extra resources to support it.

2.7 From literature review to research question

The aims of the literature review in this study were twofold. The first aim was to establish the extent and quality of evidence published to support the existence of suboptimal care, arguably a driving force for change in the strategic development of critical care services. The second aim was to critically examine the role of the nurse in relation to the history and development of critical care provision and the emergence of suboptimal care in acute care settings. To that end, a critical analysis of suboptimal care has been addressed. This included its definition, causes and factors related to the management of critically ill patients in ward areas. The reasons cited to explain why acute-care services seem to be failing patients, and proposed solutions, have been examined. These include: a lack of emphasis on critical care education and training available for medical and nursing staff; changes in the specification and delivery of health care; increasing evidence of specialisation; and the impact of increasing demands related to the faster turnover of patients in acute care areas where the skill mix of health care staff is not always sufficient to meet patient need (Intensive Care Society, 2002a, 2002b). The solutions to the problems reviewed included the development of skills based training for diagnosing and managing critically ill patients, the use of outreach services and the introduction of risk assessment tools to guide inexperienced staff in the assessment and management of critically ill patients. The development of critical care as a speciality has been discussed in the context of general developments in health care particularly since the inception of the NHS in 1948. The lack of strategic direction for the management of critical care provision has also been highlighted as being influential in the development of critical care services in England and Wales from 1948 to 2000 (Webster, 2002).

Suboptimal care may be described as deficiencies in the assessment and interpretation of clinical situations when there is life threatening dysfunction of a patient's airway, breathing and/or circulation (McQuillan *et al.,* 1998). Studies that have highlighted the existence of suboptimal care have had a dramatic impact on policy direction and development even though much of the evidence cited is classified as category three (medium to low evidence) and includes non-experimental, descriptive and correlational studies (Charny, 2001). In this instance, however, the nature of the results were sufficiently powerful to influence policy because of the correlation between described suboptimal care and patient morbidity and mortality As

a consequence, it is recognised that, while there may be limitations associated with the quality of the findings, the risk of potential harm to patients has been sufficiently strong to stimulate political action.

Research into the existence of suboptimal care to date has predominately focused on patient outcome rather than analysing in detail factors and issues that have influenced the process of managing care. However, factors that have been cited in this context include reference to shortfalls in the skills and experience of the health care team responsible for the patients' care, organisational issues concerning continuity of care and the effectiveness of communication networks (Goldhill *et al.*, 1999; McGloin *et al.*, 1999; McQuillan *et al.*, 1998).

In summary, the growing swell of evidence published during a five year period was sufficient to influence trends in practice from the level of clinical practice to local and national policy. The recommendations for change focused on three key areas including the education of staff, protocols for risk assessment of patients who had the clinical features of deterioration and finally organisational change to facilitate earlier recognition and the fast tracking of patients to facilitate optimal care (Department of Health, 2003, 2001a, 2000; Audit Commission, 1999). These areas are relevant to the issues identified in the literature although many of them were not research based but were based on examples of good practice recommended by the Audit Commission (1999). The clinical effectiveness of such ventures, however, was difficult to predict and define. This trend has so far continued with little substantive evidence to support organisational changes related to the development of outreach services in critical care (Ball *et al.*, 2003; Odell *et al.*, 2002; Buist *et al.*, 2002). A similar pattern is evident when reviewing the literature on risk assessment tools where there appears to be no consensus over the criteria used to determine when the patient is at risk of clinical deterioration, except that most tools rely on a scoring system related to changes in physiological parameters. The use of physiological parameters alone, however, has been challenged by findings from several studies that identify the significance of clinical experience, gut feelings, pattern recognition and knowledge of the patient over a period of time in triggering concern (Cioffi, 2000a, 2000b; Goldhill *et al.*, 1999).

Factors affecting the quality of care have therefore been identified in the literature but an in-depth understanding of the influence of these factors on the experiences of nurses caring for this group of patients has yet to be described.

Furthermore, when these issues are put into a historical context, a pattern of increasing complexity of practice coexisting with massive innovation and change becomes evident.

Consequently, the management of acute and critical care occurs in a dynamic environment that is constantly involved with change related to clinical developments based on risk assessment, need and policy. The dynamic nature of change in the health service has often lacked synchronicity leading to innovation and development occurring at different levels of practice often with differing levels of priority and at differing speeds of implementation and timing. Arguably, for each innovation or development that is planned and coordinated, there is invariably a clash with other changes going on simultaneously. This is often associated with problems related to communication, coordination and strategic planning (Webster, 2002; Palfrey, 2000). It can be argued therefore that each NHS Trust will have a unique view and response to change and it is anticipated that having an in-depth understanding of nurses' experience in this context will inform ideas for further education and research, offer a different perspective on the role of the nurse in the management of critically ill patients in one Trust and add to the knowledge base of the nurse's role in the context of acute and critical care.

The general problem area for this research focuses on the nursing management of critically ill patients in one NHS Trust and relates to the lack of understanding of the process of assessing and managing the care of patients who become critically ill, from a nursing perspective. To that end, the purpose of the research is to describe and interpret how nurses perceive the experience of caring for patients with clinical deterioration leading to critical illness and to view this in the context of history and tradition.

The timing of this study is also critical in that the data were collected during a period of review of adult critical care services in England and Wales and at a time when recommendations had been made regarding standards for the management of the critically ill in acute care hospitals (All Wales Critical Care Development Group, 2003; Department of Health, 2000; Audit Commission, 1999). Most of the recommendations can be subsumed within the provision of outreach services and include developing the role of the nurse in order to meet the recommendations set (Ball *et al.,* 2003; Goldhill and McNarry, 2003). In England, the government has made substantial investments in these services (Morgan and Mugglestone, 2002).

Funding in Wales, however, has not been so readily available due in part to a time lag between the publication of Department of Health recommendations in 2000 and the availability of a Welsh response. Subsequently, following a review of the Department of Health recommendations and the service needs in Wales, there were some reservations about the recommendations, particularly pertaining to the provision of an outreach team although they supported the general development of outreach services (All Wales Critical Care Development Group, 2003).

According to Ball *et al.* (2003), the challenge is to implement and evaluate the effectiveness of outreach services in order to justify existing investment and to support further investment in them by the government. It is interesting that Wales is not alone in questioning the efficacy of outreach services. For example, the Scottish Executive (2000) set up a working group to assess and review their own arrangements and provide information and advice to their Health Boards and Trusts. The group accepted that outreach teams were recommended in the Department of Health (2000) report as an essential part of critical care services, but they took the view that such initiatives "would not significantly affect ICU workload, optimal patient care or bed requirements" (Scottish Executive, 2000, p. 10). They supported the notion of a "Patient at Risk philosophy" but argued that this approach should not be limited to the responsibility of critical care staff and that the concept of "Patient at Risk" should be adopted across all acute ward areas and should include the utilisation of specialist nurses and physiotherapists. These recommendations highlight that the problem of effectively assessing and managing patients who become critically ill in acute care areas is not limited to the problem of knowing when and how to enable the swift transfer of patients to the appropriate areas. The problem also involves the assessment, identification and management of patients who are at risk in any defined practice area.

Indeed the Intensive Care Society (2002) proposed that outreach services are not meant to act as a substitute or solution to the problems of too few critical care beds, inadequate skill mix and lack of material resources on general wards. They argue that these problems need to be addressed within individual Trusts. They conclude that the development of outreach services cannot be viewed as isolated from other initiatives taken to develop an integrated system of effectively managing critically ill patients in both acute care and critical care environments.

It can be argued, therefore, that a greater understanding of nurses' experience of managing situations where patients become critically ill can only offer more insight into an area where there is little clear evidence of process compared to outcome. This leads the researcher to the following questions:

1. What is it like to nurse patients with clinical deterioration leading to critical illness?

2. What is it like to nurse patients with critical illness in the context of history, change and innovation in one NHS Trust in Wales?

The purpose of the study is to describe and interpret the experience of nurses who care for these patients in both acute and critical care areas in one NHS Trust in Wales, in order to present another way of understanding and making explicit the nurses' interpretation of the practice of caring for critically ill patients. The influence of history and health care policy are included in order to place the nurses' stories and experiences in context. The general aim of this research is to describe and interpret the experience of nurses who care for patients with clinical deterioration and go on to develop critical illness in one NHS Trust in Wales.

The specific objectives are:

1. To describe and interpret the experience of nurses who care for patients who become critically ill.

2. To examine critically the nurses' experience of caring for patients developing critical illness in the context of history and tradition.

Chapter 3

Philosophical Framework and Theoretical Foundation of the Study

3.1 Introduction

The aim of this chapter is to present the justification for the philosophical foundations of the study. This includes a critical discussion of the choice of research questions related to the problem area for study and findings from the literature. The purpose of the research questions is subsequently critically analysed in the context of the proposed philosophical foundations of the study and a conceptual framework developed to inform the research process. The conceptual framework is examined in relation to how it informs the research approach chosen and the method by which the rigour of the study may be demonstrated is introduced. The focus of the research is concerned with the description and interpretation of human experience (Denscombe, 2002; Holloway and Wheeler, 2002). By asking the question, "What is it like to nurse patients with clinical deterioration leading to critical illness?", the aim of the researcher is not to look for technical solutions influenced by modernist perspectives (Guba and Lincoln, 2005; Rolfe, 2000) but to produce an understanding of human experience through the analysis and interpretation of language as text.

For this study, the issues that influence the ontological and epistemological nature of the research encompass three areas. Firstly, the nature of nursing practice is context dependent and influenced by the history and interpretation of both the people experiencing the phenomenon as well as the interpreter of the research. Secondly, the researcher brings to the study history and prejudices or pre-understandings that will influence how the research is interpreted and findings presented. Finally, the aim of the research is to produce an understanding of the nurses' experiences of caring for critically ill patients in one hospital trust in Wales, the purpose of which is to interpret and understand nurses' experiences in a defined context. These assumptions are discussed in more depth in the following sections of the chapter.

3.2 Research questions and purpose of the research

The purpose of the research is to describe and interpret nurses' experiences in one NHS Trust in Wales. As such, the area of concern is subjective and contextual. The research questions are:

1. What is it like to nurse patients with clinical deterioration leading to critical illness?

2. What is it like to nurse patients with critical illness in the context of history, change and innovation in one NHS Trust in Wales?

According to Schon (1987, p. 3) the focus of this type of research is not the "high ground overlooking the swamp..." but "...the swampy lowland". Arguably the high ground is synonymous with the rigours of a positivist approach to research, based on objective, distant, highly structured and nomothetic methods of data collection. The swampy lowland, however, is out of reach of such an approach and requires methods that allow the researcher to describe and interpret the phenomena being studied. Schon (1987) goes on to argue that practice based disciplines such as nursing and teaching are complex and context dependent and require the researcher to move into "the swampy lowlands" in an attempt to understand the complexities of practice and process. This argument is reinforced by Guba and Lincoln (2005) and Lincoln and Guba (1985, p. 37) who in their arguments present an ontological view of positivism as having a "single tangible reality" that can be fragmented and reduced into variables that can be tested, predicted and controlled. The epistemological perspective of this view focuses on the objective and independent nature of the knower and the subject of inquiry. This perspective is inconsistent with the ontological and epistemological paradigm of this study where the nature of reality is contextual and holistic. The relationship between the inquirer and the object of inquiry is dialogic, the purpose of which is to present an understanding of the participants' realities as they describe it rather that a search for absolute scientific truth.

According to Denzin and Lincoln (2005), such ontological and epistemological views are consistent with an interpretative paradigm. By asking the question, "what is it like?", the inquirer is seeking to understand another's experience in order to present a different understanding of the phenomenon being studied. In this instance, the researcher is attempting to interpret and understand nurses' experience of caring for a critically ill patient and offer an explanation of this as one version of how this may be

understood. This approach is consistent with phenomenology, the description of lived experience, and hermeneutics (the interpretation of text), with a particular focus on how prior understandings and prejudices influence the process of interpretation (Denzin and Lincoln, 2005; Cohen, 2000; Palmer, 1969).

An interpretative paradigm in the most general sense can include perspectives that focus on bringing out meaning or explaining and translating symbols to establish an understanding. According to Denzin and Lincoln (2005), qualitative research may be structured by several interpretative paradigms including: positivism and post-positivism; constructivist-interpretative; critical theory; and feminism. For the purpose of this study, the interpretative perspective chosen can be aligned to a constructivist-interpretative approach with a focus on constructing a new understanding of "what it's like" that emerges from a shared interpretation and understanding of the situation being studied. The second research question again focuses on the question, "what is it like?", and is asked in the context of history change and innovation. The context of the situation therefore focuses on the juxtaposition between the influence of history and developments in innovation and change. Research strategies that are consistent with this approach include phenomenological hermeneutics, cultural and ethnomethodological studies, and real world research approaches, utilising strategies such as action research and participatory action research and adopting a pragmatic approach to study the impact of innovation and change (Guba and Lincoln, 2005; Kemmis and McTaggart, 2005; Saukko, 2005; Johnson and Onwuegbuzie, 2004; Robson, 2002). Arguments for the choice of hermeneutic phenomenology informed by Gadamer's hermeneutic principles for this research are critically discussed in the remainder of this chapter.

3.3 Defining an ontological, epistemological and practical foundation for the research

According to Denzin and Lincoln (2005), all researchers involved in qualitative studies are guided by abstract principles that combine beliefs about ontology and epistemology. In general philosophical terms, ontology is the study of being or existence and for the purpose of this study is defined by Flew (1983, p. 256) as "the assumptions about existence underlying any conceptual scheme or any theory or system of ideas." These assumptions, when defined, provide a picture of how the researcher views and understands the world and should be consistent with the chosen methodology and methods for data collection, analysis and interpretation.

Epistemology, when considered from a philosophical perspective is concerned with the nature of knowledge, how knowledge is acquired and what people claim to know. In relation to this study, the researcher refers to Flew (1983, p. 109) who defines epistemology as "...concerned with the theory of knowledge... the nature and derivation of knowledge, the scope of knowledge and the reliability of the claims of knowledge."

For the purpose of this study, qualitative research is not referred to as a distinct philosophical approach, but instead a term that can be used to describe common features to do with the choice of a sample, data collection and analysis. As such, attention has been paid to the basic belief system that informs the philosophical underpinnings and paradigmatic perspective of the approach chosen and how this has influenced the methods of data collection, analysis and interpretation of the findings.

This notion is supported by Guba and Lincoln (1994) they purport that qualitative research is often used as an umbrella term to signify a philosophical and paradigmatic approach when the overarching feature should be the basic belief system and world view that guides the researcher. They argue that questions of method are secondary to questions of paradigm and, as such, reference to the ontological and epistemological underpinnings of the research approach should be considered first and subsequently lead to methodological choices. Indeed, Lincoln (1990) argues that paradigms are pervasive and inextricably linked to every element of the inquiry and that any attempt to mix paradigms becomes counterproductive and leads to work which is at best disconnected and unable to lead to constructive findings. Guba and Lincoln (2005) challenge these assumptions, however, in their later work when they argue that it is

possible to blend world views and combine elements of one paradigm into another when engaging in research where there appears to be an overlap in the guiding belief system of the researcher.

This change of view with regard to the interpretation of paradigms in qualitative research vindicates Paley's (2005b) claim that the paradigm tables presented by Lincoln and Guba (1985) tend to polarise alternative views and limit the scope for fertile interpretation of the paradigms. The general position on the use of philosophical frameworks as guiding the research action is challenged directly by Silverman (2000), Hammersley (1992) and Bryman (1988) who propose that the choice of method should be based on technical and practical considerations.

According to Hammersley (1992), the process of scientific inquiry is the same regardless of methodology and that retreating into paradigms limits the scope for progress in research. Silverman (2000, p. 11) supports this notion and maintains that such dichotomies in social science are "highly dangerous" and can limit the scope of what is possible to learn from the use of both quantitative and qualitative approaches. Essentially, if the research methods chosen answer the research question and the tools for collecting and analysing data are used correctly, then the research is valid. Silverman (2000) goes on to say that the criteria he uses for evaluating qualitative research are equally appropriate for evaluating quantitative studies. This approach is supported by Johnson and Onwuegbuzie (2004) who argue that adopting a purist position in research may limit the scope for achieving an answer to the research questions asked. They propose that adopting a pragmatic and mixed-method approach to research allows opportunities for the researcher to maximise on the strengths and minimise the weaknesses of single paradigm research. Practical issues aside, Hammersley (1992) accepts that while he doesn't consider philosophical assumptions to be the foundation of the research process, they do form an integral part of the research and cannot be ignored.

The notion that there are no conflicting or overlapping paradigms in research, just the process of finding the right tool for the job, may be a practical suggestion but it can challenge the clarity and quality of the research, particularly if the researcher is unable to demonstrate the utility of the approach used. This argument is supported by Holloway and Todres (2003) in that, while they do not support the idea of adhering strictly to the process of method for method's sake, they do recognise that the clarity and quality of the research can be improved by the application of a guiding

philosophical approach.

Adopting a practical approach to finding the "right tool for the job" in the context of this research, however, did offer the researcher an opportunity to consider alternative approaches to answering the research questions. To return to the ontological and epistemological influences, the researcher has identified the contextual and historical nature of the research as being significant to this study as well as the knowledge, experience and understanding of the researcher when investigating the problem area for research. This led the researcher to consider collaborative, cultural or ethnographic approaches to the research that could either focus on participatory action research or ethnography. Both options would offer the opportunity to study the experiences of nurses in this context and recognise the contribution of the researcher to the process, either as a participator in collaborative inquiry or as a participant observer in the field and ethnographic interviews (Kemmis and McTaggart, 2005; Atkinson and Hammersley, 1994; Hammersley and Atkinson, 1983).

When considering an action research approach, the underlying philosophical assumptions can focus on a range of ontological and epistemological perspectives including post positivist, post modernist and critical science (Kemmis and McTaggart, 2005; Robson, 2002; Reason, 1988). The underlying focus of this research approach is based on a cycle of evaluation, problem recognition and search for a solution, action and evaluation. This takes the researcher beyond the questions asked in this study, namely to describe and understand the experience rather that to describe the experience, seek out problems and look for solutions. This approach is therefore beyond the scope of this study. The approach, however, may provide a process to take the findings of the study forward in the light of questioning developing innovation and change in practice (Kemmis and McTaggart, 2005; Robson, 2002; Holloway and Wheeler, 2002).

From a theoretical perspective, it can be argued that an ethnographic approach can focus on the description and interpretation of cultures or sub-cultures and uncover the relationship between context, practice and experience (Sorensen *et al.,* 2008; Holloway and Wheeler, 2002; Atkinson and Hammersley, 1994; Hammersley 1992). From a practical perspective, this approach requires the researcher to access and enter the field of study. In the context of the research question, "What is it like...?", the researcher is required to identify a sub-culture where the phenomena under study are

recognised as part of the cultural practice. For this study, the researcher would identify with one or several practice areas that may represent a case study of practice. Using this approach, the researcher is able to draw on the context and culture as part of the data collection. This approach is illustrated by Anspach (1997) in his study of clinical decision making in two neonatal intensive care units. For the researcher, however, there were three factors that influenced the epistemological and practical application of this approach.

The first factor involved the accessibility, availability and frequency of occurrence of relevant situations within the cultural unit studied balanced against the availability and role of the researcher. The researcher in this context works full time in education and is undertaking the research as a part time, non-funded study. Opportunities to study and work in the field were therefore limited by varied accessibility and opportunity. The researcher did consider working part-time in the units being studied but again the practicalities of access and timing were limited by resource management.

The second factor related to the ethical issues involved in the researcher undertaking fieldwork. It can be argued that, although data collection in ethnography is unstructured and guided by what happens in everyday contexts, a dominant feature of ethnographic study involves participant observation and informal interviews (Hammersley and Atkinson, 2007; Mason, 2002). In this context, the ethical validity of being able to describe and interpret the real world practice and experiences of nurses in this context as a participant observer, as well as the ethical concerns of witnessing negligence and/or illegal practice require critical consideration.

In this study, working in the field with nurses involved in the process of being alert to, and recognising, clinical deterioration has the potential to expose the vulnerabilities of the practitioners involved as well as the vulnerable position of the patients. The aim of this research is to understand what is like for the nurses in a defined temporal and spatial context and this has implications on a number of levels.

In the first instance, therefore, the presence of the researcher as an extra person either non-participating or increasing the potential for participation changes the dynamics of the culture being studied. It has the potential to alter the skill mix ratio, the number of people involved in the process of care and the process of clinical decision making. The data collected in this situation, therefore, no longer reflects the reality of the original practice situation but does reflect a reality informed and

influenced by the researcher. This could be resolved in part by the use of a reflexive approach to the research and this is supported by Hammersley and Atkinson (2007). They also recognise the significant contribution of Gadamer's presentation of the importance of pre-understandings and their impact on how cultures and text can be described and interpreted.

In the second instance, the research questions in this study focus on the experience of recognising and managing patients' clinical deterioration in an environment and context where the potential for suboptimal care has been identified. As a nurse, the researcher therefore has the potential to be exposed to situations where there may be the potential for clinical neglect, illegal acts and malpractice. In this instance, as a researcher, this may be considered as valuable data in the search for understanding the lived experience of nurses; however, as a nurse and citizen, the researcher would be obliged to act and intervene. This ethical and legal dilemma has been described by Bourdieu (2003) as the management of balancing what is considered to be good ethnographic research from an academic perspective and the moral responsibility of the researcher afforded to the participants and gatekeepers in the study. This involves a number of ethical decisions and dilemmas about how informed consent may be operationalised in acute or emergency situations, particularly when vulnerable participants are exposed to fieldwork (Griffiths, 2008; Anspach and Mizrachi, 2006). There is also the question of what to reveal and what to conceal within the fieldwork process and how this may be documented. In an example given by Anspach and Mizrachi (2006, p. 717), he reveals that in his study of neonatal intensive care he made a deliberate decision not to ask controversial questions in the early stages of field work: "…fearful of offending the nursery staff – to say nothing of losing entrée – I kept these questions to myself". Anspach and Mizrachi (2006) goes on to reveal examples in his own study of witnessing cases of neglect and illegal acts that he did not reveal in the final ethnography. From a legal perspective, however, the recognised presence of an ethnographer at any scene requires that the person can be called as a witness and the field notes used as evidence (van Maanen, 1983).

The third factor for consideration is that, while it can be accepted that the potential for evidence of suboptimal care is present, as evidenced in the review of the literature, this is not a necessary criterion for this study. The aim of this research is to understand what it is like to nurse patients who present with clinical deterioration and critical illness, the purpose being to present a new understanding of how, when, why

and what nurses experience in the context of the clinical experiences described. Evidence of suboptimal care exists; what is lacking, however, is a deeper understanding of how nurses manage situations when patients deteriorate. Such a deep understanding may be difficult to achieve when the researcher is in the field as a nurse ethnographer and participant observer, influenced by an ethical code of practice.

In summary, while an ethnographic approach to this study could be supported in the context of an interpretative paradigm, a closer examination of the ethical and practical issues challenge the feasibility of adopting this approach to answer the research questions in this study. The adoption of a hermeneutic approach, however, allows the researcher to interpret participants' stories and experiences in the context of the situation they occurred, as well as in the wider historical, traditional and political context. This approach supports the assumptions summarised below that have emerged as part of the process of refining the problem area for research and defining the purpose of the research.

The first assumption refers to the nature of nursing practice and recognises that nursing practice is context dependent and influenced by the history and interpretation of both the people experiencing the phenomenon as well as the interpreter of the research. The second assumption relates to the researcher's role and influence on the study and its findings, in that the researcher brings to the research history and prejudices or pre-understandings that will influence how the research is interpreted and findings presented. An awareness of this is necessary from the philosophical basis of the research to the practicalities of method and analysis of findings. This leads to the third assumption that the purpose of this study is to interpret and understand nurses' experiences in a defined context rather than to produce a grand theory of practice or to offer generalisations for nursing practice.

In this study, the philosophical underpinnings of the methodological approach have been guided by the phenomenological hermeneutics of Hans-Georg Gadamer ([1975]1989). A critical discussion of how these influences have guided the research process is included as an integral part of the study. This approach to interpretative research is supported by Koch (1999) who proposes that researchers need to consider the philosophical basis of their chosen research tradition and make decisions about how the philosophical underpinnings are evident in the stages of the research process. She argues that philosophy doesn't determine method but does influence how the researcher goes about each stage of the research process (Koch, 1999, 1996, 1995).

Kvale (1996, p. 57), in his discussion of the qualitative interview, offers strength to this argument when he recognises the importance of epistemological influences and argues that different philosophical perspectives offer different ways of analysing "conditions for knowledge of the human situation" and as a result will influence how the data are collected. Such conditions for knowledge, however, do not provide the tools and methods for obtaining and analysing data but they can offer justification for the methods chosen.

Chadderton (2004) supports this argument and proposes that, in order to establish rigour in interpretative hermeneutic research, the researcher needs to provide information about the philosophical basis for the study and demonstrate clarity of progression in the study from its ontological basis to epistemology, methodology and method. This view is reinforced by Maggs-Rapport (2001) who challenges researchers to demonstrate the impact of philosophical underpinnings on methodology and method without which their research can be open to criticism and the findings to dismissal. This argument is not disputed by Paley (2005a) who, in his criticism of phenomenology as rhetoric and practice, highlights the danger of allowing inconsistencies to occur between the philosophical claims and the research findings.

In summary, the arguments that define the philosophical basis for the research from its ontological basis to methodology are sufficiently justified. The choice of an interpretative paradigm has been defended and supports the assumptions made concerning the ontological and epistemological nature of the study identified at the beginning of this chapter. Justification of how these assumptions are incorporated into the philosophical underpinnings of the research and guided by Gadamer's ontology of language as being are discussed in relation to the historical development of hermeneutics and hermeneutic phenomenology in the remainder of this chapter.

Epistemological influences in this study are explored in relation to the hermeneutical problem. One of these is the way in which pre-understandings are identified and used in the material of the text, and the context which the interpreter brings to the interpretation. Another is how this has been achieved through the merging of horizons between the interpreter and the text and how this has led to a new understanding of the text (Palmer, 1969). The scope and reliability of the claim to a new understanding of the text is critiqued by drawing on Madison's (1988) arguments concerning the process of establishing rigour in the process of hermeneutic interpretation. This is explored in Chapter 4.

3.4 Beginning with hermeneutics

The word hermeneutics can be traced back to the Greek work *hermeios,* the verb *herméneuein* (to interpret) and the noun *herméneia* (interpretation) and is associated with Hermes, the wing-footed messenger-god. The significance of this, according to Palmer (2001, 1969), is not whether the etymological connection between Hermes and herméneuein is valid but rather the influence this has implanted on subsequent use of, and understanding of, the word hermeneutics. This argument is reinforced by Jasper (2004) who argues that Hermes, in his role as messenger, was able to bridge the gap between the divine and human realms and as a consequence translate or interpret that which was unintelligible into something that can be understood by humans. Hence there is a strong association between ancient hermeneutics and the interpretation of sacred texts, although modern hermeneutics has associations with philosophy and literary interpretation. The focus of this discussion is to expound on the development of modern hermeneutics and the relevance of Gadamer's ontology as a philosophical basis for this research.

Palmer (1969), in his attempt to offer an analysis of *herméneuein* in relation to the modern understanding of the term 'to interpret', presents three directions of meaning that help to contextualise the progression of hermeneutics (coming to understand) from Hermes through to modern hermeneutics and beyond. The three directions of *herméneuein* are: to express aloud in words, to say; to explain a situation; and finally to translate. The first of these three directions, *to say,* reinforces the notion of language as sound, with its own power of expression and meaning manifested as the interpreter verbalises the communication so that others can share in the meaning. According to Kvale (1996), this direction of understanding is particularly significant when undertaking hermeneutical interpretation of interview texts as interviews involve dialogue both in the creation and interpretation of the text.

The second of Palmer's directions is *to explain.* This perspective moves from beyond the expressive form of interpretation to the process of explaining, making clear the situational and contextual meaning of the interpretation. That is, the explanation is made within a horizon of already granted meanings and intentions shared by the interpreter and the text. This area of assumed understanding is described hermeneutically as *pre-understanding.* The production of explanatory interpretation therefore requires that the interpreter has some pre-understanding of the text in order

to open a shared horizon of already granted meanings and intentions so that a deeper understanding of the text is reached. This is not a linear process moving from ignorance to understanding via the interpretation of text but requires knowledge and pre-understanding of the horizon of the text prior to entering into a dialogue with the details and particulars of the text and subsequently moving back to the horizon or context of the text in a circular motion, the hermeneutic circle. Arguably, the first reference to this process as the hermeneutic circle was by Schleiermacher in 1833 (Jasper, 2004; Palmer, 1969). The idea was developed further by Heidegger ([1926] 1962) who explored the hermeneutic circle in the context of his ontological position and by Gadamer ([1975] 1989) who proposed a more epistemological view.

Palmer's third direction of understanding, *to translate*, involves the interpreter piecing together the meaning of the text, working within the shared horizons to translate the text to a level of shared understanding; this is synonymous with a fusion of horizons. Collectively, these three directions highlight the dynamic complexity of hermeneutic interpretation, described by Palmer (1969, p. 26) as the "hermeneutical problem". This can be summarised as the approach to and use of the pre-understandings of the material and the context that the interpreter brings to the hermeneutic process that leads into the hermeneutic circle and the merging of horizons.

3.5 Refining hermeneutical thinking: towards the hermeneutics of Gadamer

From its ancient beginnings, hermeneutics has been concerned with interpretation of language and text. According to both Jasper (2004) and Palmer (1969), hermeneutics has evolved chronologically through a series of periods or definitions. Each period of hermeneutics is arguably more than a map of historical development but rather a representation of a change in thought and direction in hermeneutical thinking. Palmer describes these stages as biblical, philological, scientific *geisteswissenschaftlich,* existential and cultural (Palmer, 1969). Jasper (2004) is less prescriptive in his analysis of the historical development of hermeneutics but he does highlight the periods of transition from the ancient to the modern understanding of hermeneutics. Thus, there is a journey from the interpretation of ancient biblical texts through the age of enlightenment where the scriptural text is the vessel of moral truths towards the hermeneutics of suspicion based on the exercise of human reason.

The hermeneutics of faith can be illustrated from a literary perspective. When reading a novel, the reader has to believe in the story in order for it to come to life; it becomes a world that is temporarily inhabited by the reader as they interpret and understand the story. This concept can also be manifested in the way the Bible was read and interpreted for at least the 1500 years of Christian history. This dominated the way the scriptures were presented and interpreted by others. Within this period, there was also much debate between those scholars who focused on a literal interpretation of the scriptures (biblical exegesis) and those who used an allegorical interpretation who argued for methods that reached a wider audience. The dominant trend, however, remained bound to exegetical praxis and this continued until the eighteenth century (Ihde, 2001).

By the Middle Ages, however, the hermeneutics of faith was being challenged by the hermeneutics of suspicion, an approach that involves reading a text with caution and challenging every claim against standards of experience and reason. This approach became increasingly evident from the sixteenth century onwards and was illustrated in the writings of Martin Luther (1483-1536) and John Calvin (1509-1564). According to Jasper (2004), the shift towards the age of reason was undoubtedly helped by the invention of the printing press. For Luther, working in a situation still dominated by the hermeneutics of faith, this meant increased accessibility of the

printed version of the Bible to a wider audience and his belief that the Bible should be available for all to read became a reality. As a consequence, anyone who could read could apply themselves to the task of Biblical interpretation and this opened the door for people to interpret differently. This was in no doubt helped by Luther's publication of the 95 theses on which he invited public discussion and arguably marks the beginning of the reformation (Schaff, 1997). Calvin took this a step further when he argued that, without knowledge of self, knowledge of God cannot exist. Therefore, in order to understand the text, the reader needs to consider themselves and how they understand the text in relation to their historical context (Paddison, 2005; Jasper, 2004).

From the hermeneutics of suspicion based on the exercise of human reason, there was a gradual shift towards the age of science. This had been illustrated by the end of the eighteenth century by Schleiermacher (1768-1834) who presented his view of hermeneutics as science, containing general laws of interpretation that work beyond the limits of Biblical text (Jasper, 2004). This signalled the beginning of modern hermeneutics and coincided with Schleiermacher's claim that hermeneutics does not just apply to Biblical and classical studies but can be applied to all texts without exception. Schleiermacher's ideas, however, have been challenged from several perspectives. Firstly, he did not formally publish his ideas, leaving only hand written manuscripts of his lecture notes and, secondly, in his attempt to broaden the use of hermeneutics, he proposed the development of universal laws of interpretation (Chadderton, 2004; Jasper, 2004; Palmer, 1969). By setting universal hermeneutic principles, Schleiermacher presented hermeneutics as both an art and science. He argued that interpretation can be divided into two parts: *psychological interpretation*, concerned with the interplay between the reader, text and researcher; and *grammatical interpretation*, requiring careful examination of the linguistic and syntactical structure of the text and its language. Using this approach offers a process where there is a constant interplay between the interpreter's personal and scientific understanding of the text in order to see the whole of the text (Jasper, 2004; Palmer 1969). By reading in parts and returning to the whole, a greater understanding of the text is possible - the hermeneutic circle.

In presenting hermeneutics as both an art and science, Schleiermacher opened up the possibility of viewing hermeneutics from an ontological and methodological perspective. On the one hand, Schleiermacher, in his attempt to broaden the use of

hermeneutics, opened the way for a shift from pure methodological understanding of hermeneutics to a philosophical and ontological view of hermeneutics. In this sense, he began the process of providing conditions for understanding that led to the development of the phenomenological hermeneutics of Heidegger and Gadamer. The work of Heidegger ([1926] 1962) signified the period of ontological and existential understanding. This perspective was continued by Gadamer ([1975] 1989) in his development of the ontological and epistemological understanding of hermeneutics.

On the other hand, Schleiermacher's understanding of methodological principles inspired arguments for retaining the methodological objectivity of interpretation of the human experience and history supported by Dilthey and Betti (Harrington, 2000; Palmer, 1969). Dilthey reinforced the concept of a core discipline and made the distinction between human and natural science. His concern, like Schleiermacher, was methodological and related to the formulation of a true humanistic methodology for the interpretation of human science (Palmer, 1969).

This era therefore marks a polarisation of hermeneutical thinking between the study of methodological principles that underlie interpretation and a body of philosophical explanation that explores the ontological and epistemological conditions for all understanding. Returning to the assumptions of the researcher, the nature of this study is holistic and contextual and is concerned with understanding the experience of nurses in the context of history and nursing practice. Confining interpretation to a purely methodological approach without including an ontological perspective of the research is inconsistent with the guiding principles of the study. The focus of this study therefore moves towards refining the ontological position.

3.6 Gadamerian hermeneutics: refining the ontological position

The phenomenological hermeneutics developed initially by Heidegger and subsequently Gadamer were influenced by and developed from Husserl's ideas regarding phenomenology, although the writings of both Heidegger and Gadamer move away from some of Husserl's original suppositions. Refining the ontological position therefore begins with Husserl (1859-1938) and the origins of the phenomenological tradition. Husserl in his analysis of lived experience proposed that the life-world is unexamined and undisclosed by the positivistic scientific approach and that we need to return to the world of everyday living if we are to understand the human tradition (Husserl, [1964] 1999).

In this project, Husserl was influenced by Descartes and the notion of the *mind-body problem*, the relationship between, and direction of, thought and action. For Descartes, the problem of the relationship between mind and body was that, although the whole mind seems to be united to the whole body, if part of the body was cut off, there seemed to be nothing taken away from the mind (Descartes [1641] 1996). Husserl ([1964] 1999) developed Descartes' ideas regarding the body-mind dichotomy, arguing that thinking involves the mind being directed towards objects or events and this meeting of the subjective and objective is consciousness. He called the process intentionality.

For Husserl, the goal of phenomenology is to unearth the essential structure of the conscious experience and the objective act or event that corresponds to it and to describe it as faithfully as possible. He argued that, in order for this to take place, the outer world, together with all preconceived notions of the inquirer should be bracketed out, so that what is left is the individual reality (Koch, 1996, 1995). Husserl did not reject the notions of reflexivity and self awareness and considered reflexivity to be an essential element of bracketing as it allowed personal assumptions and prior knowledge to be identified and removed from the analysis so that the true essence of phenomena could be described as faithfully as possible (Husserl, [1964] 1999). When this philosophical ontology is applied to the practice of lived experience research, however, Husserlian ideas do not account for the relationship that develops between the researcher and the participant's lived experience. By asking the participant to describe their life world, they are invited to enter into a dialogue with the researcher. As such, the relationship each has with the other will influence the description that is

forthcoming and, while bracketing the researcher's perceptions may reduce some contamination of the data, it is impossible to measure how the relationship has affected the experience and openness of the participant (Lipson, 1991).

Paley (1997) adds to this argument by proposing that any attempt to separate the essence of a described experience to an absolute datum requires the researcher to reduce the phenomenon to its objective element, devoid of the context and understanding the participant described, a process he argues is impossible because the process of reduction would remove the researcher from the social world of the participant. What is achieved, therefore, is not directly compatible with Husserl's notion of unearthing the essential structure of the subjective experience of the participant or the interviewer.

The application of Husserlian phenomenology as an ontological and methodological influence in this study therefore comes into conflict with the assumptions made by the researcher in that the researcher has practised as a critical care nurse, as a researcher and as a nurse teacher in care of the critically ill (Galloway, 1996). As such, any work undertaken will be influenced by personal experience and history and will inevitably influence the process of data collection, analysis and findings (James and Whittaker, 1998; Field, 1991). Being reflexive and aware of the historical context of the research enables the researcher to translate and interpret a shared understanding of the nurses' experiences rather than pursuing a pure and essential view of their life world (Freshwater and Rolfe, 2001; Marcus, 1998). Therefore, to produce an understanding of practitioners' experiences in the context of their work, the researcher needs to take account of locally situated practices and history.

Heidegger was an assistant of Husserl and was particularly influenced by Husserl's idea of returning to things themselves. Heidegger's ontological analysis, however, focused less on how we know as humans and more on the notion of what it means to be in the world (Welch, 1999; Mulhall, 1996; Heidegger, [1926] 1962). From this point, Heidegger's and Gadamer's ontology diverge from Husserl and his understanding of reducing the subject to its smallest objective elements in order to arrive at the essence of an experience. For both Heidegger and Gadamer, understanding is concerned with the interrelated, temporal and practical application of experience. The nature of understanding in this context involves three elements that develop and expand on Palmers' (1969) analysis of the ancient origins of

hermeneutics and focus particularly on the meaning of interpretation and translation. These include an intellectual grasp of the subject, understanding as practical know-how and, for Gadamer particularly, understanding as agreement (Grondin, 2002).

In spite of the divergence of ontology between Husserl's and Heidegger's work, Paley's (2005b, 1998; 1997) critiques of hermeneutic phenomenology continue to challenge the idea of using phenomenology as a research approach and follow the argument that the association between the phenomenological ideas and the methodological approaches used in nursing research in particular are inconsistent. In particular, he argues that hermeneutic studies of lived experience are incompatible with both Heidegger's and occasionally Gadamer's ontologies of being in the world, in that the research approach used in this context is essentially Cartesian in spirit (Paley, 1998).

He reinforces this notion by arguing that research which asks participants to describe their experience of "What it's like?" involves the participants in the process of divorcing the experience from their reality in order to present their interpretation of what it is like. It is this process, Paley argues, that goes against the Heideggerian ontology of *dasein* (being in the world). He proposes that Heidegger's argument regarding the development of practical knowledge is incompatible with the reductionist approach adopted through the process of data analysis. For Heidegger, the individual *dasein* is inseparable from their environment and practical knowledge is determined by the context of the environment and incorporates *ready-to-hand* (knowing how) and *present-at-hand* (knowing why). For Paley (1998), when that practical experiential knowledge is taken out of context (removed from being in the world of practice), it has limited validity as knowledge and is best studied and learnt in context.

Following Paley's arguments, any attempt to describe and understand another's experience is bound to separate the 'real' from the presented reality as only the person experiencing the phenomena can understand fully what it is like for them. It can also be argued that practical, experiential knowledge incorporates the activity of intuitive knowing, which, by its very nature, is difficult to unearth because of the tacit, automatic knowing and doing of the experience (Benner *et al.*, 1999; Rolfe, 1997; King and Appleton, 1997; Polanyi, 1974). As such, any interpretation of another's experience cannot lead to an absolute understanding of that perspective but only offer one understanding as it is presented in context.

Interestingly, apart from a passing reference to Gadamer's hermeneutics in the introduction of his paper, Paley (1998) makes no direct reference to Gadamer's ontology and its similarities or differences to that of Heidegger. In this context, therefore, criticism of Heideggerian and Gadamerian hermeneutics as a guiding ontology for lived experience research offers only a limited view and does not address the ontological and epistemological differences between Gadamer's and Heidegger's hermeneutics in relation to their basic understanding of understanding.

According to Heidegger ([1926] 1962), practical knowledge is the foundation for knowledge in context, is informed by theoretical knowledge but is also influenced by presuppositions. Therefore, any attempt by a person to describe and share that experience with others will necessarily include a need to ask questions of both the participant and context and subsequent understanding *(verstehen)* and interpretation *(auslegung)* of that account is as a consequence bound to that context. For Heidegger, the importance of preconceptions and history are crystallised when he presents his work "Being and Time" where he describes being constantly aware that he is a being in the world as much as the rest of humanity and as such a subject of his own work. This necessarily leads to the conclusion that the results of his self interpretation must feed back into and inform the work (Mulhall, 1996; Heidegger, [1926] 1962). He argues that there is no inquiry that is free of preconceptions and as such they need to be recognised and fed into a hermeneutic circle. As an inquirer, we enter the circle, interpret and draw provisional conclusions. These then need to be taken back to the starting point with the benefit of a deeper understanding that can again be fed into the circle and so on. The more times the inquirer navigates the circle, the deeper the level of understanding is achieved. Heidegger illustrates this process in his book, 'Being and Time' where he presents his work in two cycles beginning with preparatory fundamental analysis and followed in section two by feeding in the outcomes of the preliminary analysis to develop his ideas on d*asein* (human way of being) and temporality. Within this, he argues that ontological understanding is rooted in time and that human ways of being therefore exist and can be understood within a horizon of time (Heidegger, [1926] 1962).

For Heidegger, the hermeneutic circle presents a circle of understanding *(verstehen)* and the interpretation *(auslegung)* that guides it, with the implication that the circle is constant. Entering the circle requires the individual to recognise and seek to understand preconceptions/pre-understandings in order to move forward to future

existence. For Heidegger, therefore, the hermeneutic circle is about the interpretation and understanding of existence (Grondin, 2002). For Gadamer, a student of Heidegger, language and history provide the shared sphere of the hermeneutic circle and the aim of hermeneutics is to understand differently, rather than to produce an understanding which is better (Grondin, 2002; Koch, 1996). Unlike Heidegger, Gadamer sees the hermeneutic circle with the coherence of the whole with its parts and proposes that a text must articulate the parts with the whole creating a repeated cycle until there is a fusion of horizons and a new understanding (Gadamer, 1989). According to Gadamer ([1975]1989, p. 370), the real power of hermeneutical consciousness lies in our ability to see what is questionable in the dialogue:

> ...interpretation always involves a relation to the question that is asked of the interpreter. To understand a text means to understand this question.

He argues that a hermeneutical situation is determined by the prejudices that we bring with us. However, these prejudices are not rigid and will change as the horizon of the present challenges the horizon of the past.

Thus, according to Gadamer ([1975] 1989, p. 306):

> ...understanding is always the fusion of these horizons supposedly existing by themselves... In a tradition this process of fusion is continually going on, for their old and new are always combining into something of living value, without either being explicitly fore-grounded from the other.

Understanding therefore is a dynamic process and is relative to the progressive fusing of horizons and the subsequent modification of a pre-understanding that informs the questions of the next cycle of interpretation. Every encounter with the text takes place in the context of historical consciousness, personal prejudices/pre-understandings and the present. As such, the knowledge gained through the process of interpretation is relative to the history, context and pre-understanding of a given situation. The task of hermeneutics, therefore, is to move towards a fusion of horizons that recognises and explains the tension between historical consciousness, the text and present traditions in order to achieve understanding, but also to recognise that this process is dynamic.

Gadamer proposes that hermeneutics does not just involve understanding and interpretation but application also. Therefore, if a text is to be understood properly, it needs to be applied to the related situation or context. For Gadamer, therefore, the

hermeneutic circle is concerned with language as existence and the interpretation of text as influenced by history, prejudices and context. Gadamer's philosophical perspective on first viewing therefore appears consistent with the researcher's assumptions within this study and is worthy of further discussion.

3.7 Conclusion

In summary, the researcher has argued that due to the nature of the research questions and purpose of the study, the research focus is concerned with describing and interpreting the experience of nurses caring for patients who become critically ill, in the context of history, tradition and the pre-understandings of the subject in context. The ontological basis for this approach is concerned with both the philosophy of understanding as well as the process of interpretation and to that end supports the use of a hermeneutic phenomenological ontology to guide and inform the research design. A historical review of modern hermeneutics and phenomenology has led the researcher to the hermeneutics of Gadamer ([1975] 1989) as being most consistent with the general concerns of the researcher.

Gadamer ([1975] 1989, p. xxxvi) in the foreword to his second edition of "Truth and Method" explains that his work is:

> phenomenological in its method ... *and* ... hermeneutic,
> not in the sense of a methodology but as a theory of the
> real experience that thinking is.

In this sense, Gadamer's notion of the hermeneutic circle and fusion of horizons presents an ontological view of the world as language as being. In other words, language is existential, the core and structure of who we are and how we exist. He claims that language and history provide the shared sphere of the hermeneutic circle and that the interpreter enters into a dialogue with the text and with that brings a version of the world influenced by history and biases (prejudices) that are shared with the text in order to develop understanding. This understanding is temporal and requires a fusion of horizons, the aim of which is to understand differently (Gadamer, [1975]1989). In this context, the key to understanding lies in the ability of the interpreter to ask questions of the text in such as way as to interpret the text in the context of history, location and culture and to recognise personal biases and prejudices that influence the process of dialogical play between the researcher and the text.

For Gadamer, the move towards a sharing of horizons between prejudices, history and text and a subsequent understanding is directly related to the questions asked of the text. These questions in turn are determined by the quality of the critical questioning of both prejudices and history. In this discussion, Gadamer is not

describing a method of textual interpretation but rather highlighting the factors that inform the epistemological nature of interpretation and the development of understanding through rigorous questioning and conversation. Gadamer rehearses these ideas in his discussion of modern aesthetics and the concept of play; the elevation of the historicity of understanding; and the problem of application (Gadamer, [1975] 1989). These ideas are analysed in depth in Chapter 4 where they are applied to the development of methodological rigour in the research design and process.

Chapter 4

Methodology

4.1 Introduction

The aim of this chapter is to present a critical account of the methodology that has informed the research process and continues the examination of the relationship between philosophical influence, methodological design and methods used for data collection and analysis. For the purpose of this study, methodology refers to the philosophical framework and assumptions that underpin and influence the research process (Koch, 1996). To that end, the chapter includes: a rehearsal of the research questions and their relationship to the methodology; a critical discussion and justification of the methodological underpinnings of the research; and justification of the methods utilised for sampling, data collection and analysis. The research approach used is qualitative and is influenced by hermeneutic phenomenology with specific reference to the work of Gadamer ([1975] 1989). Ethical issues concerning the research are discussed and applied to relevant stages of the research process. A critical discussion of how rigour has been demonstrated is presented by utilising and justifying the use of Madison's (1988) criteria for rigorous hermeneutic interpretation.

The study focuses on the interpretation of nurses' lived experience of caring for patients who become critically ill in a hospital Trust in Wales. Research that focuses on the interpretation of lived experience is generally referred to as phenomenological, the aim of which is to describe and understand the nature and meaning of human experience (Holloway and Walker, 2002). The focus of phenomenology is to understand the meaning of human experience and is concerned with the ontological question of "what is being" and the epistemological question of "how do we know" (Ray, 1994). The hermeneutic phenomenology influenced by Gadamer focuses on three philosophical constructs that provide the ontological and epistemological basis for interpretation. They include: the hermeneutic circle, dialogue and fusions of horizons. From an epistemological perspective, Gadamer claims language and history provide the shared sphere in the hermeneutic circle and that the aim of this experience is to understand differently, rather than to produce an understanding which is better (Koch, 1996; Gadamer, [1975] 1989). The relationship between language as text and history are particularly significant to this study as the researcher's interpretation of the findings has been undoubtedly influenced by the tradition of caring for critically ill patients in the United Kingdom as well as the researcher's own experience and history of caring for critically ill patients. Therefore,

an interpretation of lived experience based on the hermeneutic circle and fusion of horizons provides a way of perceiving understanding as a shared experience rather than limiting the focus of understanding to essential elements of lived experience isolated and bracketed from the context of history and prejudice as proposed by Husserl ([1931]1962).

The research process began with identifying and clarifying the problem area for research and the development of research questions. The literature review offered justification for the research as well as setting the historical context and tradition of care for critically ill patients. The background and tradition of the researcher in this study is significant and has influenced the choice of methodological approach used.

The methods of data collection for this study include the use of a historical and contextual review of the literature, in-depth interviews and a diary of the research process as it began to unfold. This provided the researcher with an opportunity to map the methodological process and identify philosophical, methodological, ethical and practical issues involved in the research as well as providing a decision trail through the research process.

The technique of purposive sampling was used to select and include participants in the study and focused on the nurses' experiences of caring for patients who had developed critical illness prior to commencement of the study. The sample ultimately reflected the experiences of nurses working in a variety of acute and critical care areas who had all experienced recognising and caring for patients with clinical deterioration leading to critical illness.

The process used for data analysis is based on an interpretative approach and involved using a dialectic and dialogical approach to interpret the data. This approach began with the literature review and commencement of the researcher's diary and progressed through a cycle of listening to the interview tapes, hearing and transcribing the story, asking questions of the data and interpreting the story in the context of history and pre-understandings.

The research findings presented in Chapter 5 are interpreted as a shared hermeneutic understanding of nurses' experiences of caring for critically ill patients based on the researcher's interpretation of the relationships between tradition, context and text. A summary of the path taken in the research process is illustrated in Figure 4.1 and demonstrates the cyclical nature of the research as the data analysis and interpretation of findings progressed. Although a single line is used to denote the

circular process, it is appropriate to mention that in the process of interpretation these cycles were repeated according to how the process of hermeneutic question and answer progressed.

Figure 4.1
The research process

```
┌─────────────────────────┐   ┌─────────────────────────┐
│ Identify problem area for│───│ Reflect, search and     │
│ research                 │   │ review the literature   │
└─────────────────────────┘   └─────────────────────────┘

        ┌─────────────────────────┐
        │ Develop research questions│
        └─────────────────────────┘

   ┌─────────────────────┐   ┌─────────────────────────┐
   │ Reflect and review  │───│ Clarify methodological  │
   │ the literature      │   │ influences              │
   └─────────────────────┘   └─────────────────────────┘

        ┌───────────────────────────────────┐
        │ Choose methods for data collection:│
        │ Researcher diary, literature review,│
        │ in depth interviews                │
        └───────────────────────────────────┘
                                        ┌─────────────────────┐
┌─────────────────────┐                 │ Verify with the     │
│ Ethical approval     │                 │ participants        │
│ Access to sample group│                │ their decision      │
└─────────────────────┘                 │ regarding the       │
                                         │ inclusion of        │
   ┌─────────────────┐  ┌──────────────┐ │ their transcripts   │
   │ Select sample for│  │ Transcribe the│ └─────────────────────┘
   │ interview and    │──│ interviews,   │
   │ interview        │  │ read the      │
   │ participants     │  │ transcripts   │
   └─────────────────┘  └──────────────┘
                                 ┌──────────────────────────┐
   ┌─────────────────────┐       │ Ask questions of the data;│
   │ Question the        │  ┌────│ interpret meaning in the │
   │ relationships,      │  │Review│ context of pre-understanding│
   │ patterns, and       │──│ the  │ and history              │
   │ differences in the  │  │liter-│                          │
   │ data, identify      │  │ature │
   │ categories and themes│ └────┘
   │ in response to      │
   │ rigorous questioning│
   └─────────────────────┘

┌──────────────────────┐   ┌──────────────────────────────┐
│ Interpret in the     │   │ Identify different horizons   │
│ context of history   │───│ and recognise when shared     │
│ and prejudices (pre- │   │ horizons have led to a        │
│ understandings)      │   │ hermeneutic understanding of  │
└──────────────────────┘   │ the data                      │
                           └──────────────────────────────┘
┌──────────────────────┐   ┌──────────────────────────────┐
│ Discuss the new      │   │ Describe the interpretation   │
│ understanding of the │───│ of lived experience through   │
│ data in relation to  │   │ a dialogue with the text      │
│ the research question │  └──────────────────────────────┘
└──────────────────────┘
```

4.2 Gadamerian ontology and epistemology

The aim of this section is to critically analyse and discuss key tenets of Gadamer's ontology and epistemology and examine how these have informed the methodological aspects of the research. These include Gadamer's critique of the concept of the subject, the notion of play, the elevation of historicity and prejudice, and the problem of application. From an epistemological perspective, Gadamer's interpretation of language as being is examined in relation to how the ontological tenets above justify the use of a dialogical and dialectic approach to the process of interpretation and the truth value of the understanding achieved. A critical analysis of conditions for phenomenological hermeneutic interpretation revealed seven conditions necessary for hermeneutic understanding. These formed the basis of an epistemological structure that has informed the hermeneutic approach adopted by the researcher.

Beginning with the concept of the subject, Lebech (2006) argues that the way in which individual subjectivity is defined not only informs the relationship the individual subject has with their historical and cultural background, it also implies the conditions for understanding the role of the subject in society and the dynamics of social structures related to concepts such as morality, responsibility, knowledge and science. Lebech (2006, p. 222) gives the following example of subjective objectivity, to illustrate this argument:

> ... a position basing a theory of knowledge and a concept of truth on objective knowledge presupposes and implies that the subject in an act of self-reflection can rise above their contextual embeddedness in order to achieve an unprejudiced perspective.

The subject in this case is able to isolate themselves from the influence of culture and history and visualises a perspective of society as pure and isolated from context. This notion is supported by Dilthey (1991) to some extent, when he argues that the hermeneutic task is to generate sound historical knowledge through the process of rigorous and objective method and then to utilise this knowledge in the context of human experience, so that, guided by philosophical analysis, the interpreter can develop an empathic understanding of the text in context.

Gadamer ([1975] 1989) in his epistemology rejects entirely the presupposition of absolute, objective knowledge and argues that an individual subject's

embeddedness in their culture and history is a necessary condition for understanding. He argues that in essence an interpreter's understanding of history is dynamic and is informed by a fusion of elements in history as well as the subjective life and tradition of individuals within the context of history. In his challenge of Dilthey, Gadamer ([1975] 1989) argues that to separate and analyse history without translating and understanding the subjective experience of history in the same context reduces the interpretation to a collection of related interpretations of lived experience and a scientific analysis of history rather than providing a hermeneutic interpretation and shared understanding of the text. He argues that, in the absence of pre-understanding, the subject/interpreter would not be able to engage in a situation or understand the subject they were engaging in and the validity of the interpretation can be challenged.

Critiques of Gadamer's notion of the subject's embeddedness in history and culture argue that such a dominance of history renders the subject a passive spectator in the process of interpretation. For example, Kögler ([1992] 1999) makes a direct challenge on Gadamer's arguments for the subject's embeddedness in their history and argues that this idea makes the subject an instrument of history, without room for individual action or critique. Kögler's ([1992] 1999) arguments, however, are based on a critical theory paradigm and his construction of critical theory as critical hermeneutics. In this context, he argues that the relative powerlessness of the interpreter in his/her understanding of the text limits the scope for interpreting and understanding social and cultural power practices that have influenced the textual interpretation. He concludes that Gadamer's hermeneutic ontology and epistemology are in themselves not sufficient to inform the methodological construction of critical hermeneutics. The researcher accepts that the arguments proposed by Kögler do support his conclusion. However, the aim of the researcher in this study is not to pursue a methodology informed by critical theory but to present an understanding of nurses' experiences through the interpretation of text in the context of history and tradition. The researcher argues that by exploring Gadamer's conditions for understanding, the necessary conditions for his philosophical hermeneutics of interpretation will emerge and inform methodological understanding and application.

According to Edwards (2001), philosophical inquiry can be supported by the use of some philosophical tools, one of these being the distinction between necessary and sufficient conditions. Flew (1979, p. 242) defines this distinction as:

This is a *necessary condition* for that if that cannot be

without this. This is a *sufficient condition* for that if this is
by itself enough to guarantee that.

For the purpose of this philosophical inquiry, the researcher aims to identify
conditions highlighted by Gadamer that can be seen to be logically necessary but may
not be collectively sufficient conditions for hermeneutic understanding. In this way,
the opportunities for further dialogue with Gadamer's conditions for understanding
can be explored following application to the methodological process. This argument is
illustrated by Swartz (1997) in his rehearsal of the application of necessary and
sufficient conditions. By the term "necessary conditions", the researcher is referring
to:

> A condition *A* is said to be *necessary* for a condition *B*, if
> (and only if) the falsity (/nonexistence /non-occurrence)
> [as the case may be] of *A* guarantees (or brings about) the
> falsity (/nonexistence /non-occurrence) of *B*.
> (Swartz, 1997, p. 1)

The examination begins with Gadamer's concept of play as a clue to
ontological explanation. According to Gadamer, an examination of how the word
'play' is used from both a metaphorical and human perspective shows how play can
involve a back and forward movement that may or may not directly lead to a goal or
end point, such as a play of light through trees on a sunny day, a play of colours, and a
game that is being played. Hence, Gadamer ([1975] 1989, pp. 103-104) argues that it
is the sense of movement of play that is central to the understanding of play rather
than the subject of play:

> ...The mode of play is not such that, for the game to be
> played there must be a subject who is behaving playfully.
> Rather, the primordial sense of playing is the medial one.
> Thus we say something is "playing" (spielt) somewhere
> or at some time, that something is going on (im spiele ist)
> or that something is happening (sich abspielt).

In this argument, Gadamer clearly places the primacy of play over the consciousness
of the player and Kögler's ([1992] 1999) argument that Gadamer sees the subject as
passive in the process of play in history is initially supported. However, Gadamer
goes on to argue that, although the movement of play is primary, there is a dialectical
relationship between play and players in the activity of play. In this way, although the
to-and-fro movement of play is primary, it is the players themselves who choose to
agree to participate in the act of play and to follow the rules of play. As a

consequence, the rules of play set the limits of play while the players determine the movement within it.

A subject therefore can only experience what play contains once they agree to participate in the game. If this argument is examined in the context of history and the hermeneutic circle, it becomes evident that, as a subject of history, the individual is already involved in the act of play and is being played by the history of human life. As such, the subject is already imbedded in the play of interpretation of their existence as a historical being as well as being involved in the dialogical play of interpreting the text. To exist, therefore, is to exist as a historical being and a necessary condition for understanding. Thus, Gadamer ([1975] 1989, pp. 276-277) argues:

> ...history does not belong to us; we belong to it. Long before we understand ourselves through the process of self examination, we understand ourselves in a self-evident way in the family, society and state in which we live…. The self-awareness of the individual is only a flickering in the closed circuits of historical life. *That is why the prejudices of the individual, far more than his judgements, constitute the historical reality of his being* (translator's emphasis).

Gadamer is arguing two points in this quote. The first relates to the place of the subject in their historical existence and the second relates to the subject's recognition that history informs and helps to create who they are and how they perceive the context of their experience. Therefore, each subject's experience of history is different and will inform how he/she interprets and understands their world. Gadamer ([1975] 1989, p. 360) argues that these differences can be manifested through prejudices, pre-understanding or assumptions made in the interpretation of their world:

> A person who believes he is free of prejudices, relying on objectivity of his procedures and denying that he is himself conditioned by historical circumstances, experiences the power of the prejudices that unconsciously dominate him as a vis a tergo *a force acting from behind* (researcher's interpretation)

For Gadamer, therefore, the past is always active in the present and the result of this historical conditioning is to provide the first of two formal conditions that guide understanding. The first of these conditions is that the interpreter is never empty-handed in situations leading to understanding. Gadamer ([1975] 1989, p. 293) argues

that, in this, the hermeneutic circle is "neither subjective nor objective, but describes understanding as the interplay of the movement of tradition and the movement of the interpreter". Gadamer's understanding of tradition in this context is based on the idea of the subject being influenced by history, informing history and subsequently having an influence on history. Therefore, tradition is dynamic in that the subject understands tradition, participates in the structuring of tradition and determines the content of tradition. The circle of understanding is therefore not methodological in the sense that it does not provide rules or a tool to facilitate understanding, but it is ontological and epistemological in that it provides the conditions required for the process of understanding to take place.

The second condition for hermeneutic understanding is described by Gadamer ([1975] 1989, p. 293-4) as "the fore-conception of completeness", that is, an assumption that the subject matter of a text has been written or presented in order to be understood. Within this, Gadamer argues that understanding is primarily focused on the content of the text and secondarily on what is meant. This condition, when placed in the context of the to and fro movement of the play of interpretation, will lead to a new understanding of the text. Thus, understanding takes place in the tension between the familiarity of fore-understanding of history and tradition and the strangeness of the meaning yet to be understood and for Gadamer ([1975] 1989, p. 295) "this in-between" is the true place of hermeneutics. In this sense, the meaning of a text is not absolute because it becomes an integral part of history and continues to have an effect on history. Therefore, a later interpretation of the text will necessarily have to take into consideration the history of previous interpretations as well as the context and prejudices concerning the current interpretation.

Thus, according to Gadamer, both the object of the interpreter's understanding and pre-understandings are handed down through history and are conditioned by the "principle of history of effect" and that it is this "historically effected" consciousness that provides an essential element in the act of understanding (Gadamer, [1975] 1989, p. 300). A logical conclusion drawn from this principle is that the interpreter will understand the text differently from its author as each person will bring their pre-understandings and tradition to the interpretative process. The process of interpretation, therefore, is concerned with understanding the text in relation to the history and pre-understandings informing the interpreter, rather than with attempting to understand the original true meaning of the author's psyche, ideas and experiences

that have informed the text as Schleiermacher believed (Lebech, 2006; Jasper, 2004).

Through the history of effect, each individual accommodates a horizon of understanding that can be applied to any situation. Gadamer ([1975] 1989, p. 302) describes horizon in this context as "the range of vision that includes everything that can be seen from a particular vantage point". The process of interpretation begins, therefore, with the questioning and recognition of pre-understandings/prejudices in relation to the situation and its corresponding horizon to be understood. The situation to be understood in this context involves the text as it applies to the present situation. Gadamer ([1975] 1989) argues that to acquire an awareness of a particular situation is difficult because it requires application, with the interpreter becoming a part of the situation in order to interpret and understand it. He draws on examples from legal and theological hermeneutics to illustrate the significance of this and argues that legal text, for example, in order to be understood needs to be applied to individual and concrete situations.

In this play between the horizons of familiarity and that yet to be understood, movement and fusion of horizons requires the interpreter to question, recognise and challenge those pre-understandings that are no longer productive in relation to this situation as well as demonstrating the relationship between those that are and how they inform and apply to the text in its present situation. The interpreter, therefore, has an interdependent and dialectical relationship with the historical, cultural and social context of the situation and questions the relationship between this and the text. This process, Gadamer ([1975] 1989) argues, is possible because the text is not a closed, fixed and discrete object but is open in character, always unfinished, undetermined and influenced by tradition. It is this understanding of the text that allows the interpreter to have a dialectical relationship with it, utilising the play of question and answer (Gonzalez, 2006; Palmer, 1969).

The model for Gadamer's application of a dialectical relationship with the text is informed by Plato's dialogues (translated by Jowett, 1898), with particular attention paid to highlighting the difference between authentic and inauthentic dialogue. Gadamer begins by drawing the reader's attention to what he presents as significant insight into the process of question and answer through the interpretation of Plato's account of Socrates' dialogues. He proposes that, within authentic dialogue, it is more difficult to ask questions than answer them. In this context, authentic dialogue refers to situations where the purpose of the discourse is intended to reveal something of the

object or focus of conversation. Inauthentic dialogue is illustrated by a situation where the purpose of the dialogue is to prove a point, as opposed to gaining insight into the object of the discussion. In this instance, the focus of hermeneutic interpretation would be limited and prejudiced by the interpreter's arguments and their inability to focus on and recognise the questions that would lead to a conceptual understanding of the object of the dialogue.

For Gadamer ([1975] 1989, p. 363):

> The openness of what is in question consists in the
> fact that the answer is not settled. It must still be
> undetermined, awaiting a decisive answer.

For Gadamer, following the model of Socratic-Platonic dialectic presents an epistemological interpretation of dialectic as the art of questioning and seeking truth, to be able to persist in the process of questioning until an understanding is reached in relation to the object of the conversation. The art of questioning is therefore the art of conducting a dialogue, rather than the pursuit of an argument. According to Gadamer, the fundamental elements of conducting a dialogue include an understanding that the partners do not talk at cross purposes and that each person is orientated to the subject of the conversation. This is most effectively structured through the process of question and answer, where the questions expose the concepts and elements of the subject matter and continued questioning persists until all aspects of the subject matter are revealed. The validating feature for Gadamer is the point that the Platonic dialogues seek to pursue the truth of the matter, rather than the strongest argument. In this context, the interpreter continues to ask questions until the truth of what is under discussion emerges. The Socratic method of questioning can, therefore, through the process of the give and take of question and answer, reveal latent concepts through dialectical sequencing of questions. In this way, the interlocutors, as either two people in a conversation or the interpreter and the text, are not objects to be analysed and objectively understood but are joined in the process of conversation.

Thus according to Gadamer ([1975] 1989, p. 370):

> ... A person who wants to understand must question what
> lies behind what is said. He must understand it is an
> answer to a question.... We understand the sense of the
> text only by acquiring the horizon of the question - a
> horizon that, as such, necessarily includes other possible
> answers. Thus the meaning of a sentence is relative to the
> question to which it is a reply...

In this way, the dialogue of question and answer will always precede and inform the dialogue of interpretation and determine how a situation or text is understood. In his explanation of the use of question and answer, what Gadamer is offering is not a direct challenge to the validity of science as a process for guaranteeing truth but rather a challenge of the scientific method that assumes truth may only be guaranteed by objective analysis and control. For Gadamer ([1975] 1989, p. 491):

> ...what the tool of method does not achieve must - and
> really can - be achieved by a discipline of questioning and
> inquiring, a discipline that guarantees truth.

Gadamer's epistemological view of hermeneutic understanding of text through the primacy of question and answer has been challenged by Ricoeur (1981) who argues that the relation between the interpreter and the text is not a conversation but rather a straight forward presentation of the act of writing from the perspective of the author of the text and the act of reading from the perspective of the reader/interpreter.

Thus, for Ricoeur (1981, pp. 146-147), "the reader is absent from the act of writing; the writer is absent from the act of reading". Ricoeur's (1981, p. 145) understanding of the text in this context is that it is "fixed by writing", that in effect the text has taken the place of speech, there is no longer a speaker and, as a consequence, no longer an opportunity for discourse. This understanding of the text is generally positivistic and differs significantly from Gadamer's understanding of the text as being open, dynamic and unfinished in the context of history and tradition. What is interesting to note, however, is that both philosophers see the text as independent of the author of the text and open to interpretation but differ in their understanding of the role of the text in relation to the interpreter.

For Ricoeur, the text is no more than an object of words and paragraphs to read, while for Gadamer the text is dynamic and open to dialogue and may present in

the form of art, written text or situations. This argument is supported by Gonzalez (2006) who, while recognising this similarity, proposes that the fundamental difference between Ricoeur and Gadamer highlights two different strands of hermeneutics. Ricoeur follows an objective methodological approach to hermeneutic interpretation where the text is fixed with its own characteristics that can be explained through analysis. Gadamer, on the other hand, presents an ontological understanding of 'language as being' and the text as having an open indeterminate nature influenced by history and tradition; open to interpretation through the primacy of question and answer.

It is this open and subjective nature of Gadamer's hermeneutic understanding that has been criticised by Ricoeur for having insufficient critical distance to justify objective understanding. He argues that, by focusing on the relationship between historically affected consciousness, the interpreter and the text as dialogue, Gadamer places too strong an emphasis on the role of appropriation and belonging to the process of understanding and this is done at the expense of critical distance (Ricoeur, 1981).

How does Gadamer demonstrate epistemological justification for hermeneutic understanding in the light of Ricoeur's criticisms? The answer to this question emerges firstly when Gadamer explores the elevation of the historicity of understanding and the management of the interpreter's prejudices and fore-meanings, and secondly in his analysis of historically affected consciousness and the notion of experience as process. In Gadamer's analysis of the historicity of understanding, he focuses particularly on the relationship between history and temporal distance. According to Dostal (2002), it was Husserl who developed an account of the three dimensional nature of temporality as being past, present and future. In this context, the present is expanded to include aspects of both the past and future. In the case of Husserl ([1931]1962), this notion of temporality is associated with the requirement for isolating elements of the past and bracketing them so the essence of the phenomena can be unearthed.

For Heidegger ([1926]1962), the notion of temporality was central to his ontological understanding of being and time. Gadamer ([1975] 1989, p. 297) went on to develop Heidegger's ontological understanding of temporal distance, as a relationship between existential being and time and pursued the notion that time is not a gulf to be bridged, but becomes the "supportive ground of the course of events in

which the present is rooted." Temporal distance therefore offers a productive condition to enable understanding through "the continuity of custom and tradition".

In Gadamer's ([1975] 1989, pp. 298-299) second edition of 'Truth and Method', he revises his original claim that it is "*only* temporal distance that can solve the question of critique" and proposes that it is *often* temporal distance that helps the hermeneutic interpreter to distinguish between "the true prejudices, by which we understand, from the false ones, by which we misunderstand." He proposes that to manage the relationship between the interpretation and understanding of prejudices in the text is to open the reader to possibilities through the process of question and answer. According to Gadamer, it is only when the prejudices of the interpreter are brought into the play of question and answer with the text that the interpreter is able to experience the back and forward movement of dialogue.

According to Grondin (2002), what Gadamer highlights through this analysis is that the interpreter's understanding of the text is always subject to revision through the process of dialogue and the productivity of temporal distancing. In his analysis of historically affected consciousness, Gadamer reinforces the importance of dialogue and temporal distance when he alludes to experience, not just as a result of a process of learning, but also as a process of living continually new experiences, some that conform to expectation and others that occur as new experiences, that allow the interpreter to see things differently. It is this latter type of experience that Gadamer ([1975] 1989, p. 353) argues:

> ...is always negative. If a new experience of an object
> occurs to us, this means that hitherto we have not seen the
> thing correctly and now know it better...We call this kind
> of experience *dialectical.*

True experiences that are negative therefore offer insight into how the interpreter understands the text and it is this productivity that leads the interpreter to openness for ever newer experiences.

For Gadamer, it is the combined processes of dialogue, temporal distance and true experience that account for what understanding is. The epistemological justification for recognising the process as well as the experience of dialogue is reinforced by Davey (2006) who, in thesis three of his eleven theses on philosophical hermeneutics, proposes that it is not only what an individual interprets from the text from their historical perspective, but also the nature of the encounter with the text and

what the text imposes on the interpreter through the encounter. Engaging with a text can therefore expose to the interpreter the inadequacy of previous understandings. Davey (2006) revisits this point in theses seven and ten when he proposes that the negativity of experience in the hermeneutic encounter is productive in that it disrupts the expectancies of the interpreter so that they are forced to think differently within the limitations of time and horizon. The implication of this is that no act of understanding is complete in that it is defined by the individual perspective. Future encounters with the text, therefore, undertaken with temporal distance and a changed horizon will necessarily yield a different act of interpretation and understanding. Philosophical hermeneutics, therefore, is dynamic and productive in the practice of understanding text.

4.3 Seven conditions necessary for phenomenological hermeneutic understanding

Based on an interpretation of Gadamer's ([1975] 1989) translated text, the researcher has identified seven conditions necessary for hermeneutic interpretation. These ontological and epistemological conditions for understanding guide the methodological application of conditions for praxis - the process of interpreting and understanding the text. Where possible, these conditions have been supported by other authors' interpretations of Gadamer's work but the conditions identified are primarily based on the researcher's own understanding of the text. It is significant to note that the researcher's interpretation of Gadamer's text is limited by the use of a translated version of Gadamer's text, rather than the text as it was presented in its original form. This limitation has been noted by Geanellos (1998a) as a factor that can influence interpretative accuracy of the content of hermeneutic text and is significant for the work of Gadamer as well as for works by Heidegger, Ricoeur and others. With reference to this limitation, the researcher is drawn to one of the most basic tenets of hermeneutic understanding: that interpretation involves the ability to say, explain and translate the text (Palmer, 1969). The implication of this in relation to interpreting translated text is that, as long as the interpreter makes explicit the type and content of the text through description, explanation and translation into meaning, it gives the reader a clear idea of the source and context of the text.

The conditions necessary for hermeneutic interpretation have been discussed in the previous section and are summarised under the seven sub-headings below.

4.3.1 Recognition of the primacy of movement of play

Gadamer's recognition of the primary movement of play is of critical significance when informing methodological understanding as it informs the movement, direction and process of interpretation. When a subject enters into play, it/he/she becomes part of the process of play as well as informing the process of play. A subject in this instance may be an individual, text or situation and will be involved in the to and fro movement of play, either in a situation or as part of a larger experience. While the primacy of play makes the to and fro movement of play inevitable, when play occurs within the structure of a game, it is the players themselves who choose to play the game that determine the direction of the game. In

order to participate fully in the game, the players choose to abide by the rules of the game and, in this way, the rules set the limits of play while the players determine the movement within it. In this way, making overt the rules of the game as the research process unfolds sets the limits and scope of each stage of the process while the players, namely the researcher and the text, determine the movement within it. This is manifested firstly by defining the conditions necessary to facilitate interpretation and understanding of text, and secondly through the use of Madison's (1988) guiding principles for 'good' hermeneutic interpretation and understanding.

4.3.2 Recognition of historically affected consciousness

Recognising the subject's embeddedness in the play of history allows the subject to be part of the experience of history and tradition as well as being part of the present process of interpretation. Each subject, in this case the researcher, has a unique experience of history that will inform how she interprets and understands her world. To exist as a subject, therefore, is to exist as a historical being and recognition of that historically affected consciousness will necessarily inform interpretation and understanding and is a necessary part of the hermeneutic circle. This concept was introduced in Chapter 1 as part of the background of the study and is revisited as part of the researcher's methodological interpretation of the text.

4.3.3 Recognition of pre-understandings and prejudices that emerge from the researcher's experience of history and interpretation of the text

The recognition of historically affected consciousness is not sufficient to support a condition for interpretation and understanding unless the nature of the pre-understandings and prejudices manifested by the subject's experience of history and tradition are recognised and identified as integral to their hermeneutic horizon. In this way, the subject (the researcher) is required to present how she understands her tradition and the history of the text in context, how her participation in the structuring of the tradition has influenced interpretation and process and how this has subsequently influenced the context of tradition. Understanding emerges as the process of movement to and fro between the play of tradition and the play of the interpreter with the text progresses and leads to a different understanding. This condition applies directly to the practice of interpreting and coming to understand the text and is addressed in Chapter 5. It is useful to note that Gadamer's understanding of

how prejudices and pre-understandings come to light is primarily through dialogue and temporal distance, although he does note that hermeneutic reflection in its universal function can facilitate the bringing of things into conscious awareness (Gadamer([1962] 1976).

4.3.4 Recognition of the assumption that the subject matter presented as text may be understood

The assumption that the subject matter of the text has been presented in order to be understood relates to what Gadamer ([1975] 1989, p. 293-4) refers to as "the fore-conception of completeness". The consequence of recognising this condition is that the primary focus of interpretation and subsequent understanding is focused on the content of the text as it exists rather than what the person who developed the text might have meant by the text. The text exists, therefore, as part of the experience of history and tradition and should be interpreted in that context, rather than as an individual expression of meaning. Hermeneutic interpretation, therefore, is concerned with sharing the interpreter's experience of tradition with the text itself in order to develop a different understanding. Thus, according to Geanellos (1998a), it is not appropriate to contaminate this process by returning the transcripts to the interviewees for clarification of meaning as this would change the perspective of the interpretation away from the text and towards the authors of the text. For Gadamer, meaning resides with the text, not the author of the text. The researcher was cognisant of this condition when conducting the interviews and transcribing the text. However, in order to present a text that was ethically sound, participants were contacted following transcription of the interviews to verify their continued agreement to be included in the research (Kvale, 1996).

4.3.5 Recognition of the text as open in character, always unfinished and undetermined and influenced by tradition

The text in this context represents a situation to be understood and necessarily requires application to a subject of understanding or a concrete situation. In this sense, the content of the interview transcripts in this research represent the experience of caring for critically ill patients and this has been applied to the concrete situations of caring for patients with medical problems on acute wards and caring for patients in an intensive care unit. The content of the text, however, is historical in the sense that it

has occurred in history and is therefore influenced by the play of history and tradition as well as by the pre-understandings of the researcher. The researcher, therefore, has an interdependent and dialectical relationship with the text as the interplay of history and tradition shapes the understanding of the text. It is recognised that the understanding of the text reached in this research is temporal, in that if the researcher was to return to the text at a future date the temporal distance would invite a new experience of interpreting and understanding the text in the light of a revised history, tradition and pre-understanding.

4.3.6 Recognition of the importance of dialogue as a manifestation of the movement of play through the process of question and answer

In this context, Gadamer is referring to the conditions necessary for authentic dialogue, the specification for which includes situations where the purpose of the dialogue is to reveal something of the object or focus of the conversation. The rules of the game for practising authentic dialogue include the following. The first rule is that there is a clear understanding that the purpose of the discourse is to reveal something, rather than to argue a point. The second rule focuses on the process of question and answer and directs the player to persist in the process of questioning the text until an understanding is reached in relation to the subject of conversation. The final rule concerns the process and duration of the dialogue and directs the player to continue with the process of question and answer until all aspects of the subject matter are revealed and no further answers are forthcoming. In this way, the limits of the game are set but the movement and the outcome are determined by the players, in this case the researcher and the text.

4.3.7 Recognition that understanding of the text is mediated through the interpreter's ability to translate the text through a shared understanding of language as the medium of human experience and application

Gadamer's ontological understanding of language as being allows language to become the medium of human experience and application of experience. The text in its broadest sense in this understanding includes anything that can be interpreted through language; each time the interpreter experiences a new situation or text, they are exposed to the possibility of a new understanding. If this experience is negative, it necessarily reveals a different way of seeing the object of the text. Thus, when the

same text is viewed with temporal distance, a new understanding of the text will be informed by the richness of the experience of temporal distance and may include new experiences exposed through dialogue with the text.

4.4 From conditions necessary for hermeneutic interpretation to the process of responsible interpretation

For Gadamer, the concern of philosophical hermeneutics is to examine the nature of understanding text and, within that, the conditions that influence the process and practice of interpretation and understanding of text. Based on his ontology of language as being, Gadamer presents text as being embedded in history, pre-understanding and application in context that can be unearthed and interpreted through the play of dialogue between the interpreter and the text. The true experience of this process allows the recognition of prejudices and focussed questioning of the text. Understanding emerges as the horizon of what is already known through history and pre-understandings merge with what is yet to be unearthed through dialogue and leads to a fusion of horizons, transformation of meaning, a different and new understanding of the text.

In this study, the purpose of the research was not to search for the objective truth but rather to present a shared understanding of the participants' versions of their experience, transcribed as text, which may be shared with and interpreted by the researcher in the context of history and pre-understandings. To that end, the phenomenological hermeneutic perspective posed by Gadamer represents a guiding philosophy. This provides the conditions necessary for hermeneutic understanding as interpreted by the researcher, rather than a method for interpretation of meaning.

In the context of qualitative studies from a general perspective, a research approach that is guided by Gadamer's conditions for understanding support what Guba and Lincoln (2005) describe as an interpretive paradigm, although, as discussed in Chapter 3, the classification of paradigmatic approaches needs to be sufficiently flexible in order to support faithful methodological process. The significant factor remains, however, that methodological rigour is not defined exclusively by the paradigm but by the ontological and epistemological influences that may fall in a particular paradigmatic approach (Guba and Lincoln, 2005). For Gadamer ([1975] 1989), an objective, methodological approach to scientific endeavour is not the only way to pursue knowledge and what scientific inquiry may fail to uncover can be exposed through rigorous question and answer. The aim of establishing rigour when using this approach is therefore not methodological but interpretative in its perspective.

In Section 4.4.1, the researcher has undertaken a critical examination of how adopting Gadamer's conditions necessary for hermeneutic interpretation can be considered as a responsible, coherent and comprehensive approach to guiding the research approach. The journey begins with a critical discussion of what constitutes rigour in qualitative research and continues with the justification for incorporating Madison's (1988) guiding principles for responsible hermeneutic interpretation to ensure quality in the research approach used.

4.4.1 Rigour in qualitative research

The aim of this section is to define, critically discuss and establish the requirement for rigour in qualitative research. This includes a critical review of current trends in establishing rigour in qualitative research generally, as well as presenting arguments to support the approach used in the context of this research. Debates concerning which criteria are appropriate for assessing quality in qualitative research are historical and dynamic. That is, although some movement within the debate has continued, the original challenges posed to qualitative researchers regarding validity and reliability of data continue to exist (Guba and Lincoln, 2005; Watson and Girard, 2004; Silverman, 2000).

From a historical perspective, the debate on such criteria has been formalised and summarised on several significant occasions. For example, Goodwin and Goodwin (1984) describe four different perspectives on the use of validity and reliability in qualitative studies. The first of these presents both validity and reliability as being irrelevant to qualitative research; the second refers to those who accept validity as relevant but not reliability; the third refers to those who accept both validity and reliability as being important but difficult to establish in qualitative research; and the fourth refers to those who see validity and reliability as equally important to both qualitative and quantitative research.

Denzin and Lincoln (1994), however, present a wider view of arguments in the debate. They continue to recognise two of the positions identified by Goodwin and Goodwin (1984), namely the postmodern position and the positivist/post-positivist position. The postmodern position does not accept validity and reliability as relevant to qualitative research whereas the positivist/post-positivist position considers issues of validity and reliability as core to both qualitative and quantitative research. Denzin

and Lincoln (1994) also proceed to elaborate on the possibility of different approaches to establishing rigour in qualitative research. The first of these proposes that specific criteria should be developed to represent particular distinctive methodological paradigms. The second advocates the movement away from any association with objective, positivist and post-positivist positions on rigour to the development of an entirely new set of criteria for measuring quality in qualitative research.

This refinement of classification illustrates a general trend towards the adoption of ontological, epistemological and methodological consistency with the use of quality criteria for evaluating qualitative research. Any criteria that are used to judge the rigour and authenticity of the research and its application, therefore, should be philosophically consistent with the guiding conditions. This notion is supported by Chadderton (2004), Maggs-Rapport (2001), Fleming *et al.* (2003) and Geanellos (1998a, 1998b) when they argue that demonstration of rigour in hermeneutic studies needs to provide clear evidence of how the researcher has progressed from an examination of the ontological and epistemological underpinnings of the research and how this applies to the methodology and finally process of interpretation. Paley (2005a, 2005b, 1998, 1997), however, argues that such a trend has not always been manifested in demonstrations of ontological consistency when applied to phenomenological and hermeneutic research informed by Husserlian and Heideggerian ontologies.

Murphy *et al.* (1998), in their review of qualitative approaches to health care research, argue that there should be a core understanding of validity in qualitative research that is consistent with a positivist paradigm when they conclude that the most important quality measure for both qualitative and quantitative research is the requirement for validity and relevance to the concerns identified. They concede that absolute validity in both general research approaches is impossible to achieve and that the focus of validity is to demonstrate ways in which the likelihood of error has been limited rather than eliminated.

This argument is supported by Paley (2005b) who suggests that there has been a misunderstanding of the positivist position by some qualitative researchers and this has led to a shift away from recognising validity as a method for reducing error as opposed to a method for determining the truth value of the findings. Murphy *et al.* (1998) propose that, although there may be a core understanding of validity, the strategies through which this can be achieved are entirely dependent on the research

approach and methods used within it, as each approach and method used will have its own margin for error. That is, there should be core criteria for judging all research but the judgements should be based on a method-appropriate basis. According to Murphy *et al.* (1998), it is this approach to validity that is considered favourably by commissioners of research, as it clearly defines the generalisability and relevance of the research findings, particularly when applied to health technology research.

This perspective on the relationship between validity and qualitative research can be placed in a post-positivist paradigm and represents a position that allows a degree of external validity of the findings by demonstrating measures of validity and reliability from sampling techniques to applicability of findings (Guba and Lincoln, 2005). Murphy *et al.* (1998) regard the post-modernist perspective as having little value in health care technology research because its approach is inconsistent with the level of rigour required to demonstrate the value and application of the findings.

However, Smith (1984), arguing from an anti-realist and relativist perspective, proposes that to add validity criteria to qualitative, social science research limits the contextual nature of the research findings as they are only relative to the context in which they are being studied. Therefore, any inclusion of external criteria that measure the quality of the findings will alter the consistency of the findings in context by adding objective, realist measures to research that is in essence anti-realist and relative to context. He concludes that qualitative researchers who profess to have a relativist epistemology informing their research and then apply criteria for assessing the objective, truth value of their research are not being true to their own epistemological foundation and this limits the quality of the research. What this debate does illustrate, however, is the clear trend towards matching ontological and paradigmatic approaches to the defined requirement for rigour when applied in a particular research context.

Paley (2005b), in response to the debate concerning the rigour being influenced by paradigmatic and ontological influences, argues that qualitative researchers should abandon the focus on paradigmatic influences and concentrate instead on having a shared understanding of the meaning of objectivity and truth that focuses on the reduction of error in qualitative research rather than being concerned with defending the findings from a particular paradigmatic perspective. What he fails to identify, however, is that the example he uses to base his argument on, the "Müller-Lyer illusion", is by definition an illusion and can be interpreted as either as an

absolute datum in the objective sense or an interpretation of what is perceived by the observer. Therefore, using the illusion is not consistent with his argument as the illusion remains in spite of objective measurement to prove otherwise. This appears to reinforce the need to find the right tool for the job related to the objective to be achieved, rather than assuming that any approach can achieve the same end.

The relationship between paradigmatic and ontological positions of qualitative research and the debate regarding the use of quality criteria to evaluate these studies continues to be developed. Guba and Lincoln (2005), in their review of paradigmatic controversies in qualitative research, highlight the emerging continuum of qualitative paradigmatic approaches that stretch from the pole of positivistic, objective reality that is fixed towards the pole of socially constructed reality and new paradigm research. They recognise that there is often blurring between the limits of one paradigm and another as often there is shared understanding of the focus or source of knowledge, or ways that the knowledge may emerge and be presented.

Guba and Lincoln (2005, p. 205) go on to argue that within the breadth of the paradigmatic approaches relevant to qualitative research, two elements of validity have emerged. The first focuses on "methodological rigour", based on the positivistic paradigm of objective measures of truth. The second is concerned with "interpretative rigour" and asks the question, "can our created constructions be trusted to provide some purchase on some important human phenomenon?" This concern for interpretative rigour highlights the argument for demonstrating the relevance and application of findings, in that, if the findings of the research have no relevance or applicability to a defined concept, then the research has poor or no justification. Interestingly, the criteria developed by Guba and Lincoln (1989) and Lincoln and Guba (1985) for judging the process and outcome of naturalistic, constructivist and phenomenological inquiries appears to focus on methodological rigour as objective measures of truth.

Their original, naïve assumption about qualitative research at that time, however, was that a common discourse could be found in relation to issues of rigour and validity, as they applied to both objective and constructivist approaches to research. This can be illustrated particularly in their presentation of the four terms: credibility, transferability, dependability and confirmability as being equivalent to the terms: internal validity, external validity, reliability and objectivity (Lincoln and Guba, 1985).

They now argue that the generation of new paradigm research and post-modernist approaches has shifted the understanding of truth from a purely objective stance to the understanding that there is no single "truth" and this in itself negates the prospect of a single "conventional" paradigm identifying common terms and mutual understanding of issues such as validity and reliability (Guba and Lincoln, 2005). The direct consequence of this is that there is no common definition of validity or rigour in relation to qualitative research approaches and no common tools or method through which to establish the truth value of the research findings.

4.4.2 Establishing rigour in hermeneutic research

In order to pursue the issue of rigour in hermeneutic research, the researcher has undertaken a review of published research papers where the authors have adopted a Gadamerian hermeneutic approach. This highlighted that the debate surrounding the use of criteria for establishing rigour in hermeneutic research continues to be played out. Ways of establishing and demonstrating rigour in hermeneutic research influenced by Gadamer tended to fall into two general categories: those that focus on the trustworthiness of the research and those that pursue ontological and methodological consistency with the pervading paradigm, although these categories were not mutually exclusive.

4.4.3 Establishing trustworthiness

The first and main category that is utilised is consistent with Lincoln and Guba's (1985) approach to establishing trustworthiness in naturalistic, constructivist inquiry and is illustrated in studies by Nolan (2006), Whitehead (2004), Fleming *et al.* (2003) and Mak and Elwyn (2003). A critique of the methods used to demonstrate trustworthiness in these studies highlighted that there was often an underlying objective focus to some of the measures used and that this was inconsistent with the ontological and epistemological basis for the research. These include member checking and peer review. In some cases, however, the use of a reflexive diary as a criterion for establishing trustworthiness in the context of making explicit a decision trail and the self-awareness of the researcher has led to conflicting critical discussion and is considered worthy of a more in-depth analysis (presented in Section 4.4.4).

Member checking involves the process of returning transcripts to the

informants for respondent validation and is recommended by Lincoln and Guba (1985) as a method for establishing credibility and accuracy of the informants' interviews. However, according to Sandelowski (1993), this perspective assumes that the informants have a single objective way of understanding their world that is not influenced by time or experience and may be a threat to validity. This opinion is supported by Angen (2000) who questions the value of such an approach in interpretative research. In relation to this study, the researcher argues that returning transcripts to informants in this context draws the inquirer away from the text and back to the person, as well as potentially altering the temporal perspective of the text. Both of these concerns challenge the conditions necessary for hermeneutic interpretation and were not included in the interpretative process in this study. This perspective is consistent with Geanellos' (1998a) argument that researchers using Gadamer's fusion of horizons do not need to check interpretations with peers, researchers or participants as the process will interfere with the play of question and answer between the horizons of pre-understandings, history and text.

The argument presented by Geanellos (1998a) also challenges the use of a disinterested peer for engaging in an analytical review of the inquirer's findings (peer review). This argument is reinforced when supported by Morse (1994) and Sandelowski (1993) who propose that a disinterested peer can never have the same depth of involvement and understanding of the text as the interpreter and this is likely to confuse the interpretative process and reduce credibility of the findings as it requires the researcher to move outside the hermeneutic circle rather than interpreting the text in context. As a result, the new understanding would no longer be a coherent fusion of horizons interpreted from the play of dialogue and would therefore be inconsistent with Gadamer's ontology.

4.4.4 Reflexive diary as a way of mapping interpretative rigour

The use of reflexivity in qualitative research as a process for demonstrating rigour is well evidenced and supported by ethnographic, anthropological and feminist researchers as well as those researchers influenced by hermeneutic and interpretative phenomenology (Finlay, 2002a, 2002b; Holloway and Wheeler, 2002; Freshwater and Rolfe, 2000; Silverman, 2000; Koch and Harrington, 1998; Kvale, 1996; Hammersley and Atkinson, 1995; Lincoln and Guba, 1985). The uses of a reflexive diary are

summarised by Silverman (2000) and include the following: to demonstrate the researcher's development of thinking, as part of the process of reflective writing; to map and control time management as well as provide ideas for the future direction of the work; and finally to contribute to the methodology chapter of the researcher's thesis. Finlay (2002a) offers a similar list but adds more emphasis to the use of reflexivity to enable public scrutiny of the research. Finlay also recognises the role of reflexivity in collaborative research approaches where opportunities exist to facilitate empowerment of the research participants. Being reflexive in qualitative research is advocated strongly by Lincoln and Guba (1985, p. 327) when they propose that a reflexive journal offers the researcher a technique that has the potential to establish "credibility, transferability, dependability and confirmability" of the research findings, although here the emphasis is on the objective justification of validity in the research process. This notion is reinforced by Miles and Huberman (1994) who argue that, by using a reflexive stance in the writing up of qualitative research, the inquirer can demonstrate accountability in the research process. The danger, however, in keeping a reflexive diary is that the researcher simply uses it to describe the research experience which, at worst, can lead to the researcher looking into themselves without looking critically at the process in context and, at best, can facilitate a process where the researcher can critically analyse the relationship between the reflective text and the phenomenon being studied (Finlay, 2002a; Freshwater and Rolfe, 2001; Alvesson and Skoldberg, 2000; Koch and Harrington, 1998).

For Gadamer ([1962] 1976), history provides the horizons of the interpreter's world and is learnt and presented through language as being. As a subject, the interpreter is a product of history and experience and is involved in a process of forming his/her present hermeneutic horizon. This is consistent with the researcher's second necessary condition for hermeneutic interpretation; and the role of hermeneutic reflection is elaborated in the third of those conditions when Gadamer recognises the significance of pre-understandings and prejudices that emerge from the researcher's experience and dialogue with the text. In this context, pre-understandings and prejudices make themselves known to the interpreter within two processes, the first through the process of 'true experiences' - negative experiences that cause the interpreter to question existing and previously held understandings - and the second through the process of question and answer. Hermeneutic reflection for Gadamer is therefore secondary to the experience of historically affected consciousness. He does
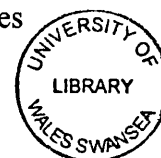
not, however, dismiss hermeneutic reflection and recognises that, from a universal perspective, the function of hermeneutic reflection is to bring something into conscious awareness and that this transcends all fields of knowledge. He also accepts that, in order to achieve understanding of the text, the interpreter is required to recognise the unconscious elements involved in the act of generating knowledge as well as how these are brought to the interpreter's awareness. According to Gadamer ([1962] 1976, p. 45):

> First of all, as a hermeneutical task, understanding
> includes a reflective dimension from the very beginning.
> Understanding is not a mere reproduction of knowledge,
> that is, it is not a mere act of repeating the same thing.
> Rather, understanding is *aware* of the fact that it is indeed
> an act of repeating.

The scope of hermeneutic reflection for Gadamer is concerned with bringing something to awareness in order to respond to a 'question' brought out through dialogue with the text, the aims of which are to place the answer in the context of existing possibilities, pre-understandings and tradition and to challenge existing pre-understandings in order to move towards a shared horizon of understanding. For Gadamer ([1962] 1976, p. 39), the universality of hermeneutic reflection can:

> ...indirectly serve the methodological endeavour of
> science by making transparently clear the guiding
> pre-understandings in the sciences and thereby
> open new dimensions of questioning.

According to Koch (1999), in hermeneutic interpretation, the researcher needs to be "critical and self-consciousness" of their own background, experiences and prejudices and to recognise this as a contribution to the data along with the participants' transcripts and that both sources need to brought into the hermeneutic circle. This perspective is supported by Angen (2000) when she argues that, in interpretative inquiry, reflexivity should not be used in an attempt to obtain an objective stance - although, as Gadamer says, this may occur incidentally - but to trace how the interpreter's sense of the topic has changed over time. During the study the researcher's aim was to develop a reflexive understanding of what was happening in the research process in order to reflect on the play and movement of interpretation and, to that end, the researcher tried to maintain an open dialogue, as the inquirer, with tradition, pre-understandings and the text. This is consistent with Gadamer's ([1975]1989) understanding of hermeneutics as a process of constructing a shared

understanding of the text through dialogue so that rather than focusing on a specific method or tool to establish understanding, the researcher should be focused on the process of dialogue with the text in the context of history and pre-understandings.

According to Cutcliffe (2003), there are several techniques for facilitating reflexivity in the research process although he infers the technique used should be balanced with the philosophical underpinnings of the research. Lincoln and Guba (1985) suggest three key tasks in the reflexive process: a daily schedule of the practical elements of the study; a personal diary for reflection; and a methodological log of decision making and rationale for action. Other researchers suggest a different approach and propose that the first step is to make clear any presuppositions that will have influenced the researcher in their choice of methodological approach (Andrews *et al.*, 1996). This is consistent with Gadamer's notion of recognising prejudices and history and how this may influence the process of interpretation and shared understanding of the text.

The use of a reflexive approach to research is not without criticism and, according to Cutcliffe (2003), although reflexivity is recommended as an essential element of the qualitative research portfolio, it does have limitations. He proposes that there is a strong argument for recognising the value and function of tacit knowing in the qualitative research process.

Tacit knowledge, the taken for granted knowledge, is instrumental in the development of an imaginative and inductive element to the process of data analysis and interpretation. As such, extensive reflexive accounts could never fully allow for the tacit and intuitive part of qualitative analysis to be 'signposted' (Cutcliffe, 2003). This argument is reinforced by Altheide and Johnson (1994, p. 493) who are supportive of the essential role of tacit knowledge in the interpretation of meaning in qualitative research and go on to argue that by its nature tacit knowledge is "largely nondiscursive... One of its features is that it is beyond words".

Interpretation is, however, **not** beyond experience; therefore it is the experience the interpreter has with the text that is significant rather than whether this can be captured through a reflective account. Gadamer's presentation of interpretation and understanding as emerging through the use of dialogue is directly related to the interpreter's experience of reading and questioning the text, history and pre-understandings. If, during the experience of interpretation, there is a strong and dominant focus on the particulars of the interpreter's role through reflection, attention

is drawn away from the production of a coherent entity by paying too much attention to the tools rather than the process. This can be illustrated by applying Polanyi's (1983) interpretation of tacit knowing to the experience of hermeneutic interpretation.

According to Polanyi (1983), tacit knowing develops as we attend to the meaning of the impact of the knowing rather that the particulars of how we know. For example, if a person is in a dark cavern with only a stick to explore, in the first instance the person will be focused on the particulars of the stick, how heavy it is, how long, the sound it makes, the feel of the stick in the person's hand (proximal knowledge). As the person learns how to use the stick to find their way, the focus on the stick will change and be directed to understanding more about the objects being explored so that the stick becomes an extension of the hand and the meaning understood from the probe end of the stick rather than the handle (distal knowledge). If the person deliberately changes to focus back to the particulars of the stick, the knowledge being gained about his/her surroundings will be lost. Polanyi (1983, p. 18) argues that integration of the proximal and distal knowledge achieves an integration of the particulars to a coherent entity and he proposes that in this context:

> ...it is not by looking at things, but dwelling in them, that
> we understand. ...Scrutinise closely the particulars of a
> comprehensive entity and their meaning is effaced, our
> conception of the entity is destroyed.

He argues, however, that when the particulars are reintegrated this recovery never brings back their original meaning, but a different meaning. This relates to Gadamer's understanding of interpretation at two levels. The first level recognises that too much emphasis on reflection during the interpretative process as a particular can imbalance the new understanding of the text. The second level recognises that in the process of interpreting the particulars of a text, this in itself destroys the meaning of the text and a new, different meaning will only emerge when the particulars are shared and integrated with the whole and a new shared horizon is reached through the fusion of horizons.

Cutcliffe (2003) goes on to challenge the reflexive process further by referring to the limitations of individuals to develop self awareness. He argues that again there will always be an element of the reflexive process not open to scrutiny because of the dynamic and progressive nature of individual self-awareness. Cutcliffe refers to Luft (1969) and his model of self-awareness to support this claim and argues that, while

some reflexive strategies are designed to facilitate the development of self-awareness, there will always be an element of the unknown. DeVault (1997) suggests that, in order to avoid the dangers of focusing too much on the introspective element of reflexivity, personal reflection and revelation are only useful if analysed in the broader context of the study. Finlay (2002a) is also critical of the reflexive process in qualitative research and accepts that, although reflexivity is a well established element of qualitative research, it can be fraught with problems and difficulties as the research process unfolds. These arguments are consistent with Gadamer's understanding of the hermeneutic circle where the horizons of tradition and pre-understanding enter into a play of movement with the text and the game continues until the relationship between the parts and the whole is understood and a new shared horizon is reached.

The researcher accepts that the use of a reflexive approach in the research process is limited by the qualitative and dynamic nature of the data being interpreted and the scope through which the researcher is able to articulate the experience. It is equally important to recognise that the knowledge and skills of the researcher will directly influence the research process. Such qualities and skills include: having background knowledge of the interview theme; self awareness; interpersonal skills to facilitate a clear and logical structure to the interview process; active listening skills; sensitivity and empathy towards the participants; an open and questioning approach to the process; and the use of memory and interpretation during the interview process (Holloway and Wheeler, 2002; Kvale, 1996; Lipson, 1991). In effect, the researcher's use of self is a particular part of data collection and, as such, the participants' perception of the researcher and the researcher's characteristics are important factors in determining the quality of research (Lipson, 1991). There is a requirement, therefore, to include some means of demonstrating how the use of self has impacted on the research process and to present as openly as possible the processes involved in collecting and interpreting the data. This process must not, however, become the dominant feature of the interpretative process as this will limit the scope for true dialogue with the text. This has been achieved in this study by entering into a dialogue with a critical incident documented by the researcher prior to the commencement of this study. The purpose of this process was to identify and recognise the theoretical basis for the researcher's prejudices and pre-understandings at the beginning of the study and how this has been informed by the literature review. A summary of the pre-understandings to emerge from this process can be found in Chapter 5. In summary,

therefore, a reflexive approach was used to the extent that the researcher was able to map the dialectic process within the research and provide a means through dialogue to unearth prejudices and pre-understandings and how they came into play in the process of interpretation from a temporal perspective.

4.4.5 Establishing ontological and methodological consistency with Gadamer's philosophical hermeneutics

The second category for demonstrating quality in hermeneutic research is concerned with ensuring ontological and methodological consistency with Gadamer's philosophical hermeneutics, although there is evidence to suggest that this consistency is not always sustained when applied to individual studies (Chadderton, 2004). Studies that demonstrate this approach include Phillips (2007), Whitehead (2004), Fleming *et al.* (2003), Mak and Elwyn (2003), von Post and Eriksson (1999) and Larkin (1998), although it is pertinent to note that not all of these researchers have demonstrated coherent links with Gadamer's ontology and epistemology. For example, Mak and Elwyn (2003, p. 398), in their study of the meaning of desire for euthanasia, demonstrated the use of pre-understandings and history in their hermeneutic interpretation but also attempted to demonstrate "scientific rigour" by making reference to reducing potential bias and utilising a structured thematic analysis of the transcripts. As such, the paper presents differing ontologies, one steeped in a methodological framework influenced by Gadamerian hermeneutics and the other focusing on the requirement to demonstrate objective validity and reliability of the findings. A similar perspective is illustrated by Whitehead (2004) in her hermeneutic study where she used measures to ensure credibility of the research from an objective stance which again contradicts Gadamer's ontology. According to Maggs-Rapport (2001), this perceived requirement to establish the credibility of qualitative health care research is influenced by the adoption of a model for evidence based practice, where qualitative approaches are considered to have less value as evidence due to their lack of validity criteria. This is also consistent with Murphy *et al.* (1998) who argue that commissioners of qualitative research require some degree of external validity of the findings so that their impact value is increased. In this context, the ontological consistency of the research can be compromised by the requirement to demonstrate methodological rigour. The validity criteria chosen therefore need to be carefully scrutinised and justified in order to balance the

ontological and methodological consistency of the research (Watson and Girard, 2004; Angen, 2000). The approach proposed by Watson and Girard (2004) to resolve the issue of rigour in hermeneutic studies, particularly those influenced by Gadamer, is to recognise that the use of language concerning validity taken from the quantitative paradigm is inappropriate. Watson and Girard (2004, p. 867) go on to state that, for studies influenced by Gadamerian hermeneutics, the quality of the research is manifested in the ability of the researcher to demonstrate that Gadamer's guiding conditions are:

> the driving force behind the interpretative process and should be continuously intertwined in the interpretative dialogues, interpretative reflections, and interpretative writings.

They propose that the language of rigour is inconsistent with this approach and that the term "integrity" described as wholeness and honesty is more consistent with the Gadamerian tradition.

Angen (2000), debating the language of validity in the context of interpretative research, suggests that 'validation' is a more appropriate term as it is more consistent with the idea of process. Madison (1988), however, considers the issue of validity to be more concerned with how the interpreter comes to understand the term 'method'. He argues that, if method is understood in a formal sense, it can be viewed in the context of formal scientific method and is concerned with objective and exact knowledge. However, if method is understood in a normative sense, it is concerned with how the interpreter has ensured that good and rational judgements have informed the process and that these can be defended in the light of the stated norms or criteria. As such, method in this context is concerned with demonstrating responsible judgements based on guiding principles. Angen (2000) supports Madison's arguments in principle and proposes that the validation of interpretative inquiry should demonstrate ethical validation as well as substantive validation of the process of interpretation and is consistent with what Madison (1988) describes as guiding methodological principles informed by Gadamer's philosophical hermeneutics. Madison's guiding principles for assessing the quality of the hermeneutic research have been adopted by Chadderton (2003) and he recommends the principles of coherence, comprehensiveness and contextuality as being significant to hermeneutic interpretation. This argument has been supported by Witt and Ploeg (2006) who,

following an appraisal of rigour in interpretative phenomenological nursing, propose that the adoption of frameworks such as Madison's help to preserve the integrity and legitimacy of interpretative research.

For the purpose of this research, the researcher is concerned with demonstrating a hermeneutic interpretation that is faithful to the guiding conditions of Gadamer's philosophical hermeneutics and it has been argued that the rules for following an objective, positivistic approach to the research process do not apply when Gadamer's conditions for interpretation and understanding inform the methodology. This is made particularly clear in his defence of hermeneutics where he proposes that strict adherence to the pure scientific method gives only a single and narrow view of what is possible in the process of interpretation and is not the only process through which truth may be obtained (Gadamer [1975] 1989). He proposes that the process for understanding can instead be based on a rigorous process of question and answer by the interpreter having a dialogue with the text, the aim of which is to present an understanding of the text as it is embedded in the dynamic of tradition/history and the pre-understandings/prejudices unearthed by the process of dialogue. Gadamer also recognises that each dialogue with the text, in relation to temporality and historically embedded consciousness, will be different. The challenge for the researcher, therefore, is to demonstrate that the practice of interpretation in this research is ontologically, epistemologically, methodologically and ethically consistent with Gadamer's ontological and epistemological view of the experience of hermeneutic interpretation. The outcome of this is to produce a sound and honest process of hermeneutic interpretation that is concerned with what Guba and Lincoln (2005, p. 205) describe as "interpretative rigour", the process of producing a co-created construction that can provide a different and prospective understanding of the text in context. Madison (1988) describes this as a process of responsible dialogue leading to a good interpretation and understanding of the text.

Madison's (1988) criteria for an appropriate method of interpretation (in the normative sense), informed by Gadamer's phenomenological hermeneutics, proposes that within an understanding of method 'as process', there is room for demonstrating evidence of good practice and good judgement through the praxis of interpretation. He proposes nine guiding principles for responsible interpretation and these are critiqued in relation to the necessary conditions identified by the researcher and in the context of establishing accountability in interpretative research. The reference to these nine

statements as guiding principles rather than a tool to practise interpretation is consistent with Gadamer's understanding of interpretation as the process of coming to understand in the context of history and pre-understanding, rather than following an objective well defined set of rules and stages.

Madison's (1988) guiding principles are listed as: coherence, comprehensiveness, penetration, thoroughness, appropriateness, contextuality, agreement, suggestiveness and potential. These are critically discussed in Section 4.11 in the context of how they have related to the guiding conditions for the research as well as how this process has been demonstrated as responsible interpretation.

In conclusion, the purpose of undertaking a critical analysis of the process of defining and establishing rigour in this research was to ensure that a responsible and justifiable approach to the process of hermeneutic interpretation is identified. This has been demonstrated by focusing on criteria that in principle support the guiding ontology and conditions for hermeneutic interpretation. To that end, the necessary conditions for guiding hermeneutic interpretation influenced by Gadamer have been clarified and considered in the context of historical and current debates for establishing rigour in interpretative inquiry. The conclusions reached supported the use of approaches that demonstrated consistency with the conditions necessary for responsible hermeneutic interpretation. These included the application of Madison's nine guiding principles for responsible hermeneutic interpretation through the demonstration of history in context, theoretical justification for pre-understandings and dialogue with the text. A reflexive diary provided evidence of a decision trail and situations when prejudices and pre-understanding were challenged as the researcher continued a dialogue with the text although the limitations of this approach have been rehearsed. At all stages in the research process, the researcher has attempted to demonstrate how the conditions for hermeneutic interpretation and the principles of responsible hermeneutic understanding have informed the process, from identifying the problem area for research to the new understanding achieved as a result of hermeneutic interpretation.

4.5 Research questions and purpose of the research

The research process in this study began with reflecting on practice and focusing on the problem area for research. This led to the development of research questions and a clarification of the ontological, epistemological and methodological influences. Factors that have been taken into consideration regarding choice of methods for data collection are the same as those addressed in the context of methodological influences. These are: the researcher's knowledge and experience in relation to critical care practice; the nature of the research questions; the recognition that nursing practice is context dependent; and a desire to understand the practice of caring for critically ill patients in one NHS Trust in Wales. The purpose of the research is to interpret nurses' experiences in one NHS Trust in Wales. As such, the area of concern is subjective and contextual.

The research questions are:

1. What is it like to nurse patients with clinical deterioration leading to critical illness?

2. What is it like to nurse patients with critical illness in the context of history, change and innovation in one NHS Trust in Wales?

The general aim of this thesis is to find a process that allows the researcher to interpret and understand the nurses' experiences of caring for critically ill patients, in such a way as to take into account the preconceived influences of the researcher, history and tradition in the context of caring for patients with clinical deterioration. To that end, in depth interviews are used as a primary source of data, with each interview being placed in historical and spatial context. These were transcribed as text and interpreted in the play of horizons between history and the researcher's pre-understandings, according to Gadamer's ([1975] 1989) conditions for hermeneutic interpretation.

4.6 Choosing the population and sample group

The aim of this section is to identify the population being studied and justify its selection. Within this process, attention has been paid to accessing the population and sample group, the choice of selection criteria and size of the sample group. In relation to this research, the population under study includes the total number of participants that meet the criteria for being included in the problem area for research (Holloway and Wheeler, 2002; Silverman, 2000). For the purpose of this study, the researcher has defined the study population as "nurses who are involved in the care of patients who deteriorate and become critically ill in one NHS Trust in Wales". The study population focuses on nurses because it can be argued that nurses are the primary assessors and communicators of situations where patient deterioration has occurred in acute and critical care areas (McArthur-Rouse, 2001; Audit Commission, 1999; Department of Health, 2000).

Sampling in qualitative research refers to the process of setting parameters to focus on the population and to determine key factors that will influence the choice and size of sample (Holloway and Wheeler, 2002; Luborsky and Rubinstein, 1995). The aim of sampling in this context is to choose a method of sampling that fits with the general aim of the study and allows the author to collect data that are relevant to the purpose of the study. This aim is supported by Patton (1990, p. 169) who argues that all sampling in qualitative research is concerned with purposefully selecting cases or informants that represent "information-rich cases" that fit the purpose of the research. Sandelowski (1995) supports Patton's view and proposes that within this broad definition purposeful sampling can include sampling for maximum variation including criteria such as age and gender, phenomenal variation such as variations in context and location, and finally theoretical variation on analytical grounds.

Luborsky and Rubinstein (1995) propose that the identification of appropriate sampling approaches when attempting to understand meaning in qualitative research is often difficult. This is because the guiding concepts that inform the purpose of the research at the beginning may alter as the research develops a different understanding of the data over time. They argue that, when sampling for meaning is concerned with individual experiences of a particular type of situation, the factors that should guide sampling include attention to the particular individuals, the settings where the experiences occur and sociocultural factors that impinge on the experiences. The goal

of sampling in this context is to access individuals who will be able to describe the nature of experience identified in the research question (Luborsky and Rubinstein, 1995). The technique for selecting a sample group under these conditions is described by Luborsky and Rubinstein (1995) as purposive sampling and involves the selection of participants who represent predefined conditions or criteria. According to Holloway and Wheeler (2002), this approach to sampling is also referred to as criterion sampling and focuses on the provision of a balanced and representative sample group who enable the interpretation of the experience to provide sufficient detail and context to answer the research questions.

The criteria set for determining the sample type were consistent with the aim and objectives of the research, that is, to interpret the experience of nurses who care for patients with clinical deterioration leading to critical illness in a NHS Trust in Wales, at least three years after the publication of recommendations to improve critical care services in England and Wales (Department of Health, 2000). The parameters for sampling therefore included the choice of an NHS Trust in Wales where facilities were available to manage critically ill patients in a variety of clinical areas within one acute care hospital. As identified from the literature review, this process may have occurred in a variety of clinical locations including intensive care units (ICU), high dependency units (HDU), surgical wards, medical wards and medical admissions units (MAU). The patients involved may have been categorised as having a dependency level ranging from level one to level three (Department of Health, 2000).

As such the selection criteria to guide the sampling process included the following:

- registered nurses who have experienced caring for critically ill patients with a dependency level of one to three;
- registered nurses who have experienced caring for patients with clinical deterioration leading to critical illness;
- registered nurses who have experienced caring for critically ill patients during the time period 2000 to 2004; and
- registered nurses who have experienced caring for critically ill patients in any of the following settings: ICU and HDU, acute medical and surgical wards and MAU.

4.7 Accessing the sample group

In order to protect participant, patient and staff confidentiality, the NHS Trust approached and utilised in the study is referred to as Trust X, with specific reference to details concerning the practice of the Trust modified or limited to essential detail. Following ethical approval from the local research ethics committee and registration with the local research and development support office linked with the Trust, the researcher wrote to the Executive Nurse in order to obtain permission to access the sample group in July 2003. Permission was granted later that summer and the researcher proceeded to approach key areas in the Trust.

In order to identify the clinical areas most likely to have nurses who met the above criteria, all the hospitals in the Trust were visited and reviewed with regard to the type and specialist nature of the wards and units in each setting. Two hospitals in the Trust were identified as having the relevant population requirements for the study. In Hospital One, the researcher identified a possible 18 clinical settings where nurses who met the criteria for the sample group could be accessed; in Hospital Two, the researcher identified 11 possible sites. Using the sample criteria as a guide, Hospital One had clear advantages regarding the number of possible sample groups and the relationship established between acute and critical care areas.

The researcher was familiar with both hospitals and many of the staff who worked there and this proved to be a factor that influenced the sampling process as the research progressed. When participants agreed to be interviewed the researcher was cognisant of the fact that knowing the researcher may influence the way they responded at interview. In a positive way, this allowed the participants to relax and settle into the interview more quickly than when being interviewed by a stranger. There was also a shared understanding of the language, terminology and reference to the location between the researcher and participants and, overall, the familiarity with the participants may have reinforced feelings of trust and commitment to the interview (Lipson, 1991). However, it is also possible that interview participants may have felt threatened by the prospect of being interviewed by someone who has held a position of authority in their career in the past as well as concern over issues regarding anonymity and confidentiality (James and Whittaker, 1998; Lipson, 1991). The important factor in this situation was to recognise these as issues before participants agree to be interviewed and to monitor for any signs of distress or concern during the

interview process. Overall, based on the number of possible sample groups, familiarity and accessibility as well as narrowing the focus to a particular cultural setting, the researcher opted to undertake data collection in Hospital One.

For the purpose of this study, the researcher undertook a total of eight interviews with nurses from a variety of ward areas. Nurses who met the sample criteria were invited to take part in the research in the form of a standard letter posted in the appropriate wards and units (Appendix A). The letter introduced the study and included occasions when potential participants could meet with the researcher in order to clarify details of the research and to make an informed choice about taking part in the study. Copies of the information sheet and consent form were included in order for potential participants to consider fully the implications of taking part in the research. The researcher visited the wards and offered further explanation of what the research entailed and made appointments with participants who agreed to take part. A cooling off period was offered to allow the participants' time to change their mind and each participant was given an opportunity to review the process before signing a consent form on the day of interview. Each clinical area was visited on up to four occasions during the sample selection phase in order to ensure that nurses on different shifts had an opportunity to take part in the study. The sample group are referred to as participants. This implies that the participants share an active rather than passive role in the research process. This approach is supported by Morse (1991) who argues that terms such as respondent imply a passive response to the researcher's questioning rather that a true dialectical relationship between the researcher and participants.

It was during these visits that the researcher's diary became particularly significant as it provided contextual data that helped to inform the interpretative process. The researcher started accessing the sample groups during January 2004 and noted that the medical wards in particular seemed to be exceptionally busy. A consequence of this was that potential participants were reluctant to consider becoming a participant in the study. This was in sharp contrast to the availability of potential participants in the critical care areas where the atmosphere seemed to be calm and unhurried. These observations were recorded in the researcher's diary entries and became part of the data challenging the researcher's pre-understandings of the research context, explored in Chapters 5 and 6.

All the participants expressed difficulties with being interviewed outside the working day and only agreed to be interviewed during or towards the end of their

working shift. As a result, most of the interviews were undertaken during the night shift, when staff had more time available. When considering the sample group the researcher identified that junior nursing staff were rarely in positions where they made decisions about critically ill patients in acute care areas and therefore did not meet the criteria identified for purposive sampling. The junior staff in critical care areas, however, regularly cared for critically ill people and this is reflected in the skill-mix identified for interview. This is in keeping with Corben (1999) who argues that the sample size in qualitative studies is determined to a degree by the number of people who have had significant experience in the phenomenon being studied. The size of the sample in qualitative research can vary considerably but Kuzel (1999) suggests that where there is a sample from a homogenous group then six to eight participants is the usual guide number while twelve to twenty may be more consistent with a heterogeneous sample. In this study, many features of the sample group were similar in that they were all nurses who had experienced caring for critically ill patients during the previous four years in Trust X. In total, the sample consisted of four nurses from acute care areas in the Trust and four nurses who worked within critical care areas or who had experience of being in an outreach team.

According to Hamersley and Atkinson (1995), the three main features that influence sampling include context, time and people. In this study, people and context were the most important factors with time referring to a given period or time slot when the nurses would have been involved in caring for critically ill patients. A key factor in the sampling process in this instance was to identify people who have cared for critically ill patients. Details of skill mix and the number of years' experience as a nurse were not included in the early interviews as part of the criteria for sampling. However, these and other demographic details were clarified during the interview and, as the number of interviews increased, the significance of clinical grading became more evident and featured as part of the criteria for sample selection as the research progressed.

Overall, in this study, the sampling process was criterion based and purposeful. The process was also flexible in that, following the first two interviews, participants were selected based on provisional findings and questions generated from the earlier interviews. This is consistent with both Sandelowski's (1995) and Patton's (1990) understanding of purposeful sampling techniques. As the process of interpretation began to develop, the interviews became more focused but the central

feature of all the interviews remained the same, and that was to encourage the participants to tell their own story of the experience of caring for critically ill patients. For an illustration of the decision making that took place during the sampling and interview process, please refer to Appendix B (the notes in italics in this appendix give examples of some of the guiding questions and thoughts that influenced the choice of participants as the interviews progressed). The interviewing process commenced in February 2004 and spanned a year, with some interviews taking place in the winter and some in the summer. This was primarily due to practical issues regarding accessibility of the sample group.

Of the eight participants interviewed, seven had worked or were still working in an acute ward and six out of eight had previous or current experience of working in a critical care unit. At the time of the interviews, three were currently working in an acute care setting, one in a cardiac high dependency setting, three in critical care units and one in a combined post that included fifty percent of the role in critical care and fifty percent in the role of an outreach development nurse. With regard to their professional role and responsibilities, the participants included: one junior staff nurse; three senior staff nurses; one senior clinical practitioner in critical care and outreach; and three senior charge nurses. In relation to the number of years worked as a qualified nurse, three of the participants had between one to ten years' experience, three between ten and twenty years' experience and two had more than twenty years' experience. All eight participants were female registered nurses with a minimum of diploma level qualification, one was studying for a degree and one participant had a BSc Nursing Degree, specialising in intensive care. All three participants working in critical care at the time of the study had obtained a specialist qualification in critical care, as had the participant from cardiac high dependency. One participant working in acute care at the time of study had also completed a diploma level critical care module. All participants in the sample therefore met the inclusion criteria for the sample.

4.8 Ethical considerations

When undertaking research, there are ethical implications at every stage of the research process. This begins with the choice of a research topic and ends with the choice of how to disseminate the research findings. In this research, the application of conditions necessary for hermeneutic interpretation does not offer overt guiding principles for ethically sound hermeneutic interpretation. The practical application of these conditions, however, through the process of dialogue with the text, does manifest scope for ethically sound interpretation. This is achieved by the interpreter recognising the historical situatedness of their understanding as well as the process of negotiating with the text through dialogue. According to Davey (2006, p. 9), philosophical hermeneutics:

> de-centres subjective experience and brings the subject
> into an awareness of its profound dependence upon
> cultural realities that are not of its own making.

In this context, it becomes imperative that the researcher recognises that whatever she comes to understand is through dialogue or mediation with an 'other' (in the form of text, art, a person). It is the 'other' therefore that brings the interpreter to a different understanding. In this situation, hermeneutic understanding not only requires an encounter with the 'other' but also negotiation and agreement to enter into dialogue and to differ based on an empathic dialogical awareness that is consistent with the Socratic model of dialogue, as the interpreter arrives at a new understanding.

When nurses undertake research the nursing code of practice as well as a code of practice for research binds them. This includes the International Council of Nurses (ICN) Code of Ethics (ICN, 2006) and the Nursing and Midwifery Council (NMC) Code of Conduct (NMC, 2008). In relation to this study, the researcher was also guided by the Standards for Research Governance for Health and Social Care (Department of Health, 2001b) and the Research Governance Framework for Health and Social Care in Wales (Wales Office of Research and Development for Health and Social Care, 2001). These standards are organised into five domains: ethics; science; free access to research information; health and safety of those involved in the research; and information on financing authorities and intellectual property. The researcher has addressed each of these standards within the research and includes a summary of how these standards have been met.

Historically, the requirements to establish international rules regarding the ethical justification and process of research are directly related to World War Two, the experiments carried out on prisoners of war and the resultant Nuremberg Trials. A necessary consequence of the trial was the development of the Nuremberg Code in 1947. This was replaced by the Declaration of Helsinki, published by the World Medical Association in 1964. Since then, there has been six revisions of the code, the most recent being 2004. Although the Declaration of Helsinki is primarily focused on basic principles for all medical research, the core elements of the declaration apply for all those who take part in research, either as subjects or as researchers (Holloway and Wheeler, 2002) and are consistent with the standard requirements of the Research Governance Framework in England and Wales.

According to Beauchamp and Childress (2001), a model for ethical reasoning in medical ethics should include four basic principles including respect for autonomy, nonmaleficence, beneficence and justice. Respect for autonomy is concerned with respecting the decision making capacities of autonomous persons. In qualitative studies, this is primarily concerned with voluntary participation in the research. Due to the dynamic and inductive nature of qualitative studies, informed consent often has to be negotiated and renegotiated as the research process continues (Munhall, 2001; Kvale, 1996). In this study, informed consent was obtained from the participants prior to the commencement of the interview and clarified again after the interviews had been transcribed.

With regard to the principles of nonmaleficence and beneficence, the aim of the researcher was to consider the potential risk of harm and benefit to the participants and the wider population as a result of this research. In qualitative studies, the number of participants is small and the impact of findings in relation to generalisability is limited (Orb *et al.*, 2001). However, in the context of this study, the research participants were employees of the Trust and were asked to reflect on the care of patients they had been involved with. A key factor in this research, therefore, was not only to respect the dignity and rights of the participants but also to protect the safety of the content of the data concerning patient care with regard to patient anonymity. This was achieved by ensuring that the elements of traceability involving incidental patient details were removed from the interview tapes and transcripts. With regard to the principle of justice, the aim of the researcher was to present a fair and honest account of the purpose and outcome of the research. Participants were

encouraged to participate in the interviews as an active member of a conversation, with the researcher focusing on a balanced dialogue with the participant through negotiation. The extract below has been chosen to illustrate the to and fro movement of dialogue during the interview process. The focus of questioning was to interpret the interviewee's experience of knowing and recognising critical illness:

Interview 1: 47-89
(Interviewer) When you're looking after someone who is critically ill how do you describe them, what would lead you to decide that this patient is critically ill?
(Respondent) Um it's the little changes; you get that feeling "Oh I don't like the look"
(I) Yes?
(R) And there may be changes in the obs but usually it's that visual, um picking at the sheets, not responding in the same way, agitated. Not responding to treatment, it may be their respirations, struggling to breathe. But it's usually a visual thing and you usually call a colleague, check with them. Usually if you can't find something straight away then you wait and watch.
(I) So is it a feeling that you get?
(R) Yes usually.
(I) Oh right.
(R) Obviously sometimes we get feedback from the doctors when they visit daily or twice daily, the reg's let us know if they're not happy or they want us to keep an eye, need extra monitoring.
(I) How often do you think you would look after a patient like that?
(R) Um probably [pause] at the moment there is no one on the ward like that. Last week there were three critically ill, one was unwell on the ward and two where the cannula was a problem on the day ward. I suppose we get probably two or maybe three a month. Of course you get a lot of patients who come back from catheterisation with an unstable blood pressure and cardiac arrhythmias. Of course you know that in five minutes they'll be back to normal. They often drop their rate and blood pressure and you give them oxygen, raise the foot of the bed, inform the doctors, that can happen.
(I) Do you class patients like that as critically ill?
(R) I wouldn't class the patient as critically ill with that because it's something that can happen as the result of the investigation or treatment, that's why they come back to us for post-op monitoring.
(I) Yeh?
(R) I think a critically ill patient is someone with prolonged, series of problems rather than a one off drop in BP.

> *(I) You mentioned a bit earlier that you felt that you were*
> *getting a bit stale because you felt that the number of sick*
> *patients had gone down. Why do you think that is?*
> *(R) I think that a lot of our patients have gone to coronary*
> *care, I mean we used to have the cardiogenic shocks,*
> *pump failures and patients like that and we don't see*
> *them coming over now. The cardiologists focus heavily on*
> *the NSF [national service framework for cardiac care],*
> *this seems to guide what patients we have on the ward*
> *now. We get a lot of patients being checked before*
> *cardiac surgery, cardiac catheters, and angiography. A*
> *lot of patients come in for their medication to be*
> *reviewed.*

In this extract, the researcher has attempted to ask the interviewee to elaborate on her own perception of the experience of recognising critical illness by using strategies such as positive reinforcement and referring back to key phrases used by the interviewee in order to bring the dialogue back. This has been described by Kvale (1996) as the use of follow-up questions and interpreting questions that facilitate the to and fro of dialogue, rather than to force an argument.

The ethical principles were demonstrated to the participants through informed consent and their continued voluntary participation in the study. The researcher as a matter of course sought ethical approval through the local research ethics committee prior to commencement of the study and permission was sought from relevant directors, managers and other stakeholders within the Trust regarding research governance. Informed voluntary consent is an explicit agreement with the research participants, given without threat or inducement by the researcher. This was demonstrated by the use of signed written consent from the participants, using the consent form approved by the local research ethics committee (Appendix A). A potential problem with informed consent in qualitative studies is that the work is exploratory in nature and as such the nature of the findings cannot always be made explicit at the outset. In this case, participants were reminded of the voluntary nature of the research project and their participation in it. The researcher also left contact details with them so that they could call and express their concerns if they felt worried about any issues.

Participants had the opportunity to withdraw from the study at any stage and in situations where the participants may have felt vulnerable. In relation to this study, the researcher chose to respect the choices of the participants with regard to the

inclusion or exclusion of sensitive data. In the study, participants were asked to enter into a dialogue with the researcher about their experiences of caring for patients with clinical deterioration. During this process of dialogue, some participants identified situations where they expressed feelings of distress, sadness and anger when they described situations involving interprofessional conflict and delays in patients' treatment. The participants openly shared these experiences with the researcher and when contacted later to review their contribution all participants agreed to allow the data to be used. In all cases, informed consent continued. The researcher tried to anticipate in advance any potential problems and have strategies to manage them (Holloway and Wheeler, 2002, 1995). At that time, there was no immediate facility or mechanism to follow up participants and provide individual counselling, but there were available details of voluntary organisations and groups who could offer support and counselling. However, as the research progressed, none of the participants made contact regarding issues to do with any part of the research.

When the participants told their stories, the nature of the content led the researcher to discuss informally with the participant further details of the story after the interview was over. This was in order to ascertain whether the participant had been able to resolve the issue that threatened the beneficent and/or non maleficent nature of the patient situation. In the example below, a senior ward nurse describes a situation where she was unable to get appropriate medical care for a patient in her care:

> *Interview 6: 21*
> *He had a previous admission to coronary care with chest pain and was discharged to us for medical management. Then at five in the morning he started to get discomfort, pain, not feeling well, his blood pressure started dropping and he was quite cold, getting agitated, not settling, just not well. I'd given him all the prescribed medication I could at the time, but unfortunately on the medical wards we're not allowed to give IV diamorphine which in cardiology you are allowed to give. And that's frustrating because as a staff nurse on a cardiology ward I was allowed to give IV diamorphine but as a sister on my own ward with my own accountability, I'm not allowed to give it within this trust. It's so frustrating. So we rang the doctor, by this time the patient had crushing central chest pain, we'd done an ECG on him, the nurse practitioners were there, they were doing gases, A lot of the gases, ECG, observations had already been done without the medics being there, it was all done by the nurses and*

nurse practitioners that were there. As I said here was an
acutely ill gentleman on a general ward, his condition
had really deteriorated and we were trying to get the
medics to give him diamorphine just to help him with the
pain because the changes on the ECG showed that he'd
had a massive infarct, it was a text book case it was so
obvious what was happening, we could see but we just
couldn't get a medic to see the gentleman and give him
what he needed. It took us an hour and a half to get a
medic to the man.

In this example, the researcher as both a citizen and a registered nurse recognised in the participant's story a situation where there appeared to be evidence of negligence; this story was an example of suboptimal care. By listening to the participant's story, the researcher had become a witness to the details of the situation from the nurse's perspective.

In this instance, the incident had occurred in the past and the researcher could not influence the process retrospectively. Therefore, by exploring the issue informally, the researcher was able to determine the outcome of the incident and the lessons learnt. In the example above, the participant as the ward manager discussed the problems encountered with the cardiologist and the physician from the medical ward. A meeting of the relevant people involved took place where her concerns regarding the patient's care were reviewed and a strategy for reducing the risk of such incidents occurring was proposed. The participant as an employee was supported by the Public Interest Disclosure Act (Office of Public Sector Information, 1998) and as a witness to the event retrospectively via the participant, the researcher became duty bound to make the transcript available if required by law. From a professional perspective, the researcher was unable to prevent risk or harm in the context of the story told as required by the Nursing and Midwifery Council (2008), because the events had already occurred. However, by providing an interpretation of the contextual and interpersonal processes presented in the data as part of the published research findings, the researcher has been able to highlight the complex nature of practice in these situations and raise further questions about how recognising and acting on situations when patients' experience clinical deterioration can be understood.

Qualitative health care research can be intrusive and requires of the researcher sensitivity and communication skills in order to recognise vulnerability in the participants as well as facilitating the interview process (Orb *et al.*, 2001; Kvale,

1996). In relation to this study, the researcher is a trained nurse and teacher and has explored the use of interpersonal skills in a variety of settings. Because the research setting in the study was a single NHS Trust, an individual participant's anonymity may be difficult to protect. In this instance, minor changes to the demographic data were used to protect participant identity. In order to respect confidentiality, participants and individuals named in the transcripts were given pseudonyms and coded accordingly.

In order to protect the confidentiality of the data collected from the interviews, digitalised copies of the interviews were kept on the researcher's personal computer for the duration of the research and, following completion of the study, permission will be sought from the participants to destroy the digitised versions. This respects the contribution of the participants to the process of data collection and interpretation of findings as well as addressing the issue of shared copyright (Parry and Mauthner, 2004). The details regarding the coding of data were stored as hard copies, locked, and kept separate to the transcribed data in order protect participant confidentiality. On completion of the research, the researcher kept anonymous versions of the transcripts for the purpose of audit but future use of the data would not be considered without first seeking permission from the original participants in the study (Parry and Mauthner, 2004).

With regard to the Research Governance Framework standards on the quality and appropriateness of the research, the researcher has presented justification for the research questions and approach used in Chapters 3 and 4. In Chapter 4, the issues regarding how rigour in hermeneutic studies can be demonstrated has been rehearsed and is presented in Section 4.11 as guiding principles for responsible interpretation. Within this, the researcher has discussed how these principles have been operationalised as the interpretation progressed to a new shared understanding of the experiences of nurses caring for critically ill patients. The use of information in this study has reflected the ethical principles guiding research practice and the findings of the study will be published in relevant academic and professional journals. A report of the findings will also be presented to the Trust for information. The requirement for health and safety of people involved in the research was considered as the study progressed and the physical as well as psychological well-being of participants was addressed. With reference to finance and intellectual property of the research, the study was sponsored by the seconding university and the intellectual property of the

interview data and findings are shared between the university and researcher, as are any data stored with the participants.

4.9 Interviews as dialogue

According to Gadamer (1976, p. 13), the real power of hermeneutical consciousness "is our ability to see what is questionable". This supports the notion of allowing the interview/conversation to be balanced and dialectical, thus allowing the informant to tell their own story through a dialogue with the interviewer. In this study, the interview technique used was initially directive in order to establish biographical details concerning the interview participants, but, for the majority of the interview, participants were encouraged to reflect on and describe their experience of caring for patients with developing critical illness by telling their own story as a conversation with the researcher.

For the purpose of this study, the researcher used an interview technique that incorporated two stages. Stage one involved the use of a semi-structured interview process with the aid of an interview guide. The interview guide was developed from the research questions and provisional findings as they emerged from the literature review (Holloway and Wheeler, 2002). The use of a basic interview guide in this instance added to the degree of consistency between interviews with relation to demographic data. It also gave the participants time to settle into the interview and the researcher time to establish a rapport with each participant before asking them to describe personal experiences and feelings (Appendix C). In this way, the interview guide acted as a tool for facilitating a move towards stage two of the interview where participants were invited firstly to define their understanding of critical illness and then to share their own experiences of caring for critically ill patients (Sorrell Dinkins, 2005; Holloway and Wheeler, 2002).

The interview guide was used for all the interviews although some modifications were made as the interviews progressed. Asking the participants to share their own experiences in this context gave them the opportunity to identify what was significant to them about the experience and offered an insight into the intensity of the participants' feelings when they began to reflect on the experience. Riessman (1993) argues that stories of past events are portrayed according to the participants' understanding of their reality and are usually critical to the participant; they may be presented as single or multiple case studies. In this context, the phenomenon is defined by each of the participants interviewed and the dialogue with the text that continued during, between and after the interviews led to deeper avenues of inquiry as

well as making overt prejudices held by the researcher. To that end, within the interview process, the researcher combined the advantages of a semi-structured approach with that of an open dialectical interview.

While the researcher is cognisant of the arguments for the use of unstructured interviews in hermeneutic phenomenological research in order to capture the richness and depth of data required for interpretation, there is also an argument to suggest that hermeneutic interviews should resemble conversations (Sorrell Dinkens, 2005; Kahn, 2000; Koch, 1999, 1996). According to Kvale (1996), the qualitative interview is influenced by a number of philosophical positions including postmodern thought, hermeneutics, phenomenology and dialectics. He goes on to relate them to key elements of the qualitative interview including life world, meaning, descriptive, specificity, interpretation and interactivity. With reference to postmodern thought, he analyses its influence on knowledge as conversation and recognises that with the move away from objective reality there is a move towards talk and negotiation about the meaning of the lived world between two partners in the conversation about a topic of mutual interest.

This concept is not unique to the post modern perspective, however, and can be found in Gadamer's ([1975] 1989) hermeneutic analysis of the conversation. Here he proposes that the process of a conversation (dialogue) involves "question and answer, giving and taking, talking at cross purposes and seeing each other's point" (Gadamer, [1975] 1989, p. 368), and that this communication of meaning should be evident in the spoken as well as written dialogue. As such, the task of hermeneutics is to enter into a dialogue with the text in order to understand what is being said.

According to Kvale (1996), the use of dialogue in hermeneutics is relevant to the qualitative interview in two ways. The first is the significance of dialogue during the interview process: the constant questioning and clarifying highlights the key issues and occurs as first level analysis. Secondly, the dialogue continues as the researcher has a conversation with the text during and following transcription. This notion is developed further by Sorrell Dinkens (2005) when she focuses on the hermeneutic interview as a shared inquiry where the interpreter may reveal as much of him/herself through the dialectic process through challenging prejudices and tradition, as well as the participant. In this context, the interviewer may need to clarify and check their own assumptions with the assumptions and beliefs of the participants during the interview process.

The key philosophical concepts evident in Gadamer's hermeneutics include the hermeneutic circle, the play of dialogue and fusion of horizons and, as such, dialogue offers a way into the hermeneutic circle where language, history and pre-understanding come together through question and answer (Koch, 1996). The circle represents a shared experience of dialogue and interpretation through a reciprocal relationship between the interviewer and the participant at one level during the interview process and at a second level with the transcribed text. This presents a strong argument for using a dialectical approach to the interview process where the interview is considered to be a conversation that is non-directive and allows the participants to tell their own stories. The goal in this context is to obtain a description of the participants' experience according to their perceptions of significance (Koch, 1996).

Koch (1999) goes on to argue that dialogue in an interview should be characterised by openness and involve both parties in the conversation listening to each other. Kahn (2000) reinforces this approach when he argues that hermeneutic interviews should be seen as conversations that focus on the narratives rather than be hampered by interview guides where the emphasis is on guiding and controlling the interview process rather than listening to the participant. Sorrell Dinkens (2005), however, proposes that, in order to facilitate reflection of the participant on the subject of the interview, the researcher needs to create a dialogue that guides the participants to think deeply about the subject and respond through open dialogue based on the Socratic model of dialogue. This perspective is consistent with the researcher's seven conditions necessary for hermeneutic interpretation and supports the use of rigorous dialogue as opposed to argument.

Holloway and Wheeler (2002) agree that the use of an unstructured approach allows for flexibility during the interview and facilitates opportunities for researchers to follow the interests of the informants. However, they warn against the possibility of the interview lacking direction and the interviewer lacking control over the focus of the interview. They argue that although an unstructured interview generates rich data there is also the problem of collecting data that are not relevant to the study. The use of an interview guide in this study therefore ensured that key topics regarding history and demographic details of the participants were clarified in a consistent manner. This led into a section of the interview where participants were invited to enter into a

dialogue with the interviewer guided by the participants' own definitions of critical illness.

In the development of the interview guide for this research, there were key questions that the researcher needed to ask all the participants regarding biographical data. These questions were listed in Stage One of the interview guide (Appendix C). The questions were based on issues that arose out of the literature review and focused on the nursing skill mix in clinical areas, the amount of experience nurses had in critical care nursing, previous training and education and clinical grade (Department of Health, 2003, 2001a; Intensive Care Society, 2002a; Audit Commission, 1999). The questions asked were structured with a clear purpose and gave the researcher an opportunity to gather some background historical data, as well as establish a rapport with the participant being interviewed. According to Morse and Field (1996) both the interviewer and the participant can experience stage fright due to factors such as the idea of being recorded and the vulnerability associated with asking personal questions in an open and unstructured way. The use of more structured questions at the beginning did seem to offer some reassurance to both the researcher and the participants and the researcher also opted to use a small digital recorder with a slim line microphone instead of a large tape recorder and microphone. The use of the digital recorder was useful at the transcribing stage in that the researcher was able to upload each interview onto the computer as an audio file and erase the original interview. Initially, the researcher took only one digital recorder but this proved to be problematic when the digital recorder became full and began to delete previous interviews. Following this experience, the researcher recorded the interviews on two recorders simultaneously, with the participants' permission.

The interviews were planned to last for about one hour, as any period exceeding this would incorporate participant and/or interviewer fatigue (Field and Morse, 1985). Some interviews were undertaken at night when the participants were on night duty, during a quiet period or during a break. Interviewer fatigue was certainly a factor in this instance, although the participants seemed to have no problem with being interviewed at night. In fact, they said that they preferred it as it was quieter and gave them more time to think.

During the process of data collection it was evident that some participants experienced a degree of vulnerability and emotion as they related personal and sometimes emotionally painful experiences. The author was cognisant of this and

took steps to manage the consequences (Corben, 1999; Omery, 1983). At the end of each interview, the researcher asked the participant if they had any questions. On all occasions, the researcher left contact details with the participants and contacted them by letter after the interview transcription was complete to once again offer support and clarify informed consent. None of the participants replied to the letter, although the researcher has remained available for contact.

4.10 Hermeneutic interpretation: the process of coming to understand

According to Gadamer, hermeneutic understanding is phenomenological in that it involves the experience of coming to a new understanding of the text through the dialogue of rigorous question and answer (Gadamer [1975] 1989). Analysis of the data when guided by hermeneutic phenomenology needs to be consistent with the conditions for understanding according to Gadamer, in order for the research to demonstrate ontological and methodological consistency (illustrated in Section 4.3). Clarke (1999) supports this notion and describes her own strategy for analysing hermeneutic data based on a four stage analysis. These stages are: hearing and writing the story; hermeneutic interpretation, which involves the first level thematic analysis; learning through dialogue, where the researcher progresses to the next stage of focused data collection; and construction, which involves the final level of thematic analysis. These stages in the analytical process are features of what Miles and Huberman (1994) describe as common features of analytic methods in qualitative research although they go on to argue that qualitative analysis rarely follows a linear process but is complex and related to more than one level of analysis. What Clarke's (1999) strategy for data analysis does not address, however, is the relationship between the interpretation of text, history and pre-understandings and the fusion of horizons leading to a different understanding of the text.

Cohen *et al.* (2000) address this issue with more clarity when they argue that hermeneutic interpretation involves a dialectic process occurring within the hermeneutic circle. In this context, the researcher starts with a tentative notion of the meaning of the whole data, then enters into a process where parts of the text are understood in relation to the whole and, finally, each of the individual whole texts are understood in relation to other texts. Other texts may include other interview transcripts, history and reflexive awareness. Essentially, the circle continues until the researcher is able to understand the smallest units of the text in terms of the largest cultural and historical units of the text. This pattern of moving from the whole, entering into a dialogue with the text, examining particulars and their relationship with each other, before bringing things together to understand the whole is not sufficient, however, to provide the interpreter with a shared and new understanding of text unless the interpreter recognises that tacit knowing is an integral part of understanding the whole. Polanyi (1983, p. 18) illustrates this when he argues: "It is

not by looking at things, but by dwelling in them, that we understand their joint meaning." For Gadamer, it is this recognition of interpretation and understanding as being more that an objective observation, that adds to his presentation of 'language as being' and thus it is the experience of understanding 'language as being' through text that adds the tacit dimension to interpretation through dialogue.

According to Koch and Harrington (1998), Gadamer's philosophical hermeneutics does not show the researcher *what to do* but rather *what is going on* while researching. They argue that researchers guided by Gadamerian hermeneutics should allow the assumption that the research involves an interaction between the text that is historically produced and a reader who has also been historically produced.

In the pursuit of methodological rigour, researchers undertaking phenomenal and hermeneutic interpretation have adopted methods or strategies for analytical interpretation (Fleming *et al.,* 2003). Some of these have a strong hermeneutic phenomenological influence, for example Colaizzi (1978) and van Manen (1990), while others follow a phenomenological approach influenced by Husserlian phenomenology, for example Giorgi (1985). Those strategies that have adopted a Husserlian perspective are inconsistent with research guided by Gadamerian hermeneutics because the ontological and epistemological underpinnings of this approach focus on recognising and setting aside preconceptions so that the phenomenon can be described without bias or distortion from historical and prejudicial influences (Dowling, 2007; Cohen *et al.,* 2000; Cohen and Omery, 1994).

For Colaizzi (1978), the method for analysing the data uses a step by step approach and focuses on a straightforward thematic analysis of the data with the informants' narratives being central to the interpretation. He places a strong emphasis on returning the analysed transcripts to the informants for verification so that the views of the informants are described as accurately as possible. This is inconsistent with Gadamer's conditions for interpretation at several levels. At the highest level, Gadamer focuses on the value of the text rather than the author of the text for hermeneutic interpretation, as well as the relationship between the text and the horizons of history and pre-understandings. In this context, at the level of textual interpretation, the text has already been set and it is the historically affected consciousness of the interpreter that is incorporated in the dialogue. Changing or reviewing the original text at that stage would therefore influence the temporal

relationship between what is known and what is to be determined through the process of interpretation (Fleming *et al.*, 2003).

The analytical approach adopted by van Manen (1990) focuses on describing and interpreting the nature of lived experience in a contextual and holistic manner (Dowling, 2007; Cohen and Omery, 1994). Within this perspective, he recognises the limitation of bracketing associated with a Husserlian view of descriptive phenomenology and suggests that, if researchers ignore what they already know, how will they recognise when those pre-suppositions, supposedly hidden, influence the processes of description and interpretation (van Manen, 1990). In this context, he describes six research activities that focus on the nature of lived experience and argues that the researcher should be true to the contextual nature of the phenomenon and, in the analytical process, move between the parts and wholes of the context through the process of thematic interpretation. He also recognises the role of the researcher in influencing the interview process, but argues that the purpose of the analysis is to focus on capturing the essence of the experience for the participants rather than the understanding developed between the interpreter and text. The use of van Manen's (1990) six research activities as interpretative activities for recognising contextuality and the play between parts and wholes of the text are compatible with Gadamerian hermeneutic interpretation. However, the focus on the essence of the lived experience for the participants rather than an interpretation of text in the context of history and pre-understanding is inconsistent with the guiding conditions for hermeneutic interpretation in this research - although it is recognised that this approach has been adopted by other hermeneutic researchers (Robertson-Malt, 1999).

This argument is supported by Fleming *et al.* (2003) who reinforce the need to maintain ontological, epistemological and methodological consistency. They go on to propose a five stage research process founded on Gadamer's understanding of hermeneutic interpretation. These stages are: deciding on a research question that is congruent with the aim of hermeneutic interpretation; identification of pre-understandings and how these have changed through the research process; "gaining understanding" through dialogue with the participants; "gaining understanding" through dialogue with the text; and finally establishing trustworthiness (Fleming *et al.*, 2003, p. 117). Within the process of gaining understanding through a dialogue with the text, they identify four stages of interpretation of the text. The first of these stages involves reading the text in order to develop a meaning of the text as a whole.

The second stage involves focusing on particulars in order to identify themes that help to expose the deeper meaning of the text. These themes can then be considered in the light of pre-understandings identified by the researcher. The third stage involves the process of considering the particulars in the context of the whole in order to develop an expanded meaning of the text as a whole. The final stage involves identifying excerpts from the transcripts that appear representative of the shared understandings between the researcher and the participants. The authors argue that this process continues until an agreed understanding is reached (Fleming *et al.*, 2003). While, in principle, the process of gaining understanding through dialogue with the text supports conditions necessary for hermeneutic interpretation, the relationship between dialogue with the text and the process of gaining a shared understanding through the play of movement between the interpreter and the text is not clarified. This is in part due to the research design involving the use of consecutive interviews with the participants and this would alter the nature of the text through temporal distancing. The purpose of the research in their paper is also not clear and focuses on process of method rather than the experience of coming to understand.

There are, however, differences between using hermeneutic interpretation for interviewing rather than for the interpretation of historical or literary texts as in traditional hermeneutical interpretation. A literary text is a completed and refined version of a text whereas this cannot be said for an interview text in that the interpreter is involved in both the development of the interview text as it emerges with its often vague and repetitious text and the dialogue as the interview progresses. In this way, the interviewer is integrated into the text from the beginning, not just by the text but also by the shared understanding of implicit references and gestures (Kvale, 1996). This argument highlights the need to incorporate within the interpretative process information regarding the context of the conversation and the history of both the interviewer and the participant so that interpretation and understanding can be attempted in context. To that end, Koch and Harrington (1998) appeal to researchers to incorporate a reflexive approach to the research process, which is characterised by an ongoing critique of the researcher's pre-understandings and appraisal of the research process, signposted so that readers may judge for themselves the plausibility of the research. This concept of signposting the research is consistent with what Sandelowski (1986) describes as the 'decision trail' or audit trail. The process of leaving a decision trail to show how interpretative decisions have been made is

consistent with Madison's (1988) guiding principles for responsible hermeneutic interpretation.

In order to guide a critical discussion of the process of hermeneutic interpretation in this study, the researcher has included a series of diagrams to illustrate the process of coming to a new understanding of the text. The first diagram in Figure 4.2 provides an overview of the interpretative process from the literature review to the process of developing a new understanding. The curved arrows in each oval represent the play of question and answer within each horizon as the research moves from the researcher's own horizon of understanding to share the horizons of the participants during "the interview process", "dialogue with the text", "back to pre-understandings" and "forward to a new shared understanding".

The diagram in Figure 4.3 illustrates a representation of the interpretative process in action although it must be stressed that this process was not linear and often occurred concurrently. For example, the process of having a dialogue with the data was continuous and involved concurrent questioning of existing pre-understandings within the researcher's horizon as well as interpreting this in the context of practice and tradition.

It is also pertinent to recognise that the research process shares many similarities with van Manen's (1990) research activities for phenomenological interpretation as well as the stages for hermeneutic interpretation identified by Fleming *et al.* (2003). The fundamental difference, however, is in the application of a direct dialogical approach to guide not only the development of the research questions but also the mapping of history and pre-understandings, the interview process and finally the process of interpretation and fusion of horizons that have led to a new shared understanding of the experience of caring for critically ill patients. The core questions that guided the interpretation are summarised in Figure 4.2 and guide the direction of the research.

The aims of managing the interpretation through the process of dialogue are: to make explicit the recognition of pre-understandings and prejudices that emerge from the researcher's experience of history and interpretation of the text; to recognise the movement of play between the researcher's horizon and those of the text; and finally to demonstrate the principles of coherence, comprehensiveness, appropriateness and contextuality inherent in Madison's (1988) guidance for responsible hermeneutic interpretation.

The first guiding question, "What is known?", directed the researcher to undertake a review of the nature and extent of suboptimal care and the influence of this phenomenon on health care policy, as well as a historical review of the emergence of critical care as a specialist area. From this, the researcher was able to recognise the traditions and historical influences that have impacted on the role of the nurse. This led to clarifying and recognising the researcher's personal and professional background and understanding of critical illness before beginning to answer the research questions. This was achieved by the researcher using temporal distance and returning to a critical incident documented in 2003, prior to the commencement of data collection. The researcher, through the process of dialogue, interpreted the critical incident and identified themes that had personal and professional significance. These are presented in Chapter Five (5.2.1). The nature of the research questions themselves influenced the direction and purpose of the research and the choice of a theoretical framework. This led to the choice of hermeneutic phenomenology to inform the research process.

The second guiding question, "What informs and directs the interview dialogue?", guided the researcher through the sampling process and the general direction for hermeneutic dialogue during the interviews. Key questions at this point included "How is critical illness defined?", "How is it recognised?" and "What happens next?". These questions encouraged the participants to examine their own understanding of critical illness and what it meant for them in the context of their own critical incidents and experience of nursing. These questions began with the first interview and continued to influence the researcher's questioning and interpretation as the interviews progressed. In Figure 4.4, the researcher has included an example of first level analysis following the first interview. Some tentative categories and themes were identified and questioned.

This dialogue continued as the researcher progressed to the second interview, this time with Carol who described critical illness. The following interview transcript illustrates how the researcher's dialogue [shown in square brackets and in bold] developed:

Interview 2
12 *(I)* *You must get a lot of sick patients coming to the*
        unit with chest pain, how would you describe a
        patient who was critically ill, how would you
        know?

13 (R) *(No answer, hesitation)*

    (I) *Would you say all your patient's are critically ill?*

14 (R) *No, no, not all of them will be critically ill, it's very unpredictable that is.*

    (I) *If some one became critically ill, how would you describe that patient, how would you know he was critically ill?*

15 (R) *Some one who is critically ill I would say is someone who has gone into cardiogenic shock um basically some one whose got problems with their breathing, pain, um, um, maintaining their organs, with their kidneys, um, um basically whose really acute, someone who needs all the support really, someone whose getting arrhythmias, with all the monitoring and stuff, had a big MI, someone post infarct really.*

    [How does this compare with interview 1? There is no reference to a prolonged series of problems: this appears more sudden and acute?] *Were very lucky here, cos we can get them to the lab (cardiac catheter lab) quickly and get them sorted.*

    (I) *So when someone is going off like that how do you know, what are the signs you look for?*

16 (R) *Well, if someone's come in well, when some patients come in you know, some times you can see big ECG changes and you know they've had a massive infarct, and they need thrombolysis and you can see, cos sometimes they get a lots of problems during the thrombolysis before he settles down, and sometimes they just don't settle, you get people um, ummm. You get people sort of....how can I put it, um. A guy was transferred, came to us, he'd had an infarct, went up to the lab, came down, um arrested, I don't know how many times on the way down, but he settled down after they put the stent in and was fine. But he became unstable just when I started my shift and it was basically just kicking the sheets off him and I came on shift and I just thought "there's something not right with him."*

    [Feelings?] *And I caught him just before he went into acute pulmonary oedema, it's the little things, it doesn't have to be blood pressure or any thing like that, its just general agitation, before they even start getting... the BP changes and stuff, you know.* **[This is interesting: before they start getting physiological change? Does this occur in other texts?]**

(I) Yes

*17 (R) You get all sorts of things you know, in some people
it could be just sweating, they don't have to be
complaining of anything.*

*(I So what you are describing is looking at the
person, is that what you mean?*
**[Compare this to interview 1, it's a visual thing,
are they talking about the same thing?]**

*18 (R) Yes, it's not always good to just look at the
machines and you look at the person cos you see it
in them before you see it anywhere else.*

She is hesitant at first but once encouraged to continue she presents initially a technical description of critical illness that continues to expand into a more complex story as she goes on to discuss how she knows this is critical illness. The researcher explored the transcript in the context of interview one and began to develop a conceptual map of what was happening, exploring this through dialogue with the pre-understandings and literature in the context of the third guiding question.

The third guiding question, "What is happening?", involved the process of textual interpretation by examining the whole text in the context of history and pre-understandings and then focusing on particulars by seeking answers to how critical illness was understood, recognised and managed and how this was translated through a dialogue with history and the researcher's pre-understandings. Through the process of a rigorous dialogue with the text, the researcher was able to explore the text to the level of the most basic themes, organising themes and global themes so that an interpretation of "What was happening?" began to emerge (Attride-Stirling, 2001). In order to facilitate this process, the interview transcripts and diary entries were coded according to participant number, context, timing and segmenting of the text (Attride-Stirling, 2001; Miles and Huberman, 1994). Each participant was also given a pseudonym in order to help the reader to consider the extract in context. Themes were identified, compared and questioned by the horizons of text, history and pre-understandings until a map of themes and horizons began to emerge. The next guiding questions, "What is the same as/different from the pre-understandings?" and "Why and how?" facilitated the movement towards a shared understanding of the text. The final questions were "How has the fusion of what is known with what was previously unknown led to a new understanding?" and "How has this answered the research question?"

This process is illustrated in Appendix D where the researcher sets out how basic and organising themes have emerged and how she questioned these against pre-understandings, literature and text. The themes relate to recognising and understanding the problem. The first table summarises the biographical details of the participants although some variation has been added to protect confidentiality. The second set of tables and figures highlight the global theme, recognising and understanding the problem, and include a table and concept map of the relationship between basic and organising themes. Finally, the last group of figures illustrates the question/answer process as the researcher continues the dialogue with the text.

The detailed examination of the text through the process of dialogue continues in Chapter 5 through the presentation of pre-understandings and as the process and content of textual interpretation, is translated into a shared understanding. This process continues to be considered in the context of conditions necessary for hermeneutic interpretation and adheres to the principles of responsible hermeneutic interpretation, as presented in the final section of this chapter.

Figure 4.2
Hermeneutic interpretation: the process of coming to understand

Literature review: Establishing pre-understanding

Hermeneutic conversations: interviews, reflective diary

Dialogue with the text: Transcripts, history, pre-understandings

Back to pre-understandings

Forward to new understanding

Researcher's horizon

Hermeneutic conversations

Dialogue with the text

Questioning pre-understandings; towards a shared understanding

New understanding, new horizon

Question: What is known?

Question: What informs and directs the interview dialogue?

Questions: What is happening? How? Why? What is it like?

Questions: What is the same as/ different from pre-understandings? Why and how?

Questions: How has the fusion of what is known with what was previously unknown led to a new understanding? How has this answered the research question?

Figure 4.3
The process of generating and interpreting text influenced by Gadamerian hermeneutics

Identifying and clarifying the problem area for study, recognising prejudices, asking questions

Having the conversations, asking questions, active listening

Having a dialogue with the text, describing and interpreting each participant's lived experience

Questioning, reflecting, interpreting and examining parts of the data; identifying themes and categories in order to understand the relationship between the parts and the whole

Questioning relationships, questioning patterns, questioning differences, continuing the dialogue

Developing a shared understanding, moving towards a fusion of horizons

Recognising when shared horizons have led to a shared understanding of the dialogue for this time, space and context

Writing the text as a shared understanding of the experience

Revisiting the problem area for study and analysing with a different understanding of the experience, asking questions

Figure 4.4
Data analysis after the first interview

Interview transcripts	Significant phrases	Reflections	Themes
1.50 (R) Um it's the little changes, you get that feeling "Oh I don't like the look"	1.50 (R) you get that feeling, Oh I don't like the look	Feelings?	Is this the trigger: knowing when someone is becoming critically ill/ observing for signs of clinical deterioration?
1.52 (R) And there may be changes in the obs but usually it's that visual, um picking at the sheets, not responding in the same way, agitated. Not responding to treatment it may be their respirations, struggling to breathe. But it's usually a visual thing and you usually call a colleague, check with them. Usually if you can't find something straight away then you wait and watch.	1.52 (R) changes in the obs, its that visual, um picking at the sheets, agitated. Not responding to treatment, struggling to breath	Visual?	
1.60 (R) Obviously sometime we get feed back from the doctors when they visit daily or twice daily, the regs let us know if they're not happy or they want us to keep an eye, need extra monitoring.	1.60 (R) the regs let us know if they're not happy or they want us to keep an eye, need extra monitoring	Team work?	
1.97 (R) He had been on coronary care and came to us and then he said that he felt unwell one evening and he couldn't really say what was the matter, his observations were Ok but it was just that I felt, he's not right, he's really not right.	1.97 (R) he said that he felt unwell he couldn't really say what was the matter his observations were Ok. I felt that he's not right, he's really not right.	Feelings?	
1.89 (R) And I'm always very aware that you've got to concentrate on where you're looking and that you've got sideways vision of every where else and you can tell when something's not right.	1.89 (R) concentrate on where you're looking and that you've got sideways vision of everywhere else	Vigilance? Never off duty?	

Figure 4.4 (continued)

1.67 (R) Of course you get a lot of patients who come back from catheterisation with an unstable blood pressure and cardiac arrhythmias. Of course you know that in 5 minutes they'll be back to normal. They often drop their rate and blood pressure and you give them oxygen, raise the foot of the bed, inform the doctors, that can happen. (I) Do you class patients like that as critically ill? (R) I wouldn't class the patient as critically ill with that because its something that can happen as the result of the investigation or treatment, That's why they come back to us for post op monitoring	**Trigger?** Unstable blood pressure Cardiac arrhythmias	Think about the importance of a diagnosis. The nurse wasn't content with just diagnosing the state of critical illness he/she wanted to know what was wrong - what the medical diagnosis was, link this with theme 4 being in control - if you know what's wrong then you can plan ahead for treatment. Is this a feature that repeats itself in other interviews? Do any of the staff refer to guidelines in this situation?	The diagnosis: is this deciding when someone is critically ill or diagnosing the clinical condition, or both?
(R) I think a critically ill patient is someone with prolonged, series of problems rather than a one off drop in BP.	**Diagnosis?** I think a critically ill patient is someone with prolonged, series of problems	Diagnosis?	Diagnosing critical illness
1.101 (R) Um, so they sent him for a check x-ray to see if there was any sign of infection and I had a call from the x-ray department that they were worried about him, I went down to check on him, he was really breathless, we put him on a trolley, his blood pressure had dropped and he was very pale and clammy and restless. I thought at this point he was better back on the ward. On the way back he got worse and was going off in the corridor.	**Trigger?** He was really breathless, his blood pressure had dropped and he was very pale and clammy and restless.	Visual? Physiological signs?	Trigger
1.110 (R) When we got back... we did an ECG, his output was weak very poor.	**Trigger? /** **Diagnosis?** His output was weak very poor. We did an ECG		Trigger
1.112. (R) He was very poorly, even though we didn't know why. With his low blood pressure, we thought he'd probably gone back into Cardiogenic shock. He was so sick, I thought he might arrest so I didn't bother with the middle man I called the registrar straight away.	Getting help: strategy?		Strategy for getting help

4.11 Madison's guiding principles for responsible hermeneutic interpretation

In this section, the researcher has attempted to demonstrate that a process of good practice and judgement has been adhered to by adopting Madison's (1988) guiding principles for responsible hermeneutic interpretation (introduced in Section 4.4.5).

Principle 1: coherence

The first principle of responsible interpretation implies that the interpreter's work must show evidence of harmony of the details of the interpretation and understanding with the whole. In relation to the necessary conditions for hermeneutic understanding, this principle refers to Gadamer's (([1975] 1989) understanding of play. The concept of the movement of play between the defined details or particulars of the game includes the need to recognise the particulars of history, pre-understanding and text, as well as demonstrate how the movement of play between these particulars has taken place.

In practical terms, this has been demonstrated in this research by setting the historical context in the literature review as well as by identifying the professional, theoretical and personal basis for pre-understandings and prejudices that have emerged as the process of dialogue with these and the text continued. According to Geanellos (1998a), not only does the researcher need to clarify their pre-understandings and where these have come from, but they also need to need to argue for their theoretical justification. To that end, the theoretical basis for the pre-understandings identified as informing the process of interpretation are presented in Chapter 5.

Principle 2: comprehensiveness

In this second principle, the interpreter in a full interpretation of the text needs to consider the content of the text not just in relation to history and tradition but also in relation to their presuppositions and to make these explicit, so that the reader of the new hermeneutic understanding sees the juxtaposition between what was know by the interpreter and what has been revealed through the process of interpretation.

This principle supports the importance of dialogue as a manifestation of the movement of play and the demonstration of moving between what is known and what

is yet to be understood. In this research, this has been achieved by clarifying the historical context and identifying prejudices as illustrated above. The researcher has also incorporated the use of a reflexive diary to map the realisation of "true" experiences in the context of the interpretative process; this is detailed in Chapter 5.

Principle 3: penetration

In Madison's third principle, the interpreter should be able to map the guiding intention of the work as the process of interpretation progresses. In this study, this has been achieved by identifying the different horizons of the text, history and prejudices as they come together and how these horizons link through dialogue as the interpretive process is presented through the development of themes and the shared understanding that has emerged as a consequence. This process is illustrated in Figures 4.2 and 4.3 of this chapter and presented as text in Chapter 5.

Principle 4: thoroughness

Madison's fourth principle relates to the interpreter's ability to demonstrate that all the questions asked of the text and all the questions the text poses to the interpreter have been addressed. Again, this principle is consistent with the guiding condition that recognises the importance of dialogue and the manifestation of the movement of play through the process of question and answer. In this research, this process has been demonstrated by making overt the process of question and answer and mapping this process through the presentation and discussion of findings as a guide to how the decisions were made.

Principle 5: appropriateness

In relation to Madison's fifth principle, there should be evidence of how the questions have emerged from the text so that the researcher can see what is questionable. In this study, the researcher has attempted to provide theoretical evidence and historical evidence of how the questions have emerged from the text and how they have challenged the historical and personal pre-understandings of the researcher. This process began with the review of the literature in Chapter 2 and continues in Chapter 5 where the dialogue with the text continues. In this context, extracts from the transcripts are included as illustrations of how the researcher came

to question the text. The researcher has also attempted to show how the themes have emerged from the text through rigorous question and answer.

Principle 6: contextuality

Madison's sixth principle proposes that the interpretation needs to be presented in context. The principle of contextuality is relevant to all the necessary conditions for hermeneutic understanding in that contextuality recognises the position of historically affected consciousness as central to hermeneutic understanding and that any new understanding needs to be considered in relation to temporality and tradition. The researcher in this study has demonstrated this by directing the reader from the original pre-understandings, history and context of the research problem, through the deliberate process of mapping the historical and prejudicial influences of the interpreter, through the process of sharing and interpreting the horizons of the text, history and pre-understandings to the sharing of horizons and the emergence of a different understanding of the text in the context of the present.

Principle 7: agreement

Madison's seventh principle is related to two key points of agreement. Firstly, an interpretation must agree with what the interpreter describes, rather than give it a separate sub-level meaning. Secondly, if the interpretation is not consistent with the interpreter's tradition of understanding and pre-understanding, then it is necessary to explain why and how the previous understanding is deficient.

In relation to the conditions for hermeneutic interpretation, it is necessary to recognise and demonstrate when 'true' or 'negative' experiences with the text have challenged the researcher's pre-understanding of the text and show that this can be justified as challenges to the interpretative process leading to new and different understandings of the text. This has been achieved in this research by demonstrating the decision making process and the context of "true" experiences with the text as well as giving examples of where and how these interpretative experiences occurred in the interpretative process.

Principle 8: suggestiveness

According to Madison, a good understanding will be suggestive and fertile and raise further questions. This principle has been demonstrated in Chapters 5 and 6 when the researcher recognises the implications of the research for future work and discusses the questions that this new understanding raises about future practice and research in this context.

Principle 9: potential

Madison's final principle proposes that the ultimate validation of an interpretation lies in the future, in that the work leads to other findings and relates in a harmonious way to the original interpretation. It has been the intention of the researcher to recognise the new and shared understanding of nurses' experience of caring for patients with clinical deterioration leading to critical illness in the context of the history of what has gone before and forward into current and future practice of caring for the critically ill. The intention is for the dialogue to continue and become part of the historically affected consciousness of acute and critical care practice. This is demonstrated in Chapters 5 and 6 as the researcher presents a new understanding of the text and the implications for practice as well as the possibility of starting a new dialogue triggered by the findings of this interpretation.

In conclusion, the researcher has attempted to demonstrate that the principles of responsible interpretation have been used as a guiding principle through the research process. This has been supported by the use of a reflexive diary for the purpose of recognising and questioning "true experiences" that represent the play of movement between pre-understandings and a new understanding of the text.

Chapter 5

A Hermeneutic Interpretation of Nurses' Experiences of Caring for Patients with Clinical Deterioration

5.1 Introduction

The aim of this chapter is to present the researcher's hermeneutic understanding of the experience of nurses who have been involved with recognising and managing patients who have presented with clinical deterioration leading to critical illness. Using the researcher's interpretation of the seven conditions necessary for hermeneutic understanding, after Gadamer ([1975] 1989), an interpretative dialogue with the text was performed leading to an understanding of the nurses' experience of caring for patients with critical illness. This involved the recognition and interpretation of the researcher's pre-understandings about suboptimal care and the history and tradition of nursing critically ill patients (Section 5.2). The chapter continues with a presentation and discussion of the six themes that emerged during the interpretation of the data as text and their relationship with the pre-understandings and relevant research publications since 2004 (Section 5.3). Finally, based on this hermeneutic interpretation, a new understanding of how nurses experience the care of these patients is presented in Section 5.4.

5.2 The researcher's pre-understandings

The recognition and presentation of the researcher's pre-understandings in this study has been undertaken for two reasons. The first is to recognise and clarify the researcher's historically affected consciousness and the second is to make explicit key influences that have informed the interpretative process. The significance of the researcher's background was introduced in Chapter 1 and became a factor that influenced the choice of philosophical and methodological approach used in this study as discussed in Chapters 3 and 4. According to Gadamer's ([1975]1989) presentation of the experience of hermeneutic interpretation, recognition of the interpreter's historically affected consciousness is necessary in order to interpret the text. Geanellos (1998b) reinforces this point and argues that it is not sufficient simply to recognise that this process has occurred but it is also important to record and explain the nature of the interpreter's pre-understandings and prejudices as an integral part of the process of interpretation. This is consistent with conditions three, four, five and seven of the seven conditions necessary for hermeneutic understanding identified by the researcher in Section 4.3 of Chapter 4.

This section begins with a hermeneutic interpretation of a critical incident experienced by the researcher that focuses on the experience of caring for a critically ill patient (5.2.1) and a summary of the influence of the findings from the literature review on the researcher (5.2.2). The critical incident was documented and presented at a critical care conference (British Association of Critical Care Nurses, 2003), before the commencement of this study. Interpreting this critical incident allowed the researcher to expose through dialogue four themes that represent the researcher's pre-understandings that have influenced the interpretative process for this study.

5.2.1 Influence of a critical incident

This incident occurred during 2003 and led to the researcher questioning the way that critical care nursing can be understood. The themes that emerged following the researcher's hermeneutic interpretation represent the tradition and pre-understandings that have informed the researcher during the process of this research. The incident took place during a period when the researcher began a return to practice for clinical updating. The text revolves around the care of one patient who was

admitted to the critical care unit and is presented in Figure 5.1. Throughout the text, pseudonyms are used to protect the anonymity of the patient and staff.

The patient, Fred, is 84 years old and lived with Eve, his partner of twenty years, in a bungalow in the city. Fred had been complaining of breathlessness and feeling sick for several days; Eve was concerned and contacted their local general practitioner. At that time, a medical practitioner was unable to attend and she was asked to call back the following morning if there was no improvement. The following morning when Eve woke up, she tried but failed to waken Fred and noticed that his breathing was *funny*. She dialled 999 and an ambulance took him to the hospital. On the way, Fred had a cardiac arrest and was resuscitated by the paramedics. He was eventually admitted to the intensive care unit after being stabilised in the accident and emergency department.

Using Gadamerian principles to enter into a dialogue with the critical incident as text (Figure 5.1), the following themes emerged: the holistic nature of care; keeping the patient safe; emotional care and working as a team.

Figure 5.1
Critical incident (CI): caring for Fred

I arrived in ICU just as he was being brought into the unit. I am always anxious at this moment because I ask myself the question, "Can I still do this?" When I approached the bedside I noticed that the nurse in charge of the patient was an old student of mine (Simon) and I felt immediately at ease. Then I saw the patient, "Yes I can do this". He looked so frail and tinged with blue, he was unconscious, intubated and ventilated, with a GCS of 3, his heart rate is 78/min and he was in atrial fibrillation. I hadn't realised at first that we also had a student nurse (Holly) with us to help with the care of this patient. "Three nurses to care for one man - a luxury!" The three of us and the A & E team transferred Fred onto the bed and started the admission process. I was involved in changing over his urine bag to an hourly urine meter, sorting out bed covers and general positioning of the patient. I left Simon to deal with the ventilation, monitoring and lines. He's quicker than me and doesn't need time to think. We shared the observations. On assessment his blood pressure is 78/50 mean pressure of 57, CVP was 4 mm Hg. On examination he was both peripherally and centrally cyanosed; his skin was dry and very cold to touch. His core temperature was 34.5 degrees C. He had a central line and a peripheral line, an arterial line and urinary catheter. His hair was thick and grey and was standing out at all angles, it looked as though he hadn't shaved for several days, and saliva was dribbling from his mouth. He was naked apart from the blanket covering him. The A & E staff said that they had put Fred's eldest son, John, in the visitors' room and he appeared very distressed. The first medical concern was Fred's blood pressure, which continued to fall and the intensivist prescribed a mixture of both colloid and crystalloid fluid resuscitation to be titrated against blood pressure recordings. Inotrope support was withheld for the time being based on the assumption that Fred was almost certainly dehydrated. About 30 minutes after was stabilised on respiratory support, Simon took a sample of arterial blood and went away from the bed area to check a blood gas. In the meantime the junior intensivist was charged with the job of inserting a nasogastric tube into Fred's stomach via the nose. He seemed apprehensive and invited me to do it instead. Unsure of my role and responsibilities as a visiting nurse lecturer, I declined. He did tell the patient what he was going to do but I didn't feel he instilled any confidence in his actions to the patient or me. The doctor said, *"I don't like putting these down freehand, I'm used to doing this during intubation."* His first attempt was unsuccessful, *"See I told you I was no good at this, sure you don't want to put it down?"* I said, *"No, why don't you straighten his head to get better alignment and lean his head forward a little?"* It worked! After about 45 minutes Simon and the senior intensivist went out to talk to the relatives. Following Simon's return we continued to prepare for Fred's son to visit. I had been fussing around the bed area for about 15 minutes by this time during which I had washed Fred's face, aspirated secretions from his mouth and turned his pillow over. When Simon returned I was rummaging through the shelves by the bedside. He said, *"I know what you're looking for"*, a comb and we haven't got one. *"* I asked, *"How did you know that?"* He replied; *"Because I know you Desi, you taught me for three years, I know what you're like."* I asked, *"What do you mean you know what I'm like?"* Simon replied, *"Well you're one of these people who see combing his hair as important, seeing the person and all that, you know."* I felt uncomfortable at this point. I thought, doesn't everyone see the patient as a human being? Looking back I have a vivid memory of when seeing the patient as a human became so important to me, I was a student nurse in my second year and was feeding a man who had recently had a stroke. He was very smart, with a handlebar moustache and, as I was feeding him, he started to cry, then it hit me - he wasn't the stroke in bed 7, he was a human being who was distressed and vulnerable and who needed help not just physical care but total support and understanding. I had the same feeling when I was caring for Fred, only in this case I didn't know him. We had never had eye contact, he didn't know where he was, what had happened, and he didn't know me at all. Furthermore he didn't know if he was alive or dead or if he would survive at all. Before the son arrived I arranged for a chair to be put by the bedside and Simon went to fetch him. When he came in, Fred's son was clutching a wet tissue and was visibly distressed. He sat in the chair and just stared at the scene trying to take everything in. I noticed that both Simon and Holly had backed off and left me at the bedside with him, so I started to explain what was happening and I held Fred's hand at the same time. His son noticed and put his hand on his father's shoulder. I signalled to Holly to fetch some more tissues and continued to respond to the son's questions as best I could. I stood and talked to him for about 30 minutes, during which time his father started to make spontaneous movements of his mouth and face. His son was overjoyed and thought that this was a sign that Fred was going to recover. I then felt very uncomfortable and tried to explain that this was early days yet but at the same time I didn't want to destroy the hope, for him or his father.

5.2.1.1 The holistic nature of care

Within the context of seeing the patient as a human being, the text revealed references to the recognition of the patient as more than a person with severe physiological dysfunction. This is illustrated in the following text:

CI.1

He looked so frail and tinged with blue...
On assessment his blood pressure was 78/50
mean pressure of 57, CVP was 4 mm Hg. He
was unconscious, intubated and ventilated,
with a GCS of 3, his heart rate is 78/min and
he was in atrial fibrillation. On examination he
was both peripherally and centrally cyanosed;
his skin was dry and very cold to touch. His
core temperature was 34.5 degrees C. He has a
central line and a peripheral line, an arterial
line and urinary catheter. His hair was thick
and grey and was standing out at all angles, it
looked as though he hadn't shaved for several
days, and saliva was dribbling from his mouth.
He was naked apart from the blanket covering
him.

The significance of recognising the patient's state of dress and general appearance can be considered from two perspectives. Firstly, it gives the assessor information about how long the patient may have been debilitated by his illness and adds to the general context of understanding what has happened to the patient. Secondly, the recognition of frailty and vulnerability in the patient can trigger concerns for the patient's comfort and dignity. The extract from the following text illustrates how this was manifested in the incident:

CI.4

Following Simon's return we continued to
prepare for Fred's son to visit. I had been
fussing around the bed area for about 15
minutes by this time during which, I had
washed Fred's face, aspirated secretions from
his mouth and turned his pillow over I was
rummaging through the shelves by the bedside
when Simon came back. He said; "I know what
you're looking for, a comb and we haven't got
one." I asked; "How did you know that?" He
replied; "Because I know you Desi, you taught
me for three years, I know what you're like." I
replied; "what do you mean you know what
I'm like?" Simon replied; "Well you're one of

> *these people who sees combing his hair as*
> *important, seeing the person and all that, you*
> *know." I felt uncomfortable at this point, I*
> *thought, doesn't every one see the patient like*
> *this?*

The concept of holistic care and seeing the patient as a human being is well documented as being fundamental to nursing and is argued to be a core element of the 'new' nursing phenomenon than began to emerge in the 1970's based on recognising the patient as a person, and the nurse as having an independent role in their care (Kitson, 1999; Clark, 1998; Reed and Ground, 1997; Department of Health, 1994; Leininger, 1991; Benner and Wrubel, 1989; Watson, 1985; Henderson, 1980; Gortner 1980; Donaldson and Crowley, 1978).

The notion of holistic care has not gone unchallenged and questions have been raised by Reed and Ground (1997) as to whether holistic care is what the nurse may aspire to rather than what the patient agrees to. They argue that it is possible for a person to experience illness in a reductionist way, in that the illness is something that happens to them rather than something that is part of them. Adopting a holistic approach to care in such a situation can challenge the perceptions and personal space of the patient. This challenge to holistic care highlights what Woods (1998, p. 80) describes as "holism: the strong theory". He argues that a strong theory of holism is focused on a definition of holism as things being more than their constituent parts. In this context holism is considered to be opposite to, and incompatable with, a reductionist approach. He goes on to propose a "weak theory of holism" where a weak holist recognises the significance of the person with what constitutes "the parts/whole relationship and the importance of context" (Woods, 1998, p. 83). This, he argues is compatible with all aspects of nursing practice.

In the case of the extract above, the researcher does not know the patient, has never had a conversation with the patient and has only limited knowledge of the patient's circumstances and family life. This does not deter her, however, from attempting to put the patient's problems into context and try to anticipate what the patient or relatives may consider as appropriate and competent care. In response to the question, "Is the concept of holistic care therefore a necessary element of critical care nursing?", the evidence from the literature does support the argument for a holistic approach to care, particularly in situations where a predominance of physiological priorities to manage and a need to stabilise the patient's critical illness

can lead to neglect of the patient's psychosocial integrity (Almerud *et al.*, 2008; Benner *et al.*, 1999). In a study of the nature of caring work among nurses in an intensive care unit, Wilkin and Slevin (2004) described holistic care as a process of utilising professional knowledge, emotional aspects of care, competence, skill and nursing action, the goal of which is to meet the individual patient's and their relatives' needs.

This view supports Woods' (1998) understanding of holism and is compatable with Cave's philosophical analysis of holistic care in which he describes an understanding of holism as it relates to 'proximity' and the skill and experience of the nurse (Cave, 2000). That is, if the nurse only focuses on what is in the immediate proximity when assessing a patient, then critical information may be lost. He gives the example of a patient with a leg ulcer. If the nurse limits his/her assessment to what is directly observed they are able to gain some knowledge about the wound; however, if they widen their scope of proximity to related areas of concern such as the patient's description of what relieves their pain, the patient's diet, their mobility, previous employment and smoking habits, a more comprehensive understanding of the patient's leg ulcer is reached possibly by both the patient and the nurse. The skill of holistic care in this context therefore becomes more that a recognition of the patient's psychosocial integrity; it also includes the assessment and recognition of data that inform the management of care. From the researcher's perspective, exploring the relationship between holistic care and the assessment process highlights the significance of the complex and interpersonal nature of assessment and raises questions about how assessment is undertaken and in what order. This is explored in themes one to three as the researcher enters into a dialogue with the text.

5.2.1.2 Keeping the patient safe

Keeping the patients safe is an accepted part of nursing care (Ball and McElligot, 2003; Benner *et al.*, 1999; Fairman, 1992; Nightingale, 1860). In the text of the critical incident, this theme is intertwined with assessing and monitoring the patient and stabilising his condition, removing the threat of instability and progressing towards an improvement in the patient's condition. The following text highlights the theme of patient safety and also illustrates team working (discussed in 5.2.1.4):

CI.2

The three of us and the A/E team transferred Fred onto the bed. I was involved in changing over his urine bag to an hourly urine meter, sorting out bed covers and general positioning of the patient. I left Simon to deal with the ventilation, monitoring and line. He's quicker than me, doesn't need time to think. We shared the observations. Our first concern was the patient's blood pressure, which continued to fall and the intensivist prescribed fluid resuscitation to be titrated against blood pressure recordings. The assumption was that the patient was dehydrated.

What is manifested above is the functional nature of maintaining patient safety. Limitations of skill are highlighted and recognised in the effort to admit and stabilise the patient efficiently and safely. From the researcher's perspective, the notion of keeping the patient safe was integral to the assessment process and reinforced the requirement to question the relationship between a holistic assessment and prioritising care to maintain the patient's safety.

5.2.1.3 Emotional care

In the text, emotional care is demonstrated by the researcher providing support and information for both the patient and relative. What is illustrated is the therapeutic value of being with the patient and supporting the relatives. The text also highlights the feelings of the nurse in relation to promoting hope but also recognising that the patient was still critically ill. Feelings of discomfort are described as the nurse tries to get the balance right between the provision of hope for the patient and relative and the potential for the patient's deterioration. These aspects are highlighted in the following extract:

CI.5

When he came in, the patient's son was clutching a wet tissue and was visibly distressed. He sat in the chair and just stared at the scene trying to take everything in. I noticed that both the staff nurse and student had backed off and left me at the bedside with him, so I started to explain what was happening and I held Fred's hand at the same time, his son noticed and put his hand on his father's shoulder. I stood and talked to him for about 30 minutes, during which time Fred started to make spontaneous movements of his mouth and face. His son was overjoyed and thought that this was a sign that his father was going to recover. I then felt very

> *uncomfortable and tried to explain that this was early*
> *days yet but at the same time I didn't want to destroy the*
> *hope, for him or his father.*

The provision of emotional care and support is recognised as being central to nursing and an area of nursing concern in the care of critically ill patients (McGrath, 2008; Almerud *et al.*, 2007; Wilkin and Slevin, 2004; Wikstrom and Larsson, 2004). Within a critical care environment, the structure and organisation of support particularly for relatives is also well researched (Hupcey, 2000; Benner *et al.*, 1999, Zainal and Scholes, 1997; Walters, 1995a; Walters, 1995b; Walters, 1994; Millar, 1994).

When considering the provision of emotional support in nursing, attention is also drawn to the emotional labour of caring. In the example above, the researcher is *"uncomfortable"* with trying to balance hope with clinical objectivity in order to preserve the feelings of safety and reality for the patient and his relative. According to Hochschild (1983, p. 7), this situation is consistent with "the induction or suppression of feeling in order to sustain an outward appearance that produces in others a sense of being cared for". Within nursing, sources of emotional labour have been identified in situations that involve the care of patients experiencing pain and loss, caring for terminally ill patients and decisions concerning the discontinuation of active treatment (Kelly *et al.*, 2000; Smith, 1992; James, 1992). In the critical incident, the researcher has no definitive evidence that the patient's outcome will be positive or negative and as a consequence tries to demonstrate a caring and safe environment without being overoptimistic. This approach demonstrates what Hochschild (1983) describes as the use of surface and deep acting, in that on the surface the researcher is demonstrating a calm and caring approach but from a personal perspective acknowledges that the patient's situation is far from safe and predictable. With that comes a feeling of personal discomfort. For the researcher, the relationship between the provision of emotional care and the emotional labour of nursing raises questions about whether emotional labour exists among the participants in the findings of this study and, if so, the nature of the situations in which it occurs.

5.2.1.4 Working as a team

The process of collaborative care is illustrated in extract: CI.2 (Section 5.2.1.2) and extract CI.3 (below). In the first extract, the text describes harmonious team working with the people involved seeming to understand the contribution each person

was making to the patient's care. This is consistent with McCallin and Bamford's (2007) description of effective team work based on the utilisation of broad synergistic relationships that integrate technical and interpersonal skills to achieve a shared goal related to patient outcome. In this context, it can be argued that team working has the potential to flatten hierarchical structures, facilitate co-operation and lead to more effective outcomes for patient care (Atwal and Caldwell, 2006; Durbin, 2006; Snelgrove and Hughes, 2002).

In the following extract, both players in the process of care are uneasy and unclear about their defined role and function:

> *C1.3*
> *...the junior intensivist was charged with the job of inserting a nasogastric tube into the patient. The doctor seemed apprehensive and invited me to do it instead - unsure of my role and responsibilities as a visiting nurse lecturer, I declined. He did tell the patient what he was going to do but I didn't feel he instilled any confidence in his actions to the patient or me. The doctor said; "I don't like putting these down freehand, I'm used to doing this during intubation." His first attempt was unsuccessful, "See I told you I was no good at this, sure you don't want to put it down?" I said; "No, why don't you straighten his head to get better alignment and lean his head forward a little?" It worked!*

The junior intensivist found himself undertaking a familiar procedure in an unfamiliar situation, while the nurse lecturer was unsure of the scope and limitations of her role. The result is that the focus is purely functional and the patient appears secondary to the process. The nurse lecturer, while refusing to undertake the task indicated, does finally offer advice in order to improve the likelihood of success. In this extract, it can be argued that a shared understanding of each other's role within the team is lacking and, as a consequence, actions are undertaken without an understanding of mutual trust. As a result, teamwork is compromised; an outcome, however, is eventually achieved.

Why is it that in extract C1.2 the team are able to function effectively without the need for verbal communication and clarification of role whereas in extract C1.3 the process of team working is hampered by hesitancy and indecision? The answer may lie in the nature of professional roles. In this case, there was ambiguity over, firstly, who was the teacher and who was the learner and, secondly, over who was the key decision maker in the situation. The participants were a junior intensivist (a

medical practitioner involved in learning a new role) and a nurse lecturer (an intensive care nurse updating her skills and an experienced practitioner of education) and a patient who, because of the nature of his illness, was unable to contribute to the interaction. Team working in this situation therefore may have been imbalanced by uncertainty, lack of mutual trust and knowledge of the key players. These findings are supported in the literature where interprofessional working and the nurse-doctor relationship reveals a tradition of complex and often hierarchical relationships. Such relationships can be positively and negatively influenced by the nature of the situation as well as the mutual knowledge and understanding of the key players (Allen, 2002; Prowse and Allen, 2002; Snelgrove and Hughes, 2002; Mackay, 1993; Porter, 1991; Hughes, 1988; Stein, 1967). From the researcher's perspective, this theme highlights the relationship between effective team working and patient safety, as well as highlighting the uncertainty of outcome and the subjective nature of team working in unfamiliar situations.

5.2.1.5 Conclusion

In conclusion, by entering into a dialogue with the critical incident, the researcher has been able to reach an understanding of the role of the critical care nurse from a personal and theoretical perspective. From the researcher's perspective, nursing is concerned with being involved with the practice of holistic care and seeing the patient as a human being, keeping the patient safe through vigilant approaches to assessing and monitoring the patient, the provision of emotional care and, finally, team working. When these themes are analysed in the context of nursing theory, they demonstrate consistency with theories of nursing presented by Clark (1998), Benner *et al.* (1999), Leininger (1991), Benner and Wrubel (1989), Watson (1985), Henderson (1980), Gortner (1980) and Donaldson and Crowley (1978). These consistencies include references to caring, concern and responsibility for frailty and vulnerability, co-ordination of care, developing partnerships with patients, carers and families, person centred activity, technical expertise, technical care and psychosocial aspects of care.

The literature on the role of the nurse in intensive care highlights the continued focus on holistic care, vigilance in the process of assessing and managing care, working collaboratively and emotional aspects of care (McGrath, 2008; Almerud *et*

al., 2007; Wilkin and Slevin, 2004; Wikstrom and Larsson, 2004) and reflects a trend towards more holistic approaches to care that has been evident in the practice of critical care nursing since the 1980's (Benner *et al.*, 1999; Scholes and Moore, 1997; Scholes and Smith, 1997; Mills, 1997; Walters, 1995a; Ray, 1987; Benner, 1984). While the notion of holistic care appears strongly supported, it is significant that the majority of studies reviewed utilised qualitative research approaches and, as individual studies, lack generalisability. However, the consistency of findings in all the studies support the researcher's understanding of the role of the nurse in a critical care environment and justify the researcher's pre-understandings summarised as statements in Section 5.2.3.

5.2.2 Influence of the literature review

The purpose of the literature review was to define and clarify the problem area for the research, critically analyse the quality of the evidence to support the choice of research question and to critically examine the historical context of the role of the nurse in caring for seriously and/or critically ill patients. To that end, the researcher asked the literature a series of questions concerning the care of critically ill patients that were triggered by the requirement to define and explore the phenomenon of suboptimal care and nursing. The questions included: "What is suboptimal care and what is the strength of evidence to support its existence?"; "What are the causes and factors influencing the incidence of suboptimal care?"; and "What is known about the work of the nurse in the context of suboptimal care?" By undertaking the literature review, the researcher was able to justify the rationale for this study as presented in Chapter 1 and to clarify questions to be asked of the data collected through the interview process.

From the researcher's perspective, health care is concerned with innovative practice and pushing the boundaries of what is possible in order to promote health and treat ill-health. This drive for innovation and development is seemingly only limited by the scope of what is possible from a technological and physiological perspective and the availability of human and material resources, as illustrated by the development of techniques for invasive respiratory support and techniques for cardiopulmonary resuscitation (Naeem and Montenegro, 2005; Sykes *et al.*, 1995; Hillman, 1990; Ayres, 1994; Lassen, 1953). In the last thirty years, advances and

innovation in advancing health care have been tempered particularly in Britain by limited resources and a clinical governance model of health care that focuses on evidence based practice and economic evaluation (Webster, 2002; Ham, 1999).

Suboptimal care as a concept emerged concurrently with the drive towards evidence based practice and can only be identified when it can be measured against defined and evidence based optimal standards. When this principle is applied to the care of critically ill patients in acute care settings, the lack of consistency in operational definitions of optimal practice have led to research findings that lack high levels of rigour and external validity. Despite this, the volume of studies that share these findings and the potential for poor patient outcome have led to international recognition of suboptimal care of acutely ill adults (Department of Health, 2000; Hillman *et al.*, 2001; McQuillan *et al.*, 1998; Franklin and Matthew, 1994; Hourihan *et al.*, 1995; Bedell *et al.*, 1991). The impact of these findings on the researcher was to encourage her to continue asking questions of the data that supported or challenged the validity and reliability of the evidence pertaining to suboptimal care.

Published evidence that highlights the development of suboptimal care include reference to three main areas of concern: inconsistencies in the provision of critical care facilities across the United Kingdom, insufficient attention to competency based education in the care of patients with the potential to deteriorate and poor communication channels at a professional, clinical level as well as at an organisational level.

Firstly, a lack of strategic planning in the development of critical care in Britain has led to a problem of under-resourced support for critical care development resulting in a lower number of critical care facilities per acute bed allocation compared to the rest of Europe and the USA (Ridley, 2002; Webster, 2002; Ham, 1999; Edbrooke *et al.*, 1999).

Secondly, there appears to be a lack of clinical and competency based education and practice related to managing acutely ill patients for junior doctors and nurses in acute care environments, resulting in increased numbers of inexperienced health carers as the first line of care and management (Hodgetts *et al.*, 2002a).

Thirdly, poor organisation and communication channels at both strategic and clinical level for facilitating the care of acutely ill adults in hospital settings has led to an often slow and tortuous journey towards optimal care (Webster, 2002; Allen, 2002; Snelgrove and Hughes, 2002).

When this is considered in the context of the changing demographics of health care towards a system that accommodates only the acutely sick and highly dependent patients being admitted to hospital for longer than day care, the outcome can only be an increasing demand for staff to undertake optimal assessment and management of these patients. For the researcher, this highlighted the need to interpret the experience of nurses caring for these patients, not just in terms of the recognition of the patient's clinical deterioration, but also by examining the strategies used by nurses to manage these situations as well as the context in which they occur.

When examining the role of the nurse in the context of suboptimal care, previous studies that have provided a more in-depth understanding of nurses' experiences are qualitative with limited generalisability to the general nursing population. The findings from these studies only add to the recognition of complexity in the nursing management of this group of patients. What they have highlighted is the influence of clinical expertise and experience on the process of clinical decision making as well as the recognition of an increasingly high workload in the practice of acute care with what is perceived as having no extra resources to support it (Cutler, 2002b; Cioffi, 2000a, 2000b; Hodgetts *et al.,* 2002b; Goldhill *et al.,* 1999a; Franklin and Matthew, 1994). For the researcher, these findings continued to strengthen the need to tease out and interpret the complexities of practice by examining how nurses experience situations when patients develop critical illness.

5.2.3 Summary of the researcher's pre-understandings

In summary, by considering the tradition of critical care through the analysis of a critical incident and the literature pertaining to suboptimal care, the researcher has added another horizon of understanding to the experience of caring for critically ill patients. The key influences on the researcher that have been recognised through this interpretation are summarised in the following seven statements:

Statement 1: Holistic care is valued by nurses and is arguably a necessary condition for the assessment and interpretation of patients' care.

Statement 2: For the nurse, assessment involves the recognition and interpretation of subjective and objective data.

Statement 3: Keeping the patient safe is central to nursing practice..

Statement 4: The provision of emotional aspects of care can have a therapeutic value for patients and relatives but this may come at a personal cost to the nurse and be experienced as emotional labour.

Statement 5: In order for team working to be effective, the players in the team are required to demonstrate mutual trust, respect and collaboration, even in the context of uncertainty.

Statement 6: Suboptimal care can only be defined and measured against operationally defined optimal standards.

Statement 7: In order to understand how nurses care for patients with clinical deterioration, questions should focus on how nurses assess and report this phenomenon, what strategies nurses use in these situations and how the strategies used are affected by the clinical context.

By summarising her pre-understandings as statements, the researcher has made explicit the parts of her historically affected consciousness that have informed her interpretation and presentation of findings.

5.3 Presentation of the dialogue with the text, history and pre-understandings

The aim of this section is to present and discuss the interpretation of the interview data as text. This includes the play of movement from the researcher's recognised pre-understandings into the hermeneutic circle, through the interpretative process and towards a new horizon of understanding.

The first two sections introduce the participants (5.3.1) and themes (5.3.2) that have emerged. What is presented provides a simple description of the process and experience of participants as illustrated in the text.

The later sections (5.3.3 to 5.3.8) cover the interpretation and discussion of findings in the context of the researcher's pre-understandings and of the literature that has emerged since the original data collection at the end of 2004. The six themes are presented in individual sections although the researcher has, where appropriate, highlighted the connections between the themes and categories as part of the discussion of findings.

5.3.1 Introducing the participants and practice as text

Within this study a total of eight participants were interviewed and the text produced represents the interviews as transcripts. Each participant has been given a pseudonym that matches the first letter of their current working environment. For example, Cathy works in cardiology. The pseudonyms used do not relate to the participants' original identity. These pseudonyms have been used as part of the coding practice for tracing the extracts from the data back to the original data source and will be identified at the beginning of each extract referred to in the text.

Cathy is a senior staff nurse working on a cardiology ward, an acute ward with 24 beds. On a usual shift, the ward has a ward manager, three registered nurses and up to three health care support workers; third year nursing students are also allocated to this ward. The patient:nursing staff ratio on this ward was 8:1. The ward has a mixture of day case patients admitted for cardiac catheterisation and a range of other cardiology patients. The staff on the ward relied heavily on protocol based management for assessing and managing patient problems related to the specialist area. This appeared to give the nurses a degree of autonomy with regard to guided decision making and is referred to by Marian in a positive light when she reflects on working in cardiology before her post in general medicine:

6.33 Marian
As a nurse in cardiology we had set policies which
covered certain situations And as a nurse in those
situations you can use the set policies, so that you know,
like if a patient becomes bradycardic you know that you
can give certain medication even if it's not prescribed, it's
all in the protocol you can give it, you've been trained,
you can give the medication in certain situations and
you're happy to take on that extended role. You can do
that as a band 6 on cardiology, but as a band 7 in
medicine my hands are totally tied and I know that I've
got patients on the ward in that acute situation

This on the other hand appeared to be an accepted part of Cathy's role. In the following extract, Cathy describes a situation when she was able to act on her extended role and manage the situation effectively:

1.165 Cathy
Its nice when you can deal with the whole situation
yourself. Like, a lady went into VF, last Saturday and I
just went up and shocked her and she went straight back
into sinus rhythm. And you sit back and say "I just did
that"

Cathy has worked on the ward for seven years. During that time, she had a secondment to cardiac high dependency in order to support her role in the ward. Prior to this, she worked in elderly care and intensive care respectively. In her spare time, Cathy works as a bank nurse in critical care and is in the process of completing a degree in nursing, choosing to include critical care modules as part of her options.

Carol is a senior staff nurse working in a cardiac high dependency and coronary care unit comprising ten beds and a chest pain assessment bay. The unit has the facility to liaise directly with ambulance control and admit patients with chest pain directly to the unit, bypassing Casualty, and reducing the time between admission and treatment. In this unit, there are nurse specialists/practitioners who are able to assess and treat patients with thrombolytic therapy. The skill mix on the unit reflects this and includes five trained staff on the day shifts and four at night; third year student nurses are also allocated to the ward. Carol has worked here for six years during which time she has successfully completed a foundation module in cardiac nursing. Prior to working on the unit, Carol worked in clinical areas including acute medicine, acute surgery and medical admissions.

Iris has been a sister in intensive care for nine years; she also has experience working in acute medicine and orthopaedic surgery. During her time in intensive care, Iris has completed a number of specialist modules including subjects such as intensive care and clinical management. The unit comprises up to 20 beds, incorporating both level two and three patients (Welsh Assembly Government, 2006; Department of Health, 2000). On average, there are 16 registered nurses per shift with support from health care support workers and clinical technicians. Third year student nurses are also allocated to the unit and work under the supervision of the registered nurses who act as their mentors.

During the period of data collection, the Trust, without extra funding, set up a team to develop more efficient risk assessment of level one patients in line with the Department of Health (2003, 2000) recommendations. This involved introducing a tool for scoring patients at risk of deterioration and a pilot study involving the introduction of an outreach service to the surgical unit. Iris had mixed feelings about the initiative, however, and recognised some benefits and costs of the development:

3.38 Iris
I think there are far more referrals than before and I think
that the referrals are earlier than before there is too much
patient deterioration and I do think the number of
admissions have increased and this had had ad effect on
workload and I feel that sometimes we're moving patients
out a little bit sooner to allow other patients to come in
and this is having a knock on effect and you know they'll
probably come back in two or three days time but it's just
weighing up whose actually..... and it's the doctor's
decision ... Weighing up who needs the facilities more.
(I) So are you saying it's about prioritising?
Yes and sometimes it has to be quick, so at the moment we
have four patients in recovery and we have 16 patients at
the moment even though a 6 bedded bay is closed. And
it's a frequent occurrence that we're having to move
patients out and that about 30 -60% of the patients will
need to come back. The doctors do go out and review
them on the ward in their outreach and they keep a folder
with their names in and which ward they've gone to and
then you'll find that still patients do come back and we
have to move someone else out and sometimes they come
back in a poorer state then they were when we sent them
out.
(I) Why do you think that is?
Well I think it's because we've sent them out before
they've been ready to go, they are still needing a level of
monitoring that the ward staff can't provide whether

*that's lack of facilities, establishment, expertise, I don't
know. My guess would be that it was the staffing levels
rather than the lack of expertise.*

Imogene is a junior staff nurse, working on the same unit as Iris. She has worked on the unit for a year and this is her first post since qualifying. Imogene has yet to decide what she wants to do with the rest of her career. When describing her work, she appeared to focus on the patient allocated to her and was not able to describe her responsibility as being anything beyond the area of her allocated bed space:

4.6 Imogene
*I do all the observations on a patient, blood pressure,
pulse, I give their IV's, take blood for blood gases, um, I
take care of the dialysis patients, um general care of a
patient.*
*(I) So whenever you're on a shift are you allocated a
patient?*
*Yes, when we come we're allocated to a unit, then we get
allocated a patient by the nurse in charge of that unit.*
*(I) So if I didn't know anything about critical care and I
asked you to describe to me a critically ill patient, what
would you say?*
*The number of pumps by the bed is a good indicator of
how ill the patient is, whether they're ventilated, whether
they're on dialysis, you know, the number of infusions
they've got um... How many nurses are around the bed
and the doctor, um... the fact that they're on 24 hour
monitoring.*

Imogene's description highlights an emphasis on the volume and complexity of technology as a measure of critical illness rather than the instability and critical nature of the patient's condition.

Isabel, like Iris, is a sister in intensive care; she has been in post for a year. Prior to her promotion, she worked on the unit as a senior staff nurse. Isabel has also worked as both a junior and senior staff nurse in elderly care before making a career change to critical care. Since qualifying, Isabel has completed a diploma in nursing and an intensive care module. Isabel, like Iris, recognised the pressure on the need for intensive care beds in the Trust and, although the unit seemed calm to the researcher, there appeared to be an undercurrent of pressure related to assessing and transferring patients as soon as possible:

5.21 Isabel

We have an open door policy here, every patient is accepted, it does depend on the bed situation. Some of the newer consultants do tend to question some patients though. The only real issue is the bed management; we're a very big unit here. We take critically ill patients from the tertiary units as well so we have a large catchment area and there is always pressure on beds. Like the other day we needed to bring up a patient from the ward who had arrested but we didn't have any beds, we had one to transfer to the ward but they couldn't take him until the other patient was moved. So we transferred our patient to recovery, cleaned and prepared the bed area, accepted their patient and then transferred the patient down to the ward from recovery. And you have to take a nurse with you to recovery to nurse the patient until the patient is ready to be discharged down to the ward. It's very time consuming.

(I) When you discharge patients to the ward from recovery, do they have to meet any criteria before they're discharged?

They have to be assessed by a specialist registrar first and they have to have a stable respiratory status and cardiovascular status. They need to have their blood results checked before they go. If the bed crisis is too bad they will wean some patients off epidural analgesia and on to IV patient controlled analgesia so that they can be transferred back to the wards. The ideal is to keep them for 48 hours but when there's pressure on beds...

The complexities of practice in both acute and critical care settings with regard to bed management and patient discharge are revealed in the extract above and highlight the attention placed on bed management as opposed to patient need to determine patient location. A reactive process is revealed as opposed to a proactive process for managing care. This notion of reactivity was reinforced for the researcher by several critical incidents that occurred while visiting the acute medical wards for potential participants in the study. The first incident occurred in a ward where, after repeated attempts to attract a participant, the researcher had to admit defeat. For that reason, the diary entry is significant as this was the only opportunity to contextualise this area. The diary entry was recorded in January 2004 at 14:00 hours, close to the beginning of the data collection period. The researcher was attempting to attend a previously arranged meeting with the staff:

167

Diary entry: 01/04 14:00 hrs

As I walked down the corridor to the ward I could see a huddle of three relatives (I think) just outside the entrance to the ward, one of them was crying. I assumed that they had received bad news; I acknowledged them and walked into the ward. As I went to knock on the office door I saw, just in time, a sign saying DO NOT DISTURB. I managed to catch the eye of a junior staff nurse I knew as she rushed by and asked her if this was a bad time and to let her know that I would make another appointment with the ward manager. She said, "Oh it's awful here today, we've had 2 deaths this morning and there's no relatives room, we've got them in the corridor, everywhere!"

For the researcher, that visit seemed to highlight the lack of physical space and resources available to meet the needs of patients and relatives at such a critical time and appeared in sharp contrast to the researcher's understanding of holistic care described in section 5.2.1.1 of this chapter. This finding does, however, support the researcher's understanding of emotional care and supports the findings of Kelly *et al.* (2000), Smith (1992) and James (1992) that identify the care of patients experiencing loss and death as a source of emotional labour. The nurse's graphic description of events in this diary entry also highlighted her recognition of the researcher as a fellow nurse as opposed to a stranger.

The second diary entry related to when the researcher made a second visit to an acute general medical ward in the hospital. This diary entry also occurred early on in the process of data collection:

Diary entry: 01/04 14:00 hours
I arrived on the ward early; the staff were still receiving the handover. I decided to stand and wait. I noticed three health care support workers (HCSW) chatting and waiting by the nurses' station (they all had their backs to the patients), they were the early shift. A patient's relative appeared from the six bedded bay and said "I'm sorry to bother you, but my mother wants to go to the toilet?" One of the workers asked which bay she was in and the relative explained. To which the HCSW replied "Oh, that's not my bay, you'll have to wait for the staff to come out of the office." The relative looked confused and desperate, just wanting some help. I said nothing. This was the second time I have made an appointment with the staff on this ward. I sat there in the office and looked at the nurses. There were four staff, two qualified and two health care support workers, plus the nurse who was handing over to the late shift. One of the nurses was

*about 7 months pregnant and she looked pale and tired. I
left some consent forms with them but I knew that I was
wasting my time. I decided that the winter was a bad time
to collect data from one perspective because of the
"winter pressures" but, on the other hand, it is times like
this that there are increasing numbers of critically ill
patients.*

The incident involving the health care support workers led the researcher to question again the notion of holistic care. Is holistic care an ideal to aspire to or an achievable reality? The incident left the researcher feeling negative and uncomfortable with the way care had been avoided by the available staff, including the researcher. This negative view of the ward was recognised and considered when questioning the data.

In spite of the researcher's assumption that no nurses in this ward would agree to be participants, seven months later, after regular visits, Marian, the senior sister from the ward, agreed to be interviewed. Marian had been in post for five years. The 33 bedded ward was managed by a skill mix including two registered nurses per shift and four health care support workers; first and third year student nurses were also allocated to this ward. The patient to trained staff ratio was 16:1, the highest ratio of the areas included in the study. Marian's career has developed from her interest in acute medicine and she has spent time as initially a junior and then a senior staff nurse on acute medicine, cardiology and medical admissions. Marian has successfully completed a diploma in nursing since qualifying.

Mary is a recently appointed senior staff nurse on a medical admissions unit, where she started her career as a registered nurse three years ago. The ward has 22 beds and receives patients diagnosed with acute medical problems for assessment before they are transferred to the appropriate ward. As a consequence, many of the patients on the unit are acutely ill and often unstable. The usual skill mix for the ward is three registered nurses per shift supported by three health care support workers; both junior and senior student nurses are also allocated to this ward. Mary hasn't completed any specialist modules since qualifying but has attended all the statutory professional updating required of her role.

Olive is the participant with most experience as a nurse and her career spans more than 26 years. Her current role involves a job share and part of her time is spent in the intensive care unit described above, with the remainder spent in working with a

team that is responsible for introducing aspects of an outreach programme to acute care areas. The joint appointment has been running for six months and prior to this she was a sister in intensive care for seven years. During her career, Olive has worked in acute medicine and surgery, orthopaedic surgery and rehabilitation wards. She has also completed a degree in nursing and obtained a specialist practice award in intensive care. The key for reducing the incidence of suboptimal care for Olive was related to balancing wide ranging experience with education and a questioning approach:

> *8.27 Olive*
> *I think you need to be able to move around but I think you should have a speciality and it depends very much on the nurse as well , whether they're interested, it's very easy to just go along and do just the work really, without actually looking into why things are happening and asking. And there are a lot of nurses who actually do that, they're just happy to go along and then you ask them why do they think we're doing this, they've not thought of why or asking why. Its not just about the task, it's about understanding what's going on, why things are happening. So you can have experienced nurses in that they've been there a long time but they've not really been interested in why, they've just been interested in getting the basic job done, rather than understanding the what's and why for.*

The above information about the individual participants adds to the context and tradition of the nurses' experiences described in this study. Of the eight nurses participating in the study, six have spent part of their career working in a general or cardiac critical care area, seven have worked in an area of acute medicine or surgery and one has only worked in intensive care as a qualified nurse. The one participant to have no acute care experience is Imogene, who at the time of data collection was a junior staff nurse in her first job. The length of time each participant had worked as a qualified nurse ranged from one year to the maximum of twenty-six years.

With regard to the participants citing evidence of suboptimal care according to the definition by McGloin *et al.* (1999), all participants described situations that met the defined criteria. From examining the participants' stories as they were presented and without additional data, these appeared to occur as a result of:

> inappropriate or inadequate treatment, although the case records showed that the abnormality had been identified by nursing or medical staff (McGloin *et al.*, 1999, p. 256).

By questioning the participants' stories as text in the context of history and pre-understandings, the aim of the researcher is to question the process and strategies used by the nurses and to offer a different hermeneutic understanding of the experience.

5.3.2 Introducing the themes

This section introduces the themes identified after interpreting the text describing the nurses' experiences of caring for patients who develop critical illness. The interpretation was congruent with the process of hermeneutic interpretation summarised in Figures 4.2 and 4.3 of Chapter 4. In relation to the question (Figure 4.2), "What was happening?", the text revealed a complex pattern of clinical decision making that mapped a convoluted process of recognising and defining when a patient's condition becomes critical and the subsequent process of responding to the situation and solving the problem. In all cases illustrated from the text, the process of recognising the patient as having a change in condition began with a trigger that set off a cascade of reactions in response. Overall the text revealed a process of clinical decision making that followed a pattern of: recognising the patient's clinical deterioration and the potential for developing critical illness; formulating a diagnosis for situations that precipitate critical illness; and developing criteria for action that involved waiting for the evidence and responding to the problem through action. A summary of themes one to three and the categories identified for each theme is shown in Figure 5.2 and illustrates the flow of clinical decision making that emerged on the first interpretation.

The first three themes are ordered according to how they occurred in the stories told by the participants. The first theme, *the trigger*, focuses on what triggers the nurse's concern and leads to the recognition of three categories of triggers that alert the nurse to the potential for clinical deterioration. These are described in the text as: *"it's a visual thing"*, *"you get that feeling"* and *"changes in the obs"* *(observations)*. The interpretive process revealed that the triggers used by the participants to recognise the potential for critical illness are based on subjective data and automatic knowing, as well as the measurement of physiological parameters. The possession of clinical and theoretical knowledge as well as prior experience of similar situations are relevant to this process and highlights the inadequacy of using

physiological parameters alone to predict clinical deterioration in acutely ill adults in this study.

Theme two, *the diagnosis*, involves the process of recognising situations that precipitate critical illness and knowing and establishing the criteria for diagnosing critical illness. This theme reflects the different ways critical illness has been interpreted and understood in the text and leads to the presentation of four categories: evidence of a prolonged series of problems and a failure to respond to treatment; failure of one or more systems; sudden severe deterioration; and the unstable patient where the perceived situation is no longer under control. Within this theme the interpretive process revealed that the physiological evidence of clinical deterioration was not the only factor that influenced the diagnosis of critical illness. The participant's perception of their ability to cope with the clinical situation in the environment that it occurs was another significant factor. This includes concerns about patient safety and organisational factors related to access to resources, location and the dependency level of the patient.

The third theme, *the response*, describes the process and type of action taken in response to the diagnosis of events. The categories that emerge from this theme centre on the process of when and from whom to get help. The findings illustrate the strategies nurses use to get help and highlight the influence of factors such as the participant's knowledge of the individuals involved, the impact of the participant's pre-understandings of stereotypes and organisational issues. Within this theme, the text revealed that the nurses understood the conditions for achieving a successful response to their concerns and likewise the conditions for an unsuccessful response. These included the positive impact of having a team approach, mutual trust, respect and medical staff that listen to the nurse. When these conditions were absent, the participants associated this situation with an unsuccessful response and referred to feelings of frustration and disappointment.

The story of how the events were to unfold for the nurses in the study and the impact of the experience on them is revealed in themes four to six. These themes emerged as the researcher questioned the text for factors that influenced decision making. The text revealed that factors determining the process and outcome of actions were influenced by the following themes: theme four, *having control*; theme five, *the role of the nurse*; and theme six, *how the nurse felt*. The movement and interconnectedness between these themes is illustrated in Figure 5.3.

In theme four, *having control,* the text revealed that an important factor in managing this group of patients for the participants was their feeling of having a sense of control. The strategies that were revealed in the text include: ensuring that their personal knowledge of, and skills in, nursing critically ill patients are updated, knowing and understanding what is going on with the patient situation, being one step ahead, anticipating the next move and instilling professional respect for the people in the team. When these strategies did not work for the participants in the study, this was associated with emotional labour and feelings of frustration, as shown in theme six.

In theme five, *the role of the nurse,* the text reflected the relationship between how the role was perceived by others and the amount of professional autonomy afforded to the nurse. For some participants, the amount of professional autonomy they had was governed more by where they worked and the local organisational norms practised in that location rather than by their professional knowledge and expertise. A second finding related to the role of the nurse focused on the closeness of the relationship with the patient. For nurses at the bedside responsible for the day to day care of the patient, they perceived their role as knowing the patient, looking for the cues that indicate clinical deterioration and predicting the progress of the patient. For these participants, the feelings expressed regarding the experience were more subjective and intense. This appeared to contrast with participants who perceived their role as that of the manager or supervisor. In their case, the findings showed a more objective and measured response to their role. This changed, however, if they changed from supervisor to direct carer.

Finally, in theme six, *how the nurse felt,* the emotional aspects of caring for these patients are interpreted in the context of the nurses' feelings and the interconnectedness between how the nurses perceive their role and their sense of professional control. This was the last theme to emerge and appeared to reflect the primary attention of the nurses towards patient safety and their feelings second. For the participants in this study, the feelings interpreted from the text ranged from the nurse feeling good to feelings of being under pressure, frustrated, sad or distressed. Positive feelings were related to situations that the participants described as going well. Negative feelings were associated with situations where the participant experienced an unsuccessful response to a call for help and relate to the findings presented and discussed in themes three and four. When participants who described their role as knowing and understanding the patient, were involved in situations where

they perceived the patient was not getting the help they needed, the intensity of the emotions described were high. The feelings described in this situation were of sadness, distress and frustration and demonstrated emotional labour related to their role.

In summary, the first reading of the text described in this section helped form the researcher's first horizon of interpretation of the experience of caring for critically ill patients with clinical deterioration. This presented a pattern of clinical decision making influenced by personal, professional, interpersonal and organisational factors. The intensity of the feelings described by the nurses in the text when they told their stories demonstrated commitment, caring and a willingness to develop strategies to protect and maintain the safety of the patient. Based on this first reading, the strategies nurses have developed for assessing these patients appear to be based on a holistic assessment of cues that go beyond the assessment and monitoring of physiological parameters over time.

Using the six themes as they have been interpreted from the text, the process of dialogue continued. This involved pursuing the process of question and answer in the context of history and tradition, pre-understandings from the literature and new knowledge emerging from research and practice. What is presented as an overview in this section represents the beginning of the process of coming to understand what it is like to care for patients who experience clinical deterioration in hospital settings. The notion of entering the hermeneutic circle was embraced in order to continue the movement of play between the horizon of tradition and interpretation of the text. The dialogue with the text involved asking the questions "What is happening?", "How and why is it happening?", "What is the same as or different from the pre-understandings, and how and why?" and "How does this understanding compare to recent findings?"

Figure 5.2
Themes one to three and related categories: recognising, diagnosing and responding to clinical deterioration
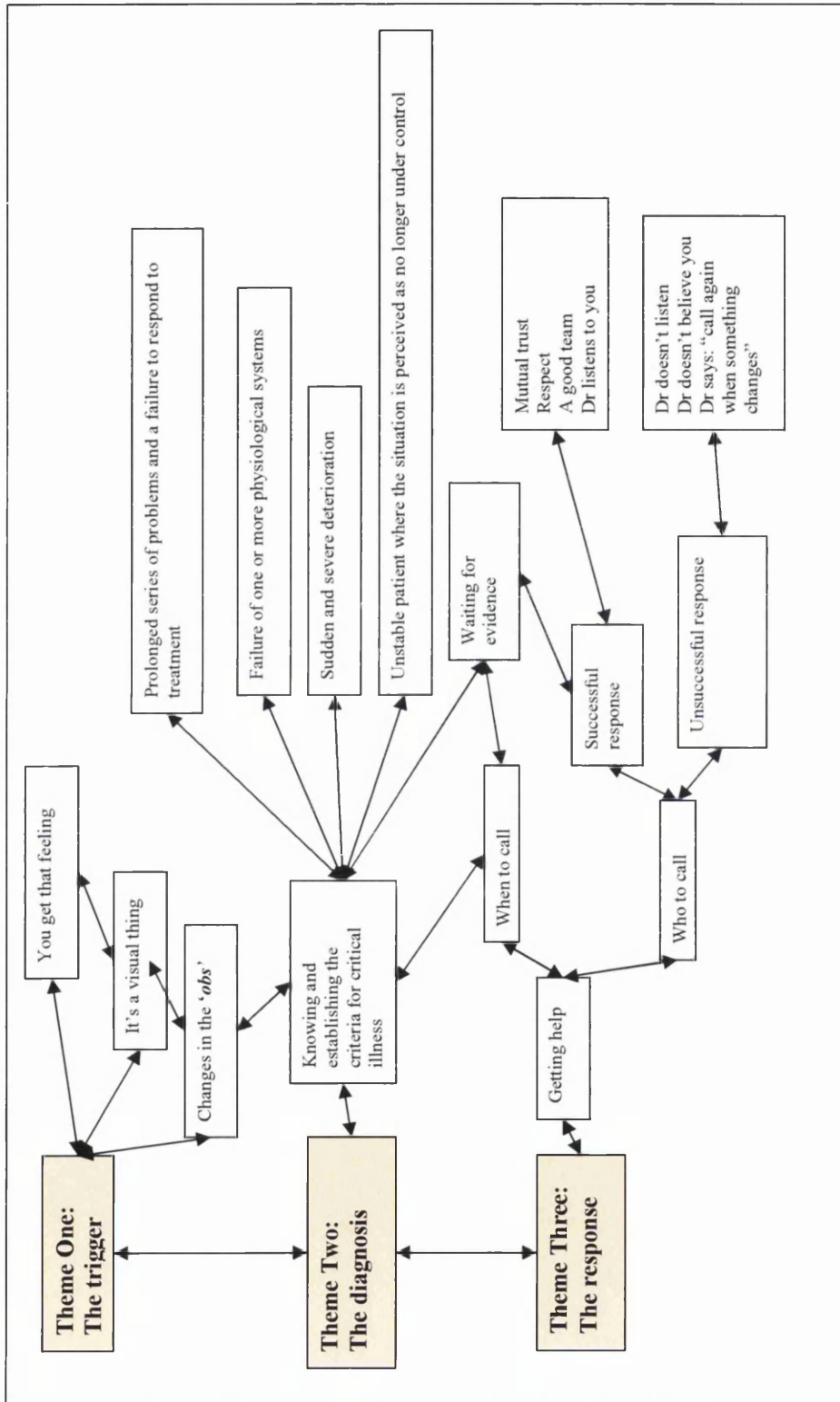
Figure 5.3
Themes four to six: the role of the nurse in the clinical situation and her experience of it
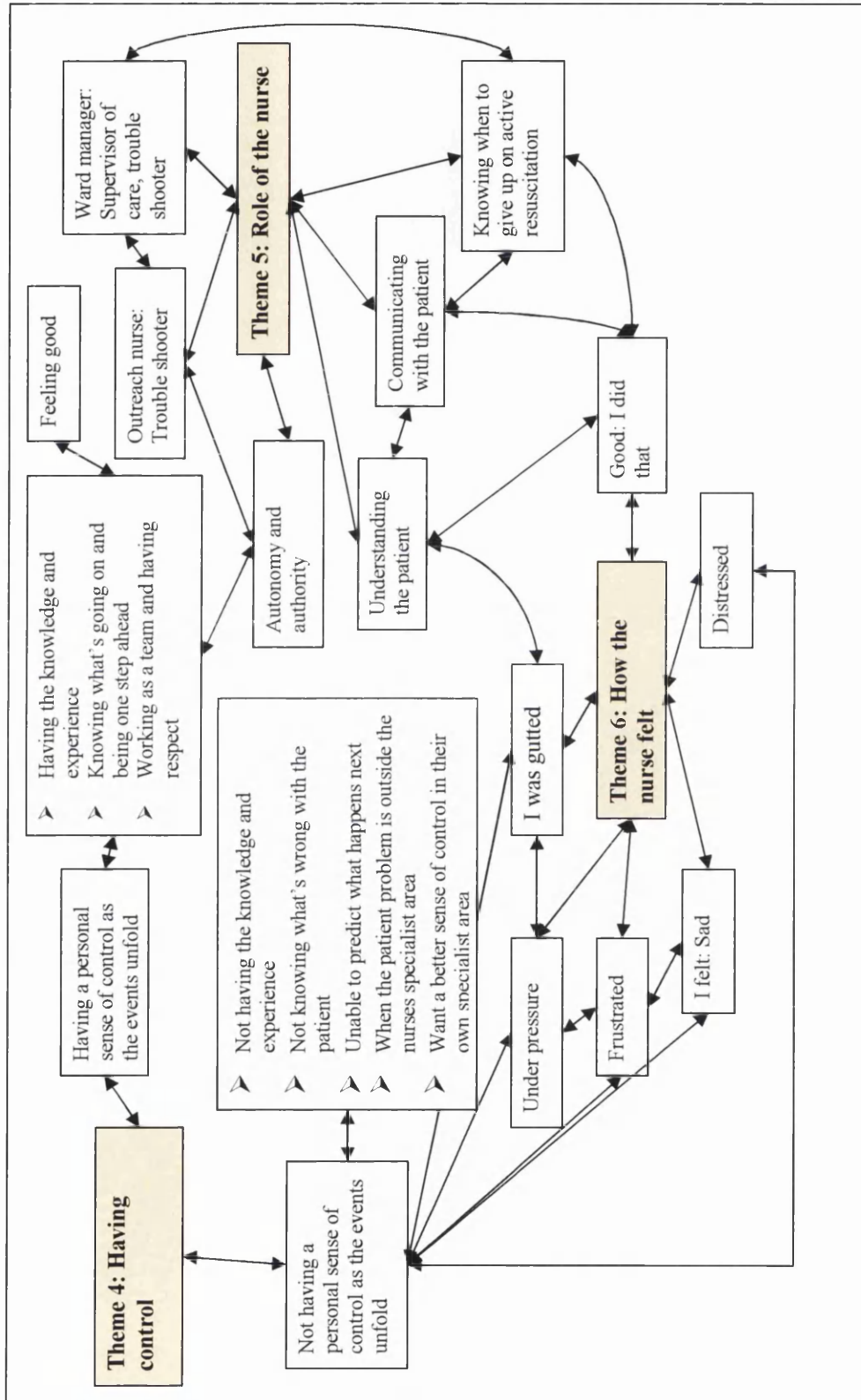
5.3.3 Theme one: the trigger

In this study, when nurses were invited to describe what it was like to care for critically ill patients, they told the story by drawing on examples of patients they had nursed. When asked how they knew the patient was developing critical illness, they described going through a process of realisation that led to the conclusion *"there's something wrong"*. For some nurses, this recognition of clinical deterioration began with evidence of a sudden change in the patient; for others, it was more gradual. Altogether the text revealed three categories of triggers or cues that led the participants to a sense of feeling concern for their patients. The first category, *"a visual thing"*, included cues that were perceived by looking at the patient, such as the patient's colour (evidence of cyanosis), skin, verbal and non-verbal behaviour. The second category, *"a feeling that something's not right"*, referred to an association between what the participant observes and a subjective interpretation of the patient's condition. The third category, *"changes in the obs"*, involved physiological observations and measurements of cues that added objective evidence to the interpretation of the patient's condition. The participants also described the need to be vigilant and alert to changes as they occurred.

5.3.3.1 The visual thing

Within the text, the most frequently cited trigger was 'the visual thing' where participants described what they could see rather than what they could measure. The examples from Cathy, Isabel and Marian illustrate this:

1.52 Cathy
but usually it's that visual, um picking at the sheets, not responding in the same way, agitated. Not responding to treatment, it may be their respirations, struggling to breathe. But it's usually a visual thing ...

5.7 Isabel
When she came in she was talking but she became increasingly more centrally cyanosed and obviously becoming more and more hypoxic... but the main change in her condition was her confusion and agitation.

> **6.11 Marian**
> *With the majority of our patients it's usually respiratory,*
> *so a change in respiratory pattern, drop in sats, signs of*
> *hypoxia, cyanosis, signs of them getting drowsy.*

What the participants appeared to see were visual changes in behaviour, level of consciousness and/or the colour of the patient and these alerted them to observe the patient more closely.

Olive, the nurse with the most experience in years compared to the other participants, was more measured in her description of how she recognised the potential for clinical deterioration. In the example below, she described looking for small visual *"clues"* that, when viewed together, led her to look more closely at the patient's general condition, because she knew that this had changed:

> **8.18 Olive**
> *It's quite difficult, it's really complex really because*
> *there's so many little clues but you take it all on board at*
> *once, you uh, know that things have started to change in*
> *the patient somehow, they may be a bit more sleepy or a*
> *bit more confused, not responding like they have been.*
> *It's very tiny, tiny clues really, like it's sometimes difficult*
> *to put your finger on but you just know that the patient's*
> *condition has changed and that gives you then the*
> *incentive to look a bit more closely.*

5.3.3.2 A feeling

Often in the same sentence the participants described having *"a feeling"* or *"just knowing"* that something was wrong, as illustrated in the extract above and the extracts below. The participants who described having these feelings all had at least three years' nursing experience:

> **1.50 Cathy**
> *Um it's the little changes; you get that feeling "Oh I don't*
> *like the look"*

> **8.18 Olive**
> *And even though this man was for full resuscitation and*
> *he hadn't arrested but I knew he was going to, I knew he*
> *wasn't going to survive.*

Olive went on to justify the feeling that her patient wasn't going to survive by identifying some of the clues that led her to this conclusion:

8.19 Olive
It wasn't just his observations, I mean they'd been having
problems with him all night; he was all over the place, so
I suppose it was quite obvious.

2.27 Carol
and initially we didn't know, we just felt, there's
something not right with this woman, you know...

This close association between the visual cues and a feeling of unease that was experienced by the participants appeared as an automatic response to the cues perceived and was accepted by them as justification for looking more closely. In the case of Carol (2.27), there was an expectation that her colleagues and the researcher, as a nurse, would also understand that *"feeling"*. This implies that the practice of picking up cues and sensing a potential problem is shared and understood by the participants in this study to be part of nursing work. Carol, by using the terms *"we"* and *"you know"*, appears to assume that she is not alone in recognising a pattern of cues leading to her feeling that something is wrong, suggesting that her judgement can be replicated by nurses with similar clinical experiences.

The potential value to the patient of the nurse acting on that *"feeling"* was illustrated when Carol described how she noticed the potential for a patient's deterioration when she started her shift, sensing that there was something wrong:

2.16 Carol
...he became unstable just when I started my shift and it
was basically just kicking the sheets off him and I came
on shift and I just thought "there's something not right
with him." And I caught him just before he went into
acute pulmonary oedema , it's the little things, it doesn't
have to be blood pressure or anything like that, it's just
general agitation, before they even start getting the BP
changes and stuff, you know.

The key finding here is that the nurse's ability to recognise and interpret visual cues and feelings is a valuable tool in assessing the patient's condition, particularly if these judgements can be replicated by other nurses in similar situations, with similar clinical backgrounds.

The theoretical arguments to support this finding can be found in the psychology of cognitive perception and the phenomenology of perception. The participants in this study describe being motivated towards being alert for signs of clinical change that, when coupled with their years of experience as a nurse, appear to

positively influence their ability to perceive patterns of events that lead to a diagnosis of clinical deterioration, rather than the perception of unconnected changes. This finding is supported by Anderson's ([1983] 1996) theory of procedural memory which states that, when a new skill is learnt, as in the assessment and recognition of clinical deterioration, it is encoded into short term memory and initially into declarative memory and that, with rehearsal and repeated exposure to the cues and patterns in context, this becomes encoded into a procedural form of memory, triggered by the subsequent exposure to the same pattern. According to Bartlett (1932), the use of schemas or patterns of cues to aid predictive and selective attention to stimuli is a social phenomenon that cannot be isolated from the history and personal experiences of the perceiver and as such is driven by culture and exposure to social experiences so that the schemas remain meaningful to that individual and culture. Thus, for Carol, with twelve years' experience of looking after acutely ill patients, of which the last six have focused on cardiac patients, her ability to recognise subtle cues and predict clinical deterioration has been rehearsed through repeated exposure to personal and shared experiences of caring for cardiac patients.

Benner *et al.* (1999, p. 64) referred to this process of being alert to the potential for clinical change as "focused attention" and the use of cue acquisition as "clinical forethought"; these involve the nurses developing habits of practice that guide "thinking-in-action". They argue, like Bartlett (1932) that clinical forethought is always embedded in particular clinical situations that, with repeated exposure to similar situations, become a habit of thought and represent a patterned way of thinking about a clinical situation. The concept of clinical forethought includes the ability to anticipate likely clinical eventualities when they occur in familiar contexts and to relate to specific diagnostic related groups. This facilitates the nurse's ability to anticipate risks and vulnerabilities associated with each patient's care. The value of context related experience as a feature of fast and efficient cue perception and the subsequent accuracy of clinical diagnosis has also been recognised in other studies (Hancock and Durham, 2007a, 2007b; Reischman and Yarandi, 2002; Cioffi, 1997; Corcoran, 1986; Tanner, 1984; Benner, 1984; Pyles and Stern, 1983).

For Benner *et al.* (1999) and Benner (1984), the theoretical basis for the concept of clinical forethought is grounded in Polanyi's ([1966] 1983) exploration of tacit knowing and skill acquisition. For Polanyi ([1966] 1983), the body is the tool through which external knowledge is acquired, both intellectual and practical. Yet the

body is never experienced as an object by its owner but instead is experienced in terms of the focus of the individual's attention. In the example used to illustrate this in Chapter 4 of this thesis in the context of hermeneutic interpretation, the researcher referred to the ability of a person blinded by darkness to learn the particulars of a stick or probe including the shape of the handle, the length of the stick and the circumferential sweep of the stick. Subsequently, through application of that knowledge, the person was able to use the stick as an extension of his body, so that the end of the stick became an extension of his hand and allowed him to feel his way out of the darkness. The attention of the person in this example was focused on the distal knowledge that facilitated the achievement of the goal, not on the proximal knowledge of the particulars of the stick. The proximal knowledge had not been lost, however; it had become tacit and incorporated into the subconscious level of awareness, as conscious awareness of these particulars was not necessary in order to achieve the goal.

Polanyi ([1966] 1983) describes this process as the interiorisation of knowledge or theory, as a form of proximal or tacit knowledge, in order to integrate the proximal features into a coherent entity for the purpose of attending to a problem or achieving a goal. He argues that the advantage of this is that focusing on distal knowledge as a conscious act facilitates speedy and efficient practice. The proximal knowledge is not lost; it is just not necessary to have conscious awareness of it because this may reduce the level of skill and capability of the user when attending to the key task. Polanyi argues that the particulars of proximal knowledge can be described and analysed but by doing so the knowledge of the comprehensive entity is temporarily removed and when the focus returns to the distal or comprehensive entity, the individual will have a changed perception of the whole, informed by analysis of the particulars.

When this theory is applied to the text in this study the participants appear to recognise the visual cues as existing patterns that automatically inform distal knowledge in order to trigger feelings of concern for the patient's condition. When the participants were asked to explain how they knew, they were able to reflect back on the experience and identify individual cues that informed their practice. Thus Polanyi's description of tacit knowing and its role in the development of cognitive and practical skills shares common features with cognitive theories related to automatic cue perception and recognition of problems based on domain related

experience, rehearsal of skills, automatic attention to schemas, patterns and the use of procedural memory.

5.3.3.4 Vigilance

For the participants in the study, this process of visual checking appeared to begin from the first moment the nurse attended to the patient situation. For example, Mary, a senior staff nurse working on a medical admissions unit, described the need to start looking for potential problems from the first moment of contact with the patient and seemed to ask questions related to the patient situation as they were wheeled into the ward on the trolley, as illustrated in the following example:

> *7.1 Mary*
> *I can tell as soon as they push the patient through the*
> *door, I just look at them, the colour, breathing, are they*
> *flat GCS?*

This pattern of being vigilant while assessing for change is also illustrated by Cathy in the extract below as she described how she tries to be on her guard even for patients not in her immediate vicinity of care:

> *1.189 Cathy*
> *And I'm always very aware that you've got to concentrate*
> *on where you're looking and that you've got sideways*
> *vision of everywhere else and you can tell when*
> *something's not right.*

She goes on to stress that, even when there is no objective physiological change, she checks her findings with her colleagues, waiting and watching:

> *1.52 Cathy*
> *... usually it's that visual, um picking at the sheets, not*
> *responding in the same way, agitated. Not responding to*
> *treatment it may be their respirations, struggling to*
> *breathe. But it's usually a visual thing and you usually*
> *call a colleague and check with them. Usually if you can't*
> *find something straight away then you wait and watch*

She goes on to describe finding a patient in this situation, where there were no observable changes in the patient's condition, apart from the patient telling the nurse that he felt unwell:

> *1.97 Cathy*
> *He had been on coronary care and came to us and then*
> *he said that he felt unwell one evening. And he couldn't*

*really say what the matter was, his observations were OK
but it was just that I felt that he's not right, he's really not
right*

The participants' cognisance of the need to be constantly alert for changing patterns of behaviour when observing or interacting with patients is consistent with the historical tradition of vigilance in the nursing assessment and monitoring of care that can be mapped from the writings of Nightingale to current nursing theory (Ellefsen *et al.*, 2007; Ball and McElligot, 2003; Benner *et al.*, 1999; Fairman, 1992; Nightingale, 1860). In the text, this process appears to begin before objective cues are identified and supports the definition of perception as being an active process, involving interpretation of what is received passively by the senses, in relation to its significance, importance and value (Gross, 2005). This finding also highlights the complexity of the perceptual process in that the cues appear related to the individual participant's history, knowledge and experience of caring for patients in similar situations.

5.3.3.5 Changes in the obs

The use of *"changes in the obs"* was rarely identified as an *early* cue or trigger for concern by participants in acute care and critical care settings. Instead, alerted by mainly observed and personal concerns, the participants tended to wait for evidence of changes in the physiological parameters to confirm and provide objective evidence for their concerns. In the critical care setting, the participants did, however, refer to *"changes in the obs"* concurrently with visual cues in the context of recognising a patient's clinical deterioration. This appeared to be influenced by two factors, the first related to organisational culture and practice and the second to the role of the nurse. In the context of organisational culture and practice, the participants working in intensive care were responsible for only one or two patients whereas those working in acute wards were responsible for the care of up to 16 patients. In intensive care environments, the general aim and role of the nurse is to provide objective assessment and monitoring for patients who require the support of at least one physiological organ dysfunction (Almerud *et al.*, 2008, 2007; McGrath, 2008; Welsh Assembly Government, 2006; Intensive Care Society, 2002a).

For example, for Imogene, working in intensive care was still new and involved a steep learning curve. She described feeling *"a bit shaky"* during handover

after she was allocated a very sick patient, explaining that she needed more time than some of the experienced staff *"to get the complete picture"*. She also referred to her need to constantly monitor the patient and described a *"patient going off"* as equating to anything that had changed. She described her role as reporting changes to the senior staff as soon as they are recognised, so that the information could be interpreted by the more experienced staff and the significance of the changed patient condition assessed.

For Imogene, recognising deterioration in the patient's condition was about looking for any change that has affected the patient's status quo and being vigilant:

> *4.10 Imogene*
> *Um... a going off patient, a drop in blood pressure, in*
> *breathing, change in ventilation, any change that's*
> *different from the start of the shift.*

She reinforced her understanding of the significance of picking up clinical changes by stressing the point again in the following sentence:

> *4.11 Imogene*
> *Anything that changes from the base line - consciousness,*
> *respiratory, blood pressure,* (emphasis on) ***anything****.*

For Imogene, vigilance was concerned with recording the observations, measurement and communication of any change. She did not describe how certain patterns of cues may give clues to the type and severity of the patient's change in condition. This suggests that, as a recently qualified nurse, she was less able to draw on her experience of previous situations to inform her practice.

In acute care settings, the role of the nurse is concerned with assessing, managing and supporting patients who are experiencing acute exacerbations of often chronic medical problems (Ellefsen *et al.*, 2007; Parker, 2004). For the participants in this study, the use of technology is limited to two to four hourly observations of temperature, respiratory rate, pulse rate, blood pressure and oxygen saturations, as well as assessment and support of airway and circulation and pain management for up to 16 patients. These findings are consistent with the standards cited by the Welsh Assembly Government (2006) and the Intensive Care Society (2002a) as a safe standard for assessing and monitoring level zero to level one dependency patients. This level of frequency for assessing vital signs can be challenged, however, by the findings of a number of studies that demonstrate a relationship between evidence of physiological abnormality and patient mortality in level one dependency patients

(Jacques *et al.*, 2006; Goldhill *et al.*, 2005; Goldhill and McNarry, 2004; Buist *et al.*, 2004). This suggests that evidence of patient clinical deterioration could be monitored more effectively by either increasing the frequency of physiological monitoring or continuous monitoring of this patient group. This argument, however, has yet to be supported by research findings (Jacobs *et al.*, 2007; Watkinson *et al.*, 2006; Tarassenko *et al.*, 2006). For example, studies by Jacobs *et al.* (2007) and Tarassenko *et al.* (2006) have been able to establish that technology exists to use continuous non-invasive monitoring of physiological signs for this patient group and that, according to Tarassenko *et al.* (2006), retrospective analysis of the data from these integrated systems does demonstrate that they have the capability to detect critical events in advance of traditional track and trigger scoring. When these provisional findings were tested, however, in a randomised control trial of the clinical effectiveness of integrated monitoring systems on high risk medical and surgical patients, they were shown to have no effect on triggering the recognition of adverse events in this patient group, in spite of the sample groups exhibiting a high incidence of abnormal vital signs (Watkinson *et al.*, 2006). They surmised that the lack of benefit obtained from the physiological monitoring of this sample group was due to other factors such as a high patient:nurse ratio, particularly at night, that limited the opportunity to observe the patients and monitors, as well as the lack of experienced staff to interpret and diagnose the cause of the abnormal physiological signs (Watkinson *et al.*, 2006). This supports the findings of this study, in that participants in acute areas focused less on objective physiological measurement and more on subjective perception of cues to trigger concern for the patient as a result of perceptual scanning, resorting to looking for changes in the observations when looking for evidence to support their concerns. Participants in the critical care areas appeared more likely to use a combination of subjective perceptual cues and objective physiological measurement. This is consistent with patient:nurse ratios being much lower, in an environment where continuous monitoring of physiological signs was available.

In this study, the dialogue with the text revealed a process that began with participants describing perceptual vigilance. This involved scanning individual patients and practice areas in order to look for cues and patterns of cues that, depending on the knowledge and experience of the participant, would lead the participant to feelings of clinical concern. For the participants, this began with "the

visual thing" and included cues such as: a change in the breathing pattern; picking at the sheets or kicking off the sheets; sweating; general agitation; a change of colour; increased sleepiness or confusion; and/or the patient saying they felt unwell. This was often associated with the nurse feeling that something was not right, followed by observing the patient more closely and checking for changes in vital signs. Some participants would ask a colleague to "check the patient with them" in order to verify their concerns. If there were no physiological alterations in vital signs evident, the participants described in some cases telling the doctor or a more senior nurse anyway but others would wait, continuing to check the vital signs until an observable and measurable change was recorded.

This interpretation of the text therefore reveals that the role of the nurse involves vigilance in the assessment and monitoring of what they can see of their patients at a glance - the professional gaze. This was described by the participants in this study as: *"concentrating on what you're doing but at the same time having a sideways glance to monitor the other patients"; "looking for visual changes" or "listening to the patient"*. This, therefore, is similar to Foucault's ([1973] 1989) clinical gaze and the more recent descriptions of the concept of the nursing gaze described by Ellefsen *et al.* (2007). For Foucault ([1973] 1989), however, the historical development of the medical gaze was concerned with the rigorous objectification of the measurement of clinical disease that combined the signs and symptoms gleaned from the clinical examination of a patient with objective physiological, pathological and biochemical findings in order to demonstrate the necessary and sufficient conditions of the patient's disease. For the participants in this study, however, the clinical gaze focused on subjective observation of visual, historical and contextual cues combined with physiological and biochemical data in order to diagnose a situation. The relationships between the role of the nurse, the professional gaze and the cues nurses use to inform their judgements are explored further in later themes.

In summary, therefore, when recognising the potential for critical illness, the participants described being alert to triggers or cues manifested by the patients in their care that led to feelings of concern that were evidenced in all the clinical locations studied. The exemplars given demonstrate a consistency with the processes involved in the perception of cues that are triggered by a direct and/or indirect encounter with a patient, leading to the recognition of cues that subsequently led to concern. In some

examples, the recognition of cues led to instantaneous feelings of concern; with other participants, this process was more gradual, depending on factors such as context, knowledge and role.

This process of perception and cue acquisition for the participants in this study is consistent with both cognitive theories supporting active and selective perception of cues and pattern recognition and evidence of tacit knowledge supporting the direct perception of whole situations, rather than the slower construction of whole perceptions developed through analytical processes such as information processing (Thompson and Dowding, 2002). This finding is supported by the findings of Patel *et al.* (1996) and Leprohon and Patel (1995) in their studies of rapid decision making in emergency situations. In the earlier study, Leprohon and Patel (1995) examined the decision making strategies of nurses involved in emergency telephone triage settings and found that in critical situations the nurses used heuristic strategies, looking for pattern recognition and cues related to critical patient symptoms, to make fast and significantly accurate decisions. In a similar study, Patel *et al.* (1996) examined clinical decision making in an intensive care unit and found that in urgent situations nurses responded to triggers that focused on pattern recognition and intuitive action. Gerdtz and Bucknall (2001), in an observational study of 26 nurses performing 404 occasions of triage, added further weight to these findings when they found that the nurses focused of subjective data to decide on the urgency of the patient's situation and, for those patients where the situation was critical, fast track heuristic responses were observed.

In this study, the text revealed two processes associated with scanning and perceptual attention to cues that led to recognition of clinical deterioration. The first of these is recognising the potential for critical illness. This appears to occur primarily through the use of visual and personal/experiential cue recognition. The second of these is recognising the existence of critical illness. This involves the collection of evidence from physiological measures to confirm the existence of clinical deterioration.

When the findings of this study are considered in the light of the current debate concerning the recognition of clinical deterioration in adults in acute care, they add to the argument to support the combined use of both objective physiological measures and the subjective feelings of clinical concern to trigger a responsive action.

This becomes clinically significant in patients where the nurse recognises clinical concern but has yet to demonstrate physiological evidence to support these findings.

In 2007, the publication of recommendations for the early recognition and effective management of this group of patients included the use of physiological track and trigger systems to monitor all adult patients in acute hospital settings at least every twelve hours, increasing in frequency according to a graded response strategy dependent on changes in physiological signs (National Patient Safety Agency, 2007a, 2007b; National Institute for Health and Clinical Excellence (NICE), 2007). In the clinical guidelines, no recommendation is made regarding the early recognition of the *potential* for clinical deterioration in patients and, significantly, no reference is made to the use and type of subjective data based on the nurses' feelings of concern as a reasonable trigger for recognising clinical deterioration, although clinical concern is included in the algorithm as a factor leading to a clinical response (NICE, 2007).

This appears contrary to the findings of this study and other studies that highlight the nurses' use of personal experiences and pattern recognition to cluster physiological and psychosocial cues together to predict the potential for concern (Cox *et al.*, 2006; Considine, 2005; Hodgetts *et al.*, 2002; Cioffi, 2001; Cioffi, 1998; Cioffi and Markham, 1997; Grossman and Wheeler, 1997; Smith, 1988). This is a particularly significant finding in view of the current lack of evidence to support the clinical effectiveness of both physiological track and trigger tools in identifying and tracking patients at risk and the use of outreach as a system for improving patient outcome following evidence of clinical deterioration (NICE, 2007; McGaughey *et al.*, 2007; Morrice and Simpson, 2007; Johnstone *et al.*, 2007).

These issues, when debated in the first consensus conference on medical emergency teams (DeVita *et al.*, 2006) led to the following recommendations: the continued use of objective criteria to identify patients with clinical deterioration; and the use of subjective criteria to complement the physiological findings. This is consistent with NICE (2007) although both documents recognised the lack of strong evidence to support an improvement in patient outcomes following the introduction of outreach or medical emergency teams.

In a systematic review of outreach and early warning systems, McGaughey *et al.* (2007) concluded that to date there is no evidence to support the relationship between the introduction of outreach and either improved or diminished patient outcomes. In their critique of the studies reviewed, they highlighted that the majority

of the research had drawn on retrospective data where external variables were difficult to measure and predict, with a lack of standardisation of outcome measures that subsequently limited the scope for generalisation of findings and meta-analysis of the data. This reinforces the findings discussed by the researcher in the literature reviewed up to 2004. The recommendations made by McGaughey *et al.* (2007) included a requirement to develop prospective randomised control trials and a standardisation of outcome measures. They also recommended the development of research studies that identify and explain the complex processes involved in assessing and managing at risk patients in acute settings.

These findings and recommendations were reinforced by Gao *et al.* (2007) in a systematic review of track and trigger systems. Following this review, the authors concluded that the validity, reliability and sensitivity of the track and trigger systems currently used to complement outreach were poor. At the time of the review, they found insufficient data to determine the most clinically effective tool, with any potential benefits being hidden or hampered by inconsistency in the reliability and accuracy of the physiological signs measured and recorded.

For example, in a quasi-experimental prospective study by Green and Williams (2006), the researchers evaluated an early warning clinical marker referral tool. The study included pre and post implementation measures of unplanned ICU admissions, cardiac arrests and mortality following cardiac arrest one year prior to implementation and two years post implementation. While the study found no significant difference in survival rates of patients post cardiac arrest before and after implementation, they did record an increase in "code blue" calls for patients who were still breathing, with a pulse and a corresponding decrease in patients suffering cardiac arrest. This finding also corresponded to an increase in the number of unplanned admissions to ICU in the post implementation study, although the authors did identify a number of extraneous variables that may have influenced this.

Significantly, one of the clinical markers utilised to alert the medical emergency team to potentially high dependency patients was the statement, "seriously worried". While some junior nurses would identify with this criterion when they were unsure about the patient and refer inappropriately, the benefits of using it outweighed the number of inappropriate calls in that the authors found that using the criterion, "seriously worried", often identified the critically ill patient before physiological abnormalities were evident. This is consistent with the finding of this study that

participants were able to recognise the potential for critical illness before measurable physiological deterioration was evident. This finding is explored in the next theme, *the diagnosis.*

5.3.4 Theme Two: the diagnosis

When the participants in this study recognised the potential for critical illness, they described clinical situations where they came to the realisation that the patient was deteriorating and showing evidence of critical illness. The participants' perception of when the "potential for" changed to "actual" critical illness appeared to vary so that no general definition or criteria emerged. Instead, this appeared to depend on their knowledge and experience of patient situations in context and while some situations appeared objectively clear, others appeared vague. This led the researcher to ask the question, "What criteria do participants use to decide when a patient has an episode of critical illness?" A dialogue with the text revealed four categories for diagnosing critical illness used by the participants that led the participants to respond to the problem. These included: *"a sudden and severe deterioration"*; *"a prolonged series of problems and a failure to respond to treatment"*; *"an unstable patient where the situation is perceived as no longer under control"*; and *"a failure of one or more physiological systems"*.

5.3.4.1 A sudden and severe deterioration

For patients who presented with a sudden and severe deterioration, the situation was characterised as the participant having no obvious clue or evidence of pattern recognition. This is illustrated by Marian in the example below, who recalls a patient who was admitted with headaches and who, in a matter of hours, changed from a healthy gentleman to a critically ill patient:

> *6.18 Marian*
> *There's one gentleman who came in, had come in*
> *previously, and had a fall at home, had presented in*
> *casualty with headaches and was assessed, started on*
> *warfarin and sent home. He came back into casualty for a*
> *warfarin blood check and was brought up to medical*
> *admissions and then came to us. He came in as a fairly*
> *healthy gentleman, walking and talking, but within a few*
> *hours was unconscious. He deteriorated quite rapidly*
> *with an alteration in his neuro-obs (neurological*
> *observations). He deteriorated over an afternoon shift*

> *and the nurse that was looking after him rang the medics*
> *and said that he was deteriorating, the obs were*
> *changing, he was becoming more drowsy, not as well.*
> *And then within an hour they all changed completely.*

Within the text, Marian elaborated on the patient's history to put the situation in context. She focused on the sudden and swift nature of the change in his clinical condition and particularly the deterioration in clinical signs. Within the text, Marian made no reference to perceiving any cues or triggers from the patient's clinical history - *"He came in as a fairly healthy gentleman"* - and was not concerned until the nurse responsible for the patient's care expressed concern about the change in his observations. The medical team were contacted twice and arrived when another sudden change in the patient's level of consciousness became apparent.

One interpretation of this situation could be that the patient had only recently been admitted and Marian had not got to know the patient, apart from a general overview. Her role as ward manager, rather than direct giver of care, would have distanced her from the patient, leading her to assume the role of supervisor of care. In this situation, the signs would have appeared sudden if the participant had not seen or interacted with the patient.

A second interpretation could be that the participant did not see the potential for critical illness because she had no knowledge of the predisposing factors that can lead to the incidence of cerebral haemorrhage and did not perceive the significance of patterns or schemas that predisposed to this situation.

This particular text challenged the researcher's pre-understandings of the importance of vigilance and selective attention to triggers in the assessment of patients in that, as the story unfolded, a clear pattern of potential danger for the patient became evident to the researcher; to the extent that the diagnosis was anticipated before it was stated. Thus, from the researcher's professional experience as a nurse, the cues described led to prediction of the patient's problem that proved to be correct. This led to the question, "How is knowledge and clinical experience understood by the nurses in the text and did this impact on their level and focus of vigilance in the recognition of impending clinical deterioration in patients they have nursed?" What emerged from the text in response to this question linked the findings in theme one, where connections between clinical experience, selective attention to cues and pattern recognition were highlighted, and in theme four, as the impact of the participants'

"knowledge and experience" were related to their experience of having control over the clinical situation.

When this example is interpreted in relation to the clinical diagnosis of critical illness based on evidence of physiological parameters, as recommended by the National Institute of Health and Clinical Excellence (NICE, 2007), the procedures for recognition and response to clinical deterioration have been followed. Unfortunately, in this example, those procedures did not indicate the potential for clinical deterioration, but actual deterioration instead, in this case a cerebral haemorrhage. What the application of the NICE guidelines have demonstrated in this example is that the principles on which they are based, as illustrated in the literature review, provide a safety net for patients who may not have been identified as having the potential for clinical deterioration as a result of the nurses concern. That is, by following the guidelines (NICE, 2007) for assessing and monitoring the patient, nurses are encouraged to follow a structured reaction to physiological changes rather than to recognise the potential for clinical deterioration and be proactive in that process. As noted in theme one, the notion of "clinical concern" (NICE, 2007, p. 17) for the patient is not recognised until the response stage when it is identified as a factor, with physiological track and trigger scoring, for relating the patient's degree of risk to the most appropriate response. In the next category, the criteria used to diagnose critical illness were more complex and were associated with the patient, his/her clinical history and the pattern recognition of clinical cues.

5.3.4.2 A prolonged series of problems and a failure to respond to treatment

Some participants described patients as having critical illness because they appeared to associate the patient with a prolonged series of problems, where the patient just didn't seem to respond to treatment. In this category, they referred to patients who had been inpatients for some time or who had a history of chronic medical problems. In the example below, Cathy refers to a patient who had a history of cardiac problems for which he had required cardiac surgery. This was followed by a stay in intensive care and then high dependency care, before being admitted to her ward. The patient's problems began slowly with little objective physiological change but Cathy felt there was the potential for critical illness to develop:

1.94 Cathy
I think a critically ill patient is someone with a prolonged
series of problems rather than a one off drop in BP ... I
had a patient who'd had a heart bypass and then
cardiogenic shock. He had been on coronary care and
came to us and then he said that he felt unwell one
evening and he couldn't really say what was the matter.
His observations were OK, but it was just that I felt that
he's not right, he's really not right. Um...so they (senior
house officer) sent him for a check x-ray (in a wheelchair)
to see if there was any sign of infection. And I had a call
from the x-ray department that they were worried about
him, I went down to check on him, he was really
breathless, we put him on a trolley, his blood pressure
had dropped and he was very pale and clammy and
restless. I thought at this point he was better back on the
ward. On the way back he got worse and was going off in
the corridor. When we got back... we did an ECG......his
output was weak, very poor.

In this example, the participant included details of the patient's history that appeared significant to her. Based on this historical understanding of the patient and by listening to the patient, she appeared to recognise the likelihood of further deterioration in his condition.

This text reveals the presence of a historical understanding of the patient's illness as well as the use of interpersonal and intrapersonal cues influenced by past experiences and listening to the patient which led to the eventual diagnosis of critical illness. There is evidence of schema or pattern recognition leading, firstly, to a judgement of impending illness and, secondly, to actual critical illness manifested by physiological changes in the patient's condition. In this instance, the criteria for determining critical illness included the repeated process of recognition and response until the diagnosis had been confirmed, while steps to diagnose the patient's specific problem had already been set in place before actual physiological evidence had been recorded.

In the interpretation of recognising the potential for critical illness before evidence of critical illness occurs, there appears to be a synergistic relationship between the acquisition of theory, a history of context specific practice, memory and cognition in the development of focused cue acquisition. When this is considered in the context of the conditions necessary for Gadamerian hermeneutic interpretation (presented in Section 4.3), the participants are interpreted as developing an

understanding of the whole through dialogue with, and interpretation of, the patient in context. In this process, the nurse carries with her a personal and cultural history, knowledge and pre-understanding of patients and proceeds to question what is perceived. The patient becomes a text where the purpose of the interpreter is to ask questions and seek answers in order to interpret the process and understand the conversation. A significant factor in this dialogue is that the interpretation of the text by the nurse is dynamic and constantly being fed by new experiences that add to the dialogue. If a new situation or contradiction occurs, this further challenges the interpreter to seek the possibility of a new understanding. Thus, the movement of play finds a new direction as the interpreter and the text continue to inform the process of play. The more opportunities the interpreter has to be exposed to the experience, the greater the richness of the interpretative experience.

This can be illustrated in Cathy's description of having a feeling of concern about a particular patient but not being able to find any tangible evidence of this. Her feeling of concern is historically acquired through a combination of experience, clinical knowledge and knowing the patient. Thus, the nurse moves back and forth watching and waiting, having a dialogue with the patient, communicating and asking questions of the picture before her. This process of questioning and responding is consistent with Norman and Shallice's (1986) theory of adopting a "supervisory attentional system" to question and modify the schema or automatic pattern recognition until a new interpretation is achieved.

Without the skill of interpretation, the nurse does not know which questions to ask nor does she know when she has found an answer. All the signs may be there, but not necessarily interpreted and understood by the key interpreter. The skill of interpretation in this situation is bound to the development of theoretical and practical knowledge that informs the pre-understandings and tacit knowledge of the nurse. The following interview extract illustrates how Imogene, a novice nurse in ICU, felt when she recognised her lack of knowledge and experience when caring for a sick patient, highlighting her feelings of chaos and surprise at the patient's care and progress:

4. 15 Imogene
Looking back he was probably the second really sick
patient I nursed, ventilated, um he developed ARDS
(acute respiratory distress syndrome) and was nursed
prone, I'd never nursed a patient prone before, I felt that I
didn't like it very much, I couldn't believe that his face
was so swollen, I couldn't believe it, again the family

were there all night, asking questions constantly, like is
he improving? Why has his temperature gone up? Why is
his heart rate changing? The family, they like fix on
everything and by the end of the patient's stay they know
exactly what the blood gases should be, what has changed
and why it's changed. Um... and trying to keep on top of
the infusions and to keep everything going um and a few
days later, well a week or two later I saw the patient
actually walking around ITU and that felt fantastic

This theoretical perspective is elaborated further in theme four in which the participants having a sense of control over their practice is explored.

5.3.4.3 An unstable patient where the situation is perceived as no longer under control

For some participants in the study, their patient stories illustrated situations where the severity of the patient's illness was entwined with the nurse's perceived ability to cope with the situation. For example, Olive, in her role as outreach nurse recalled a story where she felt that the knowledge and skills of the nurse practitioner and the junior house-officer were insufficient to diagnose, interpret and manage the patient's medical problems. Based on this assumption, she chose to intervene and contacted the specialist registrar on call for intensive care for support. When Olive and the registrar assessed the patient, Olive's concerns were justified and the patient was transferred to intensive care:

8.28 Olive
There was a classic case actually; a night nurse
practitioner brought a patient's 'blood gases' up to the
unit with a pCO2 of 8 (kPa) and a pO2 of 4 (kPa)! And
she was on 28% oxygen. So I said to the night nurse
practitioner (who should be an experienced practitioner),
"you need to put the oxygen up here don't you?" and
(he/she) replied that she was on as much oxygen as she
could have because she's a COPD, so I said, "do you
want me to contact our reg in ICU?" and (she/he) turned
around and said "our doctors don't like interference from
ICU and this was when we were going out and doing
assessments on the wards as part of outreach. So I called
my reg and said that I didn't like the look of the patient
and I think she'll end up arresting and coming to us. So
we went out and he phoned up the doctor to ask if he
would like another opinion and the doctor was a very
junior house officer, he knew very little, he just knew that
you couldn't give oxygen to COPD patients. So we went

> *down and the registrar left it to me, he said, "right you go*
> *and assess the patient and tell me what you see." Well I*
> *could see from the end of the bed that the patient was*
> *struggling, she was using all her accessory muscles, she*
> *couldn't talk, they did have her on a monitor and her*
> *pulse rate was 180, they did have her on an*
> *aminophylline infusion and they had her on 28% oxygen*
> *and she was centrally blue.*

In this example, the participant in the text had been alerted to a significant physiological measure that indicated the possibility of critical illness. This was sufficient evidence for her to ask more questions about the patient and to offer help. The patient's safety was at risk and the participant persevered with the communication even when the nurse practitioner offered a negative response, appearing unwilling to accept the severity of the problem as well as the *"interference from ICU..."* The outreach nurse decided to intervene anyway, highlighting in the story some of the complexities entwined in the collaborative process. In this case, this referred to, firstly, the resistance of the nurse practitioner to recognise when to accept help when the opinion of the team was to manage the situation themselves and, secondly, the seemingly negative attitudes of the staff towards each other. This event occurred at night when the outreach team were not active in their role and this, as well as the collaborative process involved, is explored in themes three and five. With collaboration and support from the intensivist, the junior house-officer did accept help and the patient was transferred to intensive care for treatment of respiratory failure and made a good recovery.

In the second example in this category, the frustration for Mary of trying to care for a sick patient in the cubicle as well as six other patients in the ward proved to be too much for her and, when the patient in the cubicle continued to deteriorate, she called for help. This is illustrated in the following example:

> *7. 6 Mary*
> *We had a 55 year old man with liver disease and*
> *encephalopathy, he was unconscious, and had bleeding*
> *problems, too hard to manage here and we had him for*
> *three days. It was really stressful, I was caring for six*
> *other sick patients as well, he was in the cubicle. I wanted*
> *some answers, he needed attention, he was sick and*
> *getting worse.*

For the participant in this example, the patient in the cubicle needed a level of care that correspondingly reduced the time and capacity for her to care for the remaining

six patients. Mary demonstrated the need to find help for the man in the cubicle, as well as manage the care of her other patients that, in spite of prioritising her workload, she was unable to provide. In this situation, therefore, the influence of workload and organisational issues proved to be the trigger for recognising the critical nature of the patient's situation in context and pushed the participant towards action. This example is examined in more detail in theme six.

The notion of equating perceived critical illness with the nurses' ability to cope was elaborated further by questioning the text for examples of when a patient can be critically ill when measured purely on physiological parameters, but not critically ill in the eyes of the nurse. In the example below, Cathy described a situation when a patient developed cardiac arrhythmias and an unstable blood pressure but at the same time she insisted that the patient was not critically ill because she knew what was wrong with the patient, why it had happened and how to manage the situation. For the nurse, the patient would only become critically ill if the nurse's interventions failed to stabilise them:

> *1.67 Cathy*
> *Of course you get a lot of patients who come back from*
> *[cardiac] catheterisation with an unstable blood pressure*
> *and cardiac arrhythmias. Of course you know that in five*
> *minutes they'll be back to normal. They often drop their*
> *rate and blood pressure and you give them oxygen, raise*
> *the foot of the bed, inform the doctors, that can happen. I*
> *wouldn't class the patient as critically ill with that*
> *because it's something that can happen as the result of*
> *the investigation or treatment. That's why they come back*
> *to us for post- op monitoring*

The relationship between feeling in control of a situation and the perceived critical nature of the patient is also illustrated by Iris who argues that the patients who are intubated and mechanically ventilated are often the patients who are stable and that it's more likely to be patients who are not receiving mechanical respiratory support who have the potential to deteriorate and are the most critically ill:

> *3.14 Iris*
> *Well from a physiological point of view we would say,*
> *someone who has signs of multi-organ failure, or single*
> *organ failure where um, as a unit we say that anyone who*
> *is on a ventilator is critically ill. But we all know that we*
> *have a few weaning patients on here who aren't critical.*
> *And somebody who's not yet been intubated could*
> *actually be more critical that the vented [ventilated]*

> *patient. So to say all ventilated are critical is not a true*
> *indicator........Somebody, who would need a lot of*
> *interventions, lines and blood pressure monitoring, and*
> *lots of invasive procedures and lines really. And*
> *somebody who really has the potential to be intubated*
> *really, they're usually the far more critical patient; once*
> *they've been intubated they're far more stable. Like*
> *sometimes we get the patient quite late from the ward,*
> *and they're often more unstable on the wards than they*
> *are here, once they've been intubated.*

For these patients, the participants focused on instability of the patients' physiological systems as an indicator of critical illness. However, once these systems are controlled the patient is described as stable because their physiological systems are managed and supported.

5.3.4.4 A failure of one or more physiological systems

The example from Iris, above, also highlights the fourth category for diagnosing critical illness to emerge from the text: *"a failure of one or more physiological systems"*. In this category, the participants described a physiological understanding of critical illness that shares common features with the category, sudden severe deterioration, in that the suddenness of the events described by Marian (6.18) and Isabel (5.6) in their stories were matched, while reference to psychosocial and organisational triggers were minimal in both categories. In the example below, Isabel recounts the story of a young woman who presented with deteriorating physiological parameters leading to respiratory failure, renal failure and sepsis:

> *5.6 Isabel*
> *Yes we had a very critically ill young lady recently she*
> *was in her 40's and came in with cellulitis on her right*
> *breast initially it was very small and then it just escalated*
> *and took up the whole of her right side and right arm.*
> *She was quite well coming in initially (an HDU patient),*
> *the only thing was, was that she was hypoxic, they*
> *couldn't get her sats [oxygen saturation] up but she was*
> *talking to us, then on the late shift she just deteriorated,*
> *she became agitated and increasingly confused, pyrexial,*
> *hypotensive and increasingly hypoxic and they just*
> *intubated and ventilated her from there. When she came*
> *in she was talking but she became increasingly more*
> *centrally cyanosed and obviously becoming more and*
> *more hypoxic. And she started going quite hypotensive as*
> *well, and she started to become very pyrexial, raised*

white cell count and her lung and renal function were going off as well, there was a trend but the main change in her condition was her confusion and agitation. She actually deteriorated quite rapidly and she had such a change in blood pressure and temperature.

In this patient, there was a strong emphasis on deteriorating physiological parameters that, when applied to the levels of care for categorising critical illness, clearly indicated the patient had moved from level two to level three, as described by Welsh Assembly Government (2006), Intensive Care Society (2002) and Department of Health (2000).

5.3.4.5 Conclusions

Overall, the text revealed four situations that were categorised by the researcher as equating with the patient developing critical illness. Of these, two situation types were measured predominately against changing physiological parameters that, in the examples included in the text, equated with sudden deterioration in the patient's clinical condition. These included the categories: sudden and severe deterioration and a failure of one or more systems. When the focus was on physiological parameters as criteria for critical illness, the examples given from the text, in both categories, matched the assessment criteria recommended in the NICE guidelines (2007) and the patient dependency levels in these situations could be equated with levels of care two and three requiring either single or multiple organ support (Welsh Assembly Government, 2006).

The remaining two categories were more complex. While the recognition and interpretation of physiological parameters became evident as the patients' conditions deteriorated, the triggers for diagnosing critical illness involved interpersonal, intrapersonal, historical and organisational factors that influenced the final judgement made. These categories included the following: evidence of a prolonged series of problems and failure to respond to treatment; and an unstable patient where the situation is perceived as no longer under control. This implies that, for the patients described in these categories, the physiological triggers were late indicators of critical illness leading to the requirement for treatment associated with level two and three dependency and admission to intensive care.

According to the National Patient Safety Agency (2007a, 2007b) and NICE (2007), the aim of assessing patients at risk of deterioration is to recognise and prevent critical illness based on evidence of physiological deterioration. The findings of this study, however, lead the researcher to question whether primary attention to physiological track and trigger is the most effective way of recognising patients at risk as, based on the findings in this study, this may not prevent critical illness and will only recognise when the patient has already developed critical illness.

This concern has been identified by Coulter (2001) who recommended that a comprehensive framework for the definition of severity of illness should take into account biological and physiological function, the impact on patient functions, the burden of illness and personal, social and environmental characteristics. Attempts to overcome this problem by developing a classification tool with nursing elements focusing on skill mix and nursing dependency have been reported by Harrison (2004). Her provisional findings suggest that, when dependency scoring is used to develop a ward profile for level zero and one patients, there is a proportion of patients that require a higher level of care than the ward resources allow. This supports the findings of this study related to the category, "*an unstable patient where the situation is perceived as no longer under control*".

A second finding in this theme related to making a distinction between when a patient was or was not critically ill. This judgement appeared to be related to the nurses' ability to stabilise the situation, either by direct intervention and treatment or through the use of technology to support and stabilise the patient's condition. This finding links with the nurse having control over the clinical situation and is discussed in theme four.

In summary, the findings of this theme and theme one support the notion of the nurse being vigilant in the assessment and review of patients in their area of responsibility, using a professional gaze that incorporates visual, personal and objective cues that, depending on the nature of the cues, lead to a clinical judgement pertaining to either the potential for critical illness to develop or the recognition that the patient had become critically ill. The adoption of Cave's (2000) understanding of holism as it relates to proximity and discussed in the context of the researcher's pre-understandings is also significant for this finding in that it supports the notion of the professional gaze as being more than what is in the immediate vicinity of the patient. By including the wider proximity of the patient, their history, social and

organisational context, the participants were able to assess and diagnose the patient condition in relation to potential and actual critical illness.

5.3.5 Theme Three: the response

For the participants in this study, once a diagnosis of critical illness had been made, the next step was to decide if and when to get help. Their responses to these clinical situations were influenced by a number of factors and these included the participants' sense of feeling in control of the events, the location and perceived urgency of the situation. What emerged from the data were the strategies the participants used to get the best outcome for the patient. The first of these strategies included factors affecting judgements about whether the nurse should either wait for objective physiological evidence of clinical deterioration before calling for help or call for help before this evidence has materialised and express concern about the patient. The second strategy was concerned with deciding who to call once the decision to get help had been made.

5.3.5.1 Getting help: waiting for evidence

In the example below, the participant is concerned about the patient and wants to discuss this with the registrar but doesn't feel justified in calling him in the middle of the night until there is evidence to back her concerns. She describes the potential for the patient to deteriorate in terms of the situation deteriorating rather than the patient, *"well it's not very pretty here"* and continues to take electrocardiographic (ECG) measurements until the evidence of deterioration becomes apparent:

> *2.39 Carol*
> *You get someone coming in and you know you can see*
> *changes occurring and the SHO (senior house officer)is*
> *there but not the registrar, it's the middle of the night, the*
> *registrar's in bed and we're saying "well it's not very*
> *pretty here" and we have to keep taking ECG's*
> *(electrocardiographs) all the time until we get that one*
> *little change.*

In the example below, Marian's decision to wait for evidence of clinical change was complicated by factors such as where she was working and the level of respect and trust that existed between her and the medical team:

6.20 Marian
The consultants in cardiology respect the nurses and the doctors are taught to listen to the nurses even when there's nothing measurable changing. I would think nothing of ringing a doctor in the night if I was worried and they would come. I gained a lot of confidence down there. I would pick up the phone and say, "I'm not happy" and they would come in, on my say that there's something not quite right. On the medical ward, I'll phone the junior doctor to say a patient's not well and they say yes I'll be up some time. And you say NO, the patient's not well, there are changes on the ECG.

Marian described concern that in one ward she appeared to have the ear and respect of the medical team and was able to call for help before having to wait for the appropriate physiological evidence, while in the other ward she did not. She expressed concern that the house officers did not recognise the same sense of urgency as she did with regard to certain patient problems. As Marian's story progressed, she presented a situation where the physiological evidence has been collected and communicated to the medical team but this was not sufficient to warrant a visit from them. No explanation of why there was a delay in seeing the patient was given by the medics to Marian. Eventually, several hours after they were first called, the medical team came to assess the patient:

6.25 Marian
And then when they finally came to see the patient and got the cardiologist up the cardiologist went and said to me, "I should have been phoned ages ago" and I said don't start on me, I've documented all the times I've spoken to the medics on the phone but they just wouldn't listen to me and the evidence was there the observations and ECG had changed.

What is also highlighted in this example is that the participant was vindicated from a claim of calling the medical team without proper cause, but at the same time she had to live with the stress of knowing that, when a patient needed help, she had been unable to provide it at the appropriate time. The stress experienced by participants in this context often became a factor in deciding who they should call in order to get the best care for their patient and links to a second strategy used by the participants to get help, *"knowing who to call"*. The participant's experience of stress described in this example is explored further in theme six, *the nurses' feelings.*

5.3.5.2 Knowing who to call

For the participants in this study, the factor that influenced who they called was concerned with how to get effective help quickly. These strategies appeared to exist in preference to local protocols regarding medical on-call systems. For Cathy in the example below, her strategy was that if she knew what was wrong with the patient and what to do about it, she was happy to call the junior doctor. If, however, the patient had a problem that she couldn't cope with, she would call a more senior doctor:

> *1.118 Cathy*
> *If I felt I could cope with the situation, I'll give the SHO*
> *(senior house officer) a call, if I feel I don't know what's*
> *going on, then I'll usually call the SSP (specialist senior*
> *registrar).*

She elaborated on this point by referring to a patient she had nursed:

> *1.119 Cathy*
> *He was so sick, I thought he might arrest so I didn't*
> *bother with the middle man. I called the registrar straight*
> *away.*

In the example above, Cathy had recognised the seriousness and urgency of the situation and, acting in the best interests of the patient, she called the person she believed would provide the best care for the patient. For the participant, this strategy was based on her personal experience of previous situations and was entirely subjective.

For the participants in the study who attempted to follow local policy regarding who to call, they described situations when this process could hinder the speed at which the patient received treatment. In the example below, Marian refers to a situation when she had to make a decision to contact the outreach team against the wishes of the junior doctor:

> *6.16 Marian*
> *A lot of it's down to the medics. They [the patients] used*
> *to get seen quite quickly but they're more hesitant these*
> *days. We had a patient go off and we called the house*
> *officer, he was quite junior and we had communication*
> *and language problems and he refused to involve the ICU*
> *team even though this patient needed ICU assessment. So*
> *I had to take it upon myself to ring ICU and ask them to*
> *come and assess the patient. They saw the patient and*
> *then said to the doctor, "why haven't you called us?" He*

*should have called them earlier, and he was transferred
to ICU.*

The dilemma regarding who to call was also experienced by nurses in critical care settings where again the protocol followed the path of calling the junior doctor, as first on call. In the example below, the participant's concern was for the patient to receive treatment without delay. However, by calling the junior doctor first, the time period between the patient being diagnosed by the nurse and receiving treatment was delayed:

> ### 3.25 Iris
> *Um it was quite frustrating initially as well because the
> nurses identified the deterioration, informed the doctor
> about the deterioration and originally the doctor said just
> observe, which is quite frustrating when you know when
> the patient needs more than just observation. So we
> contacted the second on call and then they arranged for
> the neuro doctor[neurosurgeon] to come up. So they took
> him up for a CT scan. Once the second ICU doctor, the
> senior doctor was spoken to, it was very quick, and it was
> all arranged within about half an hour, yes after the
> original call to the junior doctor, I think the patient was
> in the scan within the hour. It was just the original call to
> the junior doctor that took the time.*

This was not the only factor in this instance that led to the delay in treatment, in that the diagnosis was compounded by the inexperience of the senior house officer and the participant, an experienced sister, decided to intervene and call for help from the second on call. The participant's opinion on this occasion proved correct. However, this example highlights again the subjective nature of the judgements made. The physiological changes were evident for the junior physician to analyse as well as the participant but on this occasion she saw the potential for clinical deterioration and felt justified in calling the senior physician based on her own clinical experience and concern for the patient.

In some situations, the nurse's judgement can be influenced by being placed in an environment where the options are complicated by being in the wrong place at the wrong time. In the example below, Cathy was returning a patient from the radiography department to the ward when he collapsed:

> ### 1.133 Cathy
> *When he started to go off, we were half way down the
> corridor. Then you have to decide what to do. I mean I
> know you're supposed to go to the nearest ward, but I*

couldn't just wheel him into casualty, they didn't know
anything about him and where would we put the trolley?
The next ward is ward X (elderly care) and they wouldn't
have the equipment we would need. So the best option
was to get back to the ward where I knew the equipment
was and the staff as soon as possible.

In this example, the participant weighed up the options and decided that the best chance for the patient was to ignore the local protocol and get the patient back to the cardiology ward as quickly as possible. In this example, the patient was successfully treated and was eventually discharged home.

In the extract below, Marian refers to having to accept that it is difficult to get the medical team to the ward to see the patient, especially when there is no measurable evidence to back the claim. In that situation, her strategy is to threaten them with calling the consultant to the ward, and for her this appeared to work:

6.19 Marian
On an acute ward it's very difficult to get a medic to come
to the ward. You know there's something not right with
the patient, you know, the old fashioned nurse's intuition
you know there's something not right but you can't put
your finger on it that's when the junior medics change
their tune a bit when they eventually come up to the ward
and see the change in the patient. If I'm having big
problems with getting them up I say to them right I'll just
ring the consultant and I do, but they usually come up
then.

When the situations are presented in context, however, the strategies can appear more complex. In the example below, Marian elaborates on a situation where a medic was called initially, came to see the patient and felt his condition was acceptable. When he was called again, later in the night, the house officer did not accept that the patient's condition had changed sufficiently to come and reassess him. The participant, however, felt that the patient was critical and persevered until eventually the patient was seen but this was not until the medical team started their morning duties:

6.27 Marian
They had been called in the night to this gentleman
because he had niggling chest pain which didn't show
anything at that point and when I called him later, he
said, "I know the gentleman, he's had a recent infarct,
he's going to have some chest pain, his ECG's were
abnormal before" and he wouldn't take it that he'd gone

*into an acute situation. ... In his defence he said when he
was called to see him earlier he was fine just some
niggling chest pain with no changes on the ECG. But
when he finally came to see the patient it was a different
story. And you just stand there and you think, "why didn't
you come earlier when I called?"*

In this example, the junior doctor had already been to see the patient and subsequently refused to believe that the patient's condition had changed, based on his experience of the patient's condition. Even when the ECG changes were identified, the house officer passed this off as old changes. In spite of this, Marian reinforced her commitment to calling the medical team if she feels that the patient is deteriorating even when there is little or no evidence of clinical change:

*6.29 Marian
On the whole we know not to bother the doctors unless
you know something is wrong, either you can show what's
happening through the observations and test results or
you just know something's not right but you've got
nothing to show for it yet.*

Overall, when the strategies were successful, the participants equated this with using their own clinical judgement to influence their decision of who to call. They described the benefits of team working and having mutual trust and respect among the team members to effect what they judged as appropriate treatment for the patient. Participants recognised protocols and policies regarding the process of accessing help but often ignored them or felt frustrated by using them. In the example below, Carol described how she felt about the doctor-nurse relationship:

*2.44 Carol
I think that on the whole it's very good here you know, it's
good teamwork here and the doctors are good and the
SHOs (senior house officers) are generally good I
suppose, some good some bad, I mean if there's a good
team everything runs well. It's brilliant when they trust
you, If you ring and they know, what you are saying you
know, is true and like the registrar came up to see the
patient because he knew that we wouldn't have said it if
there wasn't a good reason..., I think if you've got respect
for each other, well then you've got it haven't you*

When the participants' strategies were unsuccessful, they equated this with the medical team either not listening or not believing what they were saying. Other factors included the timing of events that were hampered by the slowness of going

through the chain of command or following protocols and junior doctors not understanding the seriousness of the situation. In the example below, Carol goes on to highlight the importance of having a good team spirit and the stress associated with working in a situation where there is bad feeling or mistrust among team members:

> **2.45 Carol**
> *... the worst time is when the regs (registrars) are not very*
> *good, or they don't get on, or they don't accept anything*
> *the nurses say and that's when it's very stressful.*

When effective team work was evident, the participants felt the patient received good care and they equated this with feeling in control of the situation. This is illustrated by Iris in the extract below:

> **3.28 Iris**
> *Yes as a team we coped quite well, you know the nurse*
> *knew what she was looking for, she identified it, she spoke*
> *to me immediately and we did follow the protocol with*
> *what we should be doing and I feel that we coped quite*
> *well with it.*

For the participants in this study, their descriptions of the value of team work were instrumental to the process of getting help. This process was also informed by their knowledge of past experiences of what worked and what didn't. By applying Gadamer's principles of hermeneutic interpretation to these examples, an explanation that is based on the players historically affected consciousness and cultural situatedness becomes evident. Using the extracts from Marian's interview text (6.19, 6.27 and 6.28 above) as an example, it is possible to interpret how the players' historical and cultural situatedness may have led them to the outcome presented by Marian in 6.27. The two players in the dialogue are the participant and the junior house officer. As players in the process of interpreting the patient's problems, both will come to the dialogue with their own historically affected consciousness. For the doctor, this will include his personal and professional history including his years of medical education and training and up to a year of clinical medical experience as a junior house officer. Within that historically affected consciousness, the house officer will have pre-understandings about both his role and the role of the ward sister that will influence how he has seen the situation described. The participant will also have a historically affected consciousness informed by her nursing education and training, followed by eighteen years experience of nursing, with a special interest and

experience in cardiology. The participant will also have pre-understandings based on how she, as a subject, has been influenced by history.

In the to and fro of the game, the participant has described beliefs about not calling the doctor unless something is wrong; she trusts her interpretation of the patient's condition and contacts the junior house officer. The doctor, having only recently seen the patient, trusts his clinical diagnosis over the concerns expressed by the nurse and refuses to consider that something might have changed, the text implying that he perceives the participant to be overreacting. So the movement to and fro continues until the participant finally achieves her goal and, in the process, the experience continues to inform new pre-understandings for both players. For the participant, she has reinforced her opinion that the doctors don't listen; for the junior house officer, he is left with a sense of confusion over his diagnosis and perhaps a new understanding that it is better to check the patient rather than ignore nurses' expressions of concern.

Taking a historical view of the relationship between medicine and nursing, it becomes evident how the historically affected consciousness of both the doctor and the nurse could have informed the game described above, although absolute knowledge of their pre-understandings remain elusive. Historically, the doctor-nurse relationship has been described as the struggle for competing professional status, where the medical model has dominated as the prescribed structure for nurses and other related health care professions to follow (Hughes, 2002; Kendrick, 1995; Freidson, 1970a, 1970b). The medical model is concerned with the pathological processes of disease, its assessment, diagnosis and treatment and has emerged as a result of the objectification of disease from the subject of the patient (Liaschenko, 1998; Foucault, [1973] 1989; Rabinow, 1984).

The dominance of the medical model in health care practice has led to the situation where the medical profession is perceived as being at the top of a hierarchy of health care professions with other paramedical groups, including nurses, placed to support, carry out or operationalise the medical prescription. This tradition has been perpetuated from a nursing perspective by the general hospital nurse being characterised as a female of good character and responsible for the maintenance of all the physical conditions that have been medically prescribed, including the observation and protection of human life (Williams, 1980; Nightingale, 1860). This perspective of hospital nurses, stemming from the tradition of Nightingale, was positive in the sense

that nurses were perceived as vocational and committed to their role but negative in that the clinical skills and improvements in patient care brought about by the Nightingale model of nursing were devalued and surpassed by medical practice (Godden and Helmstadter, 2004).

According to Freidson (1970a, 1970b), as advances in medical technology progressed and demands for health care increased, this led to changes in clinical education, health care reforms and the development of specialist roles for nurses and other paramedical teams. This can be seen, on the one hand, to continue the support of the medical profession but, on the other hand, can be perceived to be competing for professional identity. This perceived threat of the nurse's specialist knowledge and experience on the medical prescription has led to the potential for interprofessional tension and conflict to occur due to the imbalance in the hierarchy, particularly among junior doctors. As a consequence, informal strategies have been reported as ways of recognising the value of the nurse's knowledge without the medical practitioner losing face, including the *"doctor/nurse game"* (Mackay, 1993; Stein *et al.*, 1990; Stein, 1967).

More recent studies have indicated that, while evidence of the doctor/nurse game remains, this occurs on a continuum from the traditional superordinate/ subordinate relationship to more overt challenges by nurses towards medical authority (Snelgrove and Hughes, 2000; Allen, 1997; Svenson, 1996). This is highlighted in a study of doctor/nurse relationships on acute medical wards in Wales, where Snelgrove and Hughes (2002, 2000) identified that, even in situations when the junior doctor had accepted the advice of the nurse, he/she did so reluctantly and with some scepticism. This was found to be due to the doctors recognising that the nursing and medical roles have different characteristics and functions, some stating that nurses had no role to play in medical diagnosis (Snelgrove and Hughes, 2002). The historical tradition of medical superiority continues to be cited as problematic, as evidenced by Rudland and Mires (2005), who, in a study of characteristics and attitudes to interprofessional education between medical students and nurses, found that medical students tended to stereotype nurses as having less academic ability, status and competence than doctors. While these findings have limited generalisability, they represent examples of the tradition of the hierarchical relationship that continues to exist and support the historical interpretation of factors that have informed the findings of theme three.

Similar findings were reported by Reader *et al.* (2007) following a cross-sectional survey of interdisciplinary communication in ICU. In this study, 48 medical doctors and 136 nurses from four ICU's responded to the survey with a response rate of 48%. While it can be accepted that this research has limited generalisability due to the low response rate, the findings revealed that senior doctors had negative views about communication accuracy between nurses and doctors. Similarly, the nurses reported less openness in communication between doctors and nurses although this was contrasted by the senior doctors perceiving themselves as very open to communication. Some of the factors identified to explain these findings were consistent with the findings of this study and included hierarchical factors, differing care responsibilities and different training methods.

In summary, although the ideal perceived by the participants in this study was for the existence of effective team work, this was not always possible, due in part to the interplay between the tradition of a medical hierarchy and balanced interprofessional collaboration. The strategies they used to overcome these issues included waiting for physiological evidence, calling if they were concerned without waiting for evidence and either contacting the senior person on call as a priority or, if the junior physician did not respond as required, calling the senior physician on call. In the first instance, by waiting for the physiological evidence, they were fulfilling their role in the observation and reporting of objective signs of deterioration according to the medical model and the National Institute of Health and Clinical Excellence (NICE, 2007). In the second instance, by calling the doctor before the evidence was collated but instead expressing clinical concern, they ran the risk of not getting help. If there was evidence of effective team working, however, the doctor would listen. The notion of using clinical concern is again accepted as a valid reason for calling for help by the National Institute of Health and Clinical Excellence (NICE, 2007), although no evidence base or elaboration of meaning of the term "clinical concern" was included in the document. The findings of this study, however, do indicate that clinical concern is related to the interpretation of the visual cues and professional gaze described by nurses with knowledge and experience in their area of practice. The difficulties encountered with unsuccessful responses in this study are explored in more detail in the following themes.

5.3.6 Theme Four: having control

In this theme, the participants described the strategies they used to help them have a sense of control over what was to some extent an unstable and often unpredictable situation. They equated having a sense of control in their role with feelings of self-confidence and job satisfaction. In the example below, Cathy described a clinical example of when she was in complete control of the situation and the patient had a positive outcome as a result:

> *1.164 Cathy*
> *It's nice when you can deal with the whole situation*
> *yourself. Like, a lady went into VF (ventricular*
> *fibrillation), last Saturday and I just went up and shocked*
> *her and she went straight back into sinus rhythm. And you*
> *sit back and say "I just did that".*

The strategies the participants appeared to use in order to gain that sense of control include: *"having the knowledge and experience"*; *"feeling confident about who and when to call for help"*; and finally *"having authority and autonomy"*.

5.3.6.1 Having the knowledge and experience

For Cathy, having the knowledge and experience of caring for critically ill patients was very important to her and she stressed this on several occasions as presented in the extracts below:

> *1.223 Cathy*
> *I think a lot of is down to knowledge, that's what makes*
> *the difference and hindsight. Because it helps you to know*
> *what's going on and you feel more in control and you can*
> *keep up with what's going on with the patient.*

> *1.217 Cathy*
> *I was very conscious of the fact that when I qualified that*
> *was something I would have liked (the knowledge) and*
> *that's why I did critical care courses. I had **no***
> *[participant's emphasis] knowledge, even when I was an*
> *E grade on elderly care, in charge, before I moved to*
> *ITU, I knew absolutely nothing.*

This emphasis on the need for knowledge and experience was also stressed by Olive when she described the importance of teaching clinical assessment skills and helping

nurses to understand the significance of recognising and understanding the significance of changing clinical signs:

> ***8.50 Olive***
> *I think you need to make sure nurses have the knowledge*
> *and experience to recognise when a patient's*
> *deteriorating because at the moment they're not*
> *recognising it and what to do. We need to use PAR*
> *(patient at risk) as a teaching tool not a deskilling tool.*
> *To encourage them to do courses such as ALERT(Acute*
> *Life threatening Events Recognition and Treatment) will*
> *help and I don't think that learning how to reflect and*
> *how to do clinical supervision is going to dramatically*
> *change the situation on the ground. And there is not*
> *enough trained staff with knowledge and experience.*

In the example below, Olive reinforced her concerns by describing what she found when she looked back through a patient's observation chart after he had been admitted to critical care. She concludes that the nursing team did not perceive or act on objective signs of clinical deterioration from the patient on the ward:

> ***8.47 Olive***
> *I think that's a major factor in why we get so many*
> *patients transferred to ICU. I can demonstrate that by just*
> *looking at the TPR (temperature, pulse and respiration)*
> *charts that come up with the patients because they are*
> *marking observations down on desperately ill patients,*
> *with BP's of 80 or 70 and not doing anything about it. On*
> *one of them they took the BP at 10 pm and didn't take it*
> *again until six the next morning and by then the patient's*
> *BP was 60 over nothing. He came to ICU and died within*
> *12 hours.*

This conclusion seems to have been based on the observations recorded on the TPR chart and does not give a full estimation of how the patient situation was assessed and managed by the nurses on the ward that night. What this finding appears to have done, however, is leave the participant with the assumption that the staff lacked the relevant knowledge and experience and that the patient received suboptimal care.

The value of the strategies nurses use in trying to have a sense of control over the patient's care is highlighted when the participants described situations when these strategies were not employed. For example, in the extract below Carol recognises the potential for a visiting staff nurse from a related specialist area to miss the subtle changes in a patient's condition when he came to help:

2.36 Carol
And we had this extra nurse on the night shift, the guy
came down from cardiac ITU and as we were one patient
down, I said I would baby-sit, leave him to look after the
patient, as it was his first serious admission and he'd
have to look after this patient on his own but when it was
quiet I would help him. The patient went down hill,
anyway, through the night, and blood gases and he
couldn't see... cardiac ITU are used to looking after
people post-op and it's very hard sometimes because he
was looking after him but I could see changes before he
could. There's a difference between surgery and here,
although people think, you know, that because it's
cardiac ITU they can look after any cardiac patient, but
down here it's completely different and they don't see
things, like I wouldn't see things up there. Outside your
own clinical area sometimes you don't have a clue.

This example highlights the importance of not just having the knowledge but the
knowledge and experience related to that specialist area. The importance of having
this knowledge was also highlighted by Olive who witnessed a situation where the
junior nurse had more knowledge of cardiac problems than the more senior surgical
nurse and, as a result, the junior nurse persisted with reinforcing the problem until the
patient received treatment:

8.48 Olive
Sometimes the nurse just doesn't click that there's
something wrong. I mean I can give you an example. A
patient was given a drug and reacted to it and went into
SVT (supraventricular tachycardia), they didn't know it
was SVT at the time, but the nurse took the pulse and said
"Oh that's very fast" and she said to the other trained
nurse, who was more senior, "Oh I think we need to get a
doctor straight away." And the other nurse said, "Why?
she's alright" The junior nurse said, "Do you know that a
patient can go on to arrest with a pulse that high?" and
the more senior nurse was completely unaware. This was
a surgical nurse who was completely unaware.

In the extract below, Olive went on to equate this with critical care nurses working
with and advising nurses on general wards. Identifying the knowledge in this example
relates not only to the recognition of clinical deterioration, but also to how that can
require different types of clinical knowledge related to the area of practice:

8.17 Olive
*Yes the ward staff need to know **how** (participant's emphasis)*
to manage these situations, we need to increase the skills not

deskill the ward staff. I mean I've looked into what other
outreach projects have done and listened to their feedback and
it's like the big problem seems to be about deskilling ward staff
and taking staff away from ICU. And just because you're ICU
staff doesn't mean you can look after patients on another ward
it's completely different. You don't have all this monitoring
equipment that you have in ICU. Sometimes I don't think people
actually understand the difference between assessing someone
when you don't have all the equipment and monitors.

The types of knowledge described by the participants in this study as affecting the provision of care include: specialist knowledge and courses that can be applied to clinical situations; knowledge and skills related to clinical assessment and interpretation of clinical signs; clinical experience; and clinical speciality and situation related knowledge. These findings are consistent with factors identified as affecting the incidence of suboptimal care in a number of previous studies (McGloin *et al.*, 1999; Goldhill *et al.*, 1999a; Goldhill and Sumner, 1998; McQuillan *et al.*, 1998).

A recurrent issue for the participants in this study was the need to have knowledge and skills relevant to the specialist area in which they worked. This factor was summed up by Carol (2.36) in the quote, *"Outside your own clinical area sometimes you don't have a clue."* This finding can been supported by the findings of Hodgetts *et al.* (2002a) who, in a study of 139 cardiac arrests, identified that, for those patients who were nursed outside the clinical area that specialised in their medical complaint, their chances of having an avoidable cardiac arrest increased 12 times.

Overall, the lack of knowledge and experience of both junior nurses and doctors was identified as an area for improvement in the context of suboptimal care by the Audit Commission (1999). A systematic review of undergraduate training in the care of the acutely ill patients by Smith *et al.* (2007) concluded, however, that the training of health care staff in the care of acutely ill patients is suboptimal and continues to add to patient risk. The quality and number of studies reviewed in the systematic review do, however, limit the generalisability and strength of the findings.

How does a nurse know when he/she has the knowledge and experience to the level required to assess and manage patient care safely within the limitations of practice? In this study, the answer appeared to be related to the participants' demonstrations of clinical confidence when assessing, managing and communicating patient care. This involved the participants being cognisant of their limitations and the

need for updating, as described by Cathy (1.217 and 1.223 previously), and the requirement to prove their competence to themselves and other members of the team, following which, their feelings of self-confidence improved as illustrated in the next category.

5.3.6.2 Feeling confident about who and when to call for help

For participants who described having the knowledge and experience to act, they equated this with feeling confident about who and when to call for help. In the example below, Cathy described how she tried to demonstrate this in her practice by using her own check list and gathering all the information she might need before contacting the medical team. She describes how, as a newly qualified nurse, she didn't have the self-confidence to act but, now that she has the knowledge, her level of confidence has increased and she believes she can predict the next step:

> *1.236 Cathy*
> *As a newly qualified nurse you don't have the confidence*
> *to always act on what you see. I feel quite confident now*
> *that I have the knowledge to back up my observations.*

> *1.238 Cathy*
> *... and I have my own check list if something goes wrong.*
> *Go and check the patient first and the patient will tell you*
> *if something's not right. And then if the blood pressure*
> *drops, check it and look at the patient, are they clammy or*
> *pale? You know the usual stuff. What's more you can be*
> *one step ahead and anticipate what's going to happen.*

The relationship between feeling self-confident and having the knowledge and experience for staff working in acute care was also highlighted by Olive in the following extract:

> *8.22 Olive*
> *A lot of staff on the ward are frightened to act on their*
> *own. They don't seem to have the confidence in their own*
> *abilities. I think it's because there's a lot of junior staff in*
> *high positions. Does that make sense? Experience,*
> *they've come through the ranks quite quickly they haven't*
> *actually got the basic grounding. They may have*
> *academic qualifications you know degrees and things but*
> *unless you are actually grounded in that speciality you*
> *don't pick up the nuances, the subtle changes.*

Marian also refers to her junior staff as not having the strength to challenge the doctor when they won't come to see the patient when called:

> *6.25 Marian*
> *Now me, I get on the phone and scream and shout if the*
> *medics won't come but a lot of my girls wouldn't have*
> *done that in their position, some of the girls especially the*
> *junior staff would not have felt strong enough and would*
> *have just sat back and let the situation carry on until the*
> *doctors decided to come.*

For these nurses, because they lacked that personal sense of self-confidence in their ability, this was reflected in how they were less able to demonstrate collaborative working to the senior staff.

5.3.6.3 Having authority and autonomy

A final factor identified by the participants in relation to feeling in control of the situation was the degree of authority and autonomy they had in making decisions about clinical diagnoses and interventions. For Marian, this was related to the use of protocols when assessing and managing clinical changes. In the extract below, she refers to how policies in cardiology could be adapted for use in general medicine:

> *6.33 Marian*
> *As a nurse in cardiology we had set policies which*
> *covered certain situations And as a nurse in those*
> *situations you can use the set policies, so that you know,*
> *like if a patient becomes bradycardic you know that you*
> *can give certain medication even if its not prescribed, it's*
> *all in the protocol you can give it, you've been trained*
> *you can give the medication in certain situations and*
> *you're happy to take on that extended role. ... but in*
> *general medicine my hands are totally tied and I know*
> *that I've got patients on the ward for that acute situation,*
> *you know patients with chest pain, in acute left*
> *ventricular failure, if I could put frusemide (furosemide)*
> *into them, they could be better within half an hour, while*
> *I'm waiting for the medics to come. I don't just mean, go*
> *in and give something, there needs to be set protocols but*
> *it would help a lot of the acute patients on the medical*
> *wards when we can't get the medics. I really think that*
> *would help.*

A significant factor in Marian's approach is that while she recognised the potential advantage to the patient of adopting this system, it also places increased responsibility on the nurses to undertake a rigorous clinical assessment of the patient, diagnosis and

treatment of the medical problem. In order for this system to function effectively, the nurse would require education and skills in medical assessment, history taking and diagnosis. This could potentially draw the nurse closer to the objectification of the patient or provide the opportunity for nurses to expand their professional gaze and authority of practice and is explored in the final section of this chapter.

Overall, the findings recognise the participants' understandings of feeling confident when calling for assistance in practice as being related to their ability to demonstrate their clinical understanding of physiological observations, combined with the experience of nursing patients with related problems. In order for the participants to increase their nursing power to achieve their goal of getting help, they demonstrated the need to prove their competence to themselves and to other members of the team. Through this action, they demonstrate self-confidence in their role. This finding supports the definition of clinical power by Hokanson Hawks (1991, p. 754) as:

> the actual or potential ability or capacity to achieve
> objectives through an interpersonal process in which the
> goals and means to achieve the goals are mutually
> established and worked toward.

This definition focuses on "power to…" as opposed to "power of…" and denotes a social model of power focusing on interpersonal relationships. In this framework, professional power skills include the use of knowledge, concern, caring, respect, courtesy, communication and trust. These skills, according to Hokanson Hawks (1991), need to be mutually agreed if goals are to be achieved and to be based on mutually accepted power sources such as expertise, knowledge and information, and legitimate authority.

When the theory of "power to…" is related to the successful team working strategies identified by the participants in theme three, a positive correlation exists with the participants basing their decisions about who to call on their clinical knowledge and judgement in an environment of mutual trust, respect and a good team spirit. The participants also recognised when effective team work was difficult to achieve and this was equated with situations where a member of the team lacked clinical knowledge, trust or the respect of team members. Goal achievement was often delayed as a consequence.

Similar findings have been identified by Atwal and Caldwell (2006) in their study of nurses' perceptions of teamwork in acute health care settings. In this small, mixed method study they found that, in order for a team to work effectively, the members of the team should have the skills necessary for competent collaboration, including assertiveness and self confidence, and that these competencies were most frequently found among nurses with knowledge and experience in their area of clinical expertise.

In summary, the findings of this study support the adoption of a strategy for developing professional power as *"power to..."* and support the participants' understanding of successful team working based on evidence of clinical knowledge and experience.

5.3.7 Theme Five: the role of the nurse

A second factor that impacted on the strategies the participants used throughout the process of recognising and managing clinical deterioration was that of how the participants perceived their role as a nurse. This included the nurses' perception of the trappings or overt characteristics of their role, as well as the essential or intrinsic characteristics of their role.

5.3.7.1 The trappings

The roles described by the participants in the study focused on a job description of their function according to their professional responsibility. This included reference to their role as a junior or senior staff nurse or sister/ward manager and was related to their place of work. Within that context, they made reference to having core functions that included: supervisor of care; trouble-shooter; manager of the ward or unit; and responsibility for direct care. For Iris, one of the sisters in intensive care, the recognition and interpretation of measurable clinical evidence was an essential part of her role. She explained that she was a supervisor, offering support and advice to junior staff and monitoring the patient's progress to check that everything was in order:

> *3.16 Iris*
> *But on a shift basis if I'm in charge and there's one*
> *unstable patient then that's where I would focus myself,*
> *particularly if there was a junior nurse looking after the*

*patient, I'd let them do all the basic nursing care but I'd
be there to support them.*

3.17 Iris
*... if someone is worried about a patient, we do a quick
review by ourselves, do an ECG, do a gas and then
collate the information and then call a doctor and then
they'll come and do a review.*

3.18 Iris
*I'm a trouble shooter and not only for junior staff, but for
some of the junior doctors as well, because not all of the
doctors are anaesthetists.*

For the nurses who believed their roles were more supervisory, their pattern of reasoning was influenced by the evidence of measurable clinical signs of deterioration that could be collated and validated as a justified reason for calling the medical team. This was their prime concern rather than the recognition of the cues and triggers that might lead to clinical deterioration. This supervisory role also involved teaching junior staff some of the cues to look for, so that, even in situations where there is a false alarm, something can be learnt from the experience. In the example below, Marian explains how this works in practice:

6.28 Marian
*At the end of the day I'm the ward sister and if I have any
nurse coming to me then I should listen and go and see
the patient. If there's nothing wrong then I should explain
to the nurse and discuss it after so that they know what to
look for next time.*

This supervisory role, nevertheless, was not exclusive and participants were seemingly able to move between supervising care and direct nursing care according to patient need. For example, when a sudden clinical emergency arose on the perimeter of one participant's vision, her role changed from that of being a supervisor of care to acting on visual cues and preventing serious deterioration of a patient who was in the care of another nurse:

8.19 Olive
*I mean we had a 24 year old when I was in charge of the
small unit, who was agitated and tried to extubate himself
and he wasn't ventilating properly and was desaturating.
I had to act quickly and it was a partial extubation so I
deflated the cuff and pushed the tube back down. I mean if
it had gone wrong I would have had problems but he was
on high PEEP (positive end expiratory pressure) and I*

*felt that I didn't have any option at the time. I wasn't
actually looking after him, it was a junior staff nurse, I
was in charge of the unit. But I did know his history and I
didn't just shove the tube down, I mean, I've done the ALS
course and the assessment module so I had the knowledge
there to do it and to make sure I was doing it correctly
and you have to make a snap decision, you don't have a
lot of time. So I increased his sedation and drew on the
knowledge to act in an emergency situation which was
what he was, because he was desaturating, he was on
such a high PEEP that his lungs would have just
collapsed. I didn't think I just acted...*

This example highlights the relationship between the essential activity of the professional scan identified in theme one, involving a process of selective perception during which the nurse is scanning the perimeter of her vision for clinical problems and taking responsive clinical action. This text also illustrates the interconnectedness between knowledge, skills, history and experience that collectively produce signs of confidence, competence and control.

A second factor related to the trappings of the role is highlighted by Marian below and refers to how the nurse's role, in the context of recognising patients with clinical deterioration, is perceived by other professional groups. She recognised how much her role had changed and developed with regard to knowledge and skills but felt that this had not been appreciated by the medical team she works with:

6.34 Marian
*I think the patients have changed so much in the ward, I
started in about 1984, and I'm now the ward manager
where I started my first staffing job, and it's a completely
different clientele from then till now, and we're still
running on the same regime and I think we as nurses have
got a different knowledge base now than we used to have,
and I've been here for 17 years. When I went there as a
staff nurse we had a completely different role, but the
medics I don't think have moved on. I think they as a
profession have moved on but, I think they haven't moved
on in terms of how they see other roles. I think they're
frightened to hand over to us a lot of the time. I don't
think that the medics accept that we've moved on and I
think that's our biggest problem.*

The text reveals in this case a knowledge-practice gap between what the medical team accepted as the role of the nurse and how nurses understood their role. There appeared

to be no mutual understanding or acceptance of each other's role and a reluctance to accept nurses as having an increased level of knowledge and skill.

Similar findings were highlighted by the researcher's interpretation of her pre-understandings and also by Snelgrove and Hughes (2002, 2000) when they identified that, while some doctors accepted and utilised the expanded role of the nurse, others tended to make judgements based on their experience of individual interactions and if, for example, a nurse called them to the ward on a false alarm, they tended to respond reluctantly when called again. Evidence of power games between doctors and nurses in the ward was also highlighted by Mantzoukas and Jasper (2004) when they found that the organisational hierarchy and related power games in the wards studied constrained the concept and practice of reflection on action among the nurses studied. They described the relationship between nurses and the medical team as a covert power game that led nurses to perceive the medical team as being the dominant power. This was seen in the context of nurses being obliged to ask the doctor's consent for their actions even when this involved care planning.

Similar findings have also been demonstrated in critical care areas in an ethnographic study by Coombs (2003). She found that, in spite of the recognised expansion of the nurses' role in critical care environments, in the three units studied, both doctors and nurses identified conflict occurring around patient management discussions, with nurses being identified as the group most likely to either modify their decision or play the *doctor/nurse game* (Stein *et al.*, 1990: Stein, 1967).

Coombs (2003) argues that the way to facilitate effective team work for the future in such environments is for staff to work on ways of realising a balance of clinical power through the development of complementary knowledge that enhances practice. Hall (2005), however, recognises that, while different clinicians use their related professional knowledge to look at the same thing, the patient, they have different perceptions of what they see through their gaze. This, he argues, is because each professional group possesses a different cognitive map of how the patient is viewed. This argument is supported by the findings in this study and is examined by relating this to the concept of the nurses' professional gaze in the last section of this chapter.

Within this study, the overt trappings of the nurses' role were related to how their role was perceived by themselves and members of the health care team. A second element of their role, however, seemed to focus more on the essential elements

of care and included emotional aspects of care that were evident in all the participants interviewed as well as being recognised by the researcher through the questioning of her pre-understandings.

5.3.7.2 The essence

Within this category, the findings present a picture of essential or intrinsic characteristics of the nurse's role that have emerged from an interpretation of the text. In the extracts below, Carol described a situation where the emotional aspects of her role were manifested in her description of empathising with the patient and trying to present the human side of the patient's clinical deterioration. In the first two extracts, Carol described the patient's problems from her point of view and her feelings of frustration with the medical team because they were unable to find the cause of her patient's pain:

> *2.26 Carol*
> *She was constantly complaining that there was something*
> *wrong with her stomach, we'd given all the interventions*
> *we could, she was washed out, she had problems with her*
> *sodium, they tried to get her stable but they were just*
> *sitting on her really, and she still kept complaining of*
> *abdominal pain.*

> *2.27 Carol*
> *Well we were there all the time. And while the doctors*
> *would come on the ward round, there wasn't much more*
> *they could be doing, it was continue, continue and you're*
> *thinking, this continue is not getting anywhere and you*
> *feel under pressure with the patient, cos they're not well*
> *and they're there, I think nurses are more human, feel*
> *more for them, than doctors cos you're there constantly*
> *with them. I'm like that anyway, I feel under pressure*
> *sometimes, I mean if it was my mother, you know, seeing*
> *them like that,*

In the third extract, the text revealed the patient's realisation that she was dying and that she wanted to share this with the participant:

> *2.29 Carol*
> *A bad experience, in a way, yes, because it was*
> *frustrating and she was looking to you for help, do you*
> *know what I mean, and the family, and she said to me*
> *before my next shift "I won't be here when you come back*
> *now" and I came back and she was but, she was so*

uncomfortable and she'd had a massive heart attack as
well and she was a very independent woman.

In the extract below, Carol had accepted that this patient's care was palliative and was surprised and distressed when she came on duty to discover that the patient had been transferred to intensive care and died a few hours later:

> ### *2.30 Carol*
> *Well initially it was the registrar, and they fiddled with*
> *her pain relief and gave her a concoction, they weren't*
> *really sure where they were going to go with her. And*
> *then I went off and when I came back they'd taken her to*
> *general ICU, but she'd died. They couldn't operate*
> *because her heart was too bad and we knew that and they*
> *couldn't do anything and she had chronic bronchial*
> *problems as well. And she was knackered, you know, not*
> *sleeping all night, dog tired and awake constantly you*
> *know. And we'd give her diamorphine for the pain and*
> *that and she was frightened as well, and they took her to*
> *general ICU, I couldn't believe it, and she wouldn't come*
> *off the ventilator. Well I wasn't here then but I was gutted*
> *because she died there, she should have stayed here and*
> *died with us. Cos we all knew her, and we'd all looked*
> *after her.*

For the participant, the experience was *"bad"* because the patient's pain and discomfort had not been reduced and as the story continues, the participant reveals her knowledge of the patient as a person who was suffering. In this extract, her use of non-technical or lay terminology adds to the human interpretation of the patient's condition.

For Carol, it appeared that her role was concerned with knowing and understanding the patient. What is revealed in the text is a story of caring that demonstrates the requirement for both intrinsic and overt characteristics of the nurses' role. When this is interpreted through Roach's (1992) five elements of caring (compassion, commitment, conscience, confidence and competence), it becomes evident how balancing conflicting demands on the nurse's role can require physical, cognitive and emotional labour. According to Morse (1992), Roach views caring as a human trait that can be manifested through the five elements of caring. These elements require of the nurse knowledge, skills and experience. However, when these skills are developed, the outcome of caring can benefit both the nurse and the patient. This can be achieved through an increased sensitivity to visible and interpersonal cues as well as improved interpersonal communication.

Caring in this story is revealed through the evidence of the participant's sensitivity to the patient's experiences of pain, discomfort and exhaustion and at the same time recognition of the patient's desire for independence and dignity. This is consistent with Roach's (1992) descriptions of compassion and conscience. Her description of compassion is concerned with the person's immersion in the human condition that brings with it an ability to empathise and be sensitive to the suffering of another. For Roach (1992), conscience is concerned with a person being attuned to the moral nature of self and others. It relates to the experience and values placed on the nurses' role as well as the experience and values of others and is concerned with respecting the values of the individual.

These notions of compassion and conscience, illustrated in the text, are also identified by Nortvedt (1998) as being an essential part of the nurses' role and arguably support the claim for "ethical practice" as being the ontological and epistemological foundation of nursing. In relation to the nurses' role, Nortvedt (1998) argues that as the nurse looks, as part of professional observation, he/she sees pathophysiological phenomena not as purely objective, value free data but as an observation of the patient's distress. For Nortvedt (1998, p. 386), "To be touched by a patient's suffering is to encounter responsibility ... and an obligation."

The obligation or commitment to care in the text is demonstrated by the participant in her attempts to achieve pain relief and a deeper understanding of the patient's condition, as well as her desire to be with the patient. For Roach (1992), such commitment is related to the nurses' chosen duty of care based on their desire to help and care for the patient and the obligation afforded by a professional duty of care and code of practice (Nursing and Midwifery Council, 2008).

Roach's (1992) two final elements of caring relate to confidence and competence. Confidence is concerned with the process of demonstrating self-confidence in the clinical role and confidence afforded to the patient in the form of trust and honesty. Competence is concerned with the demonstration of the knowledge, skills and motivation required to make clinical judgments responsibly. For Carol, her demonstration of Roach's two final elements of caring were related to her acceptance of the patient's terminal condition and the desire to promote a safe and comfortable period for the patient in the time she had left. In the text, however, the participant refers to the situation as being a bad experience, frustrating and upsetting. For her, the required demonstration of confidence and competence was challenged by the

emotional labour of trying to help the patient feel safe in a situation where decisions regarding the patient's management were confused and changed from being supportive to active and invasive, leaving the participant with a sense of loss regarding her ability to be with the patient.

The emotional labour revealed by the text in this situation was not just related to promoting the psychological and physical safety of the patient but also to the difficult situation regarding the choice of treatment for the patient. What this text reveals is the nurse's desire to demonstrate competence, confidence and compassion in her relationship with the patient through her commitment to ease the patient's suffering. However, in an environment of uncertainty where essential elements of the nurse's role are challenged by the limitations placed on treatment options and clinical decisions are seemingly made without evidence of interprofessional collaboration, that role can lead to feelings of frustration, sadness and concern.

This finding also reveals an issue highlighted by the Department of Health (2000) in their review of comprehensive critical care that stipulates that patients with clinical deterioration should be assessed with regard to timely intervention and a step-up approach to care or, if appropriate, a step-down approach to care. In Carol's case this decision appears to have been difficult to achieve leading to feelings of frustration, sadness and concern for the patient. As this situation occurred in a coronary care unit, the outreach team would not have been involved.

Studies evaluating the clinical effectiveness of outreach programmes have found outreach teams to be instrumental in the process of facilitating such a step-up/step-down approach although the findings have limited generalisability due to the study size and reliance in some cases on audit data collected prior to the commencement of the study. For example, in a study by Green and Williams (2006) evaluating the effectiveness of a clinical marker referral tool using pre- and post-test design, the researchers found that, although there was no significant difference in the survival rate of patients pre- and post-test, the outreach team appeared to influence an increase in the number of "not for resuscitation" orders after implementation of the updated tool. Similar findings have been highlighted by Chellel *et al.* (2006) in a qualitative evaluation of the contribution of outreach teams to the management of critically ill ward patients. Here, thematic analysis of the data revealed how outreach nurses facilitate expedient clinical decision making of critical cases where

intervention and treatment is required and support decisions where a "do not resuscitate" order is required.

The concept of emotional labour was first identified in this research as part of the researcher's pre-understandings, as a phenomenon experienced during nurse to patient and nurse to relative interactions. This led to feelings of unease and discomfort where the nurse felt obliged to show a professional face that may not have reflected her inner turmoil or emotions experienced at a deeper level. Since Hochschild's (1983) recognition of emotional labour, a number of studies have attempted to explore the relationship between emotional labour and the management of emotions in professional roles (Hunter, 2005, 2004; Bolton, 2000; Smith, 1992; James, 1992).

A general conclusion from these findings is that, in order to maintain the professional face of nursing, the nurse is required to use strategies and skills to manage emotional work. These include the nurse's ability to recognise when to expand or reduce the capacity for emotional work so that the recipient is able to recognise genuine concern and commitment without the nurse overstepping the boundaries of emotional care. Hochschild (1983) refers to this capacity to manipulate emotional work as a gift to patients in their care and this has been supported by Bolton (2000). The skills required to develop and refine emotional work are arguably the same skills required to develop emotional intelligence. These include self awareness, motivation, self regulation, empathy and adeptness in relationships (Goleman, 1998). Emotional intelligence is concerned with being aware of personal feelings and having an ability to manage them in a way that promotes an empathic and constructive social interaction (Akerjordet and Severinsson, 2007). An analysis of the research findings by Chellel *et al.* (2006) revealed that the skills and practice utilised by outreach nurses are consistent with emotional intelligence. This led the researcher to ask of the text, "What expressions of emotional work and feelings can be interpreted from the text and do they affect the speed and process of managing patients with clinical deterioration?" This led to the findings in theme six, *the nurses' feelings*.

5.3.8 Theme six: the nurses' feelings

When the emotional aspects of the participants' role were explored further, the text revealed expressions of stress, frustration and distress caused by the participants'

experiences of situations when their expectations related to patient outcome were not met. In many examples, this appeared to centre on issues to do with situations where resources to manage care were scarce and with interpersonal communication involving the medical team.

In the following example, Marian refers to the increased stress levels associated with having a critically ill patient on the ward. The patient is ready for transfer but there is no bed. Her concern is the strain that this puts on herself to manage the reminder of patients on the ward without help:

> ### 6.39 Marian
> *We get more ill patients waiting for an ITU bed than we did before, we get patients who are being bagged waiting for an ITU bed, admittedly they've got an anaesthetist with them but it's still an acutely ill patient that needs a nurse and you know that the patient needs a one to one but you're running back and forth to the other patients and you've got to have a named nurse at the end of the bed recording observations for you because you can't give that patient to an unqualified nurse and that means then that you've got 32 other patients to look after on your own. I find it's more stressful. I love medicine, I still get a buzz and I love the critically ill patients, it takes you back and you remember things that you thought you forgot and you start remembering and doing things that you might not have done for a while. It is nice to nurse them but it would be nice to have the quality of staff to be able to give the care without being so stressed about it.*

This highlights the conflicting emotions presented by the participant, of wanting to enjoy the clinical management of critically ill patients but recognising the potential danger of focusing too many resources on one patient at the expense of others in her care.

Mary also referred to the stress of trying to provide care for a critically ill patient while still managing the care of six other patients:

> ### 7.7 Mary
> *It was really stressful, I was caring for six other sick patients as well, he was in the cubicle. I wanted some answers, he needed attention, he was sick and getting worse. There was nowhere for the relatives, they were in the corridor; we have no relatives room but a lot of sick patients. I was exhausted, it was physically hard.*

In this example, the situation was complicated by the organisational restraint of not having a room for distressed relatives to wait in comfort and away from the main

thoroughfare of the ward. In this situation, the participant has to manage the surface communication with relatives giving the impression of calm but at the same time recognising that the lack of skilled clinical support was potentially dangerous for her patients. This tension between workload and organisational constraints had already been highlighted to the researcher during the sampling phase of the study when a similar situation had occurred in the medical ward (found at 5.3.1: diary entry 01/04, 14:00 hours). However, in this case, two patients had died that morning and both groups of relatives were attending the ward with seemingly nowhere to sit in private at such a traumatic time for them.

In both extracts, the participants refer to the hard work required to manage the care and the potential risk associated with compromising patient safety; but they remain motivated to provide the care. In this theme, the text revealed that participants felt under pressure to provide safe care in situations when the skill mix did not support patient need. These feelings of frustration and stress related to constraints associated with high workload were initially identified in theme two, *the diagnosis*, in the category, *"an unstable patient where the situation is perceived as no longer under control"*. In that context, it was proposed that current dependency scoring tools for identifying the difference between level zero and level one were ambiguous and that acute wards often have a higher proportion of patients with the potential for clinical deterioration than previously identified (Harrison, 2004). Similar findings were identified by Cutler (2002) in an ethnographic study of ward based critical care nursing where nurses described, repeatedly, situations where there was an imbalance between the severity of the patients' illnesses and the staff required to care for them. While the researcher is cognisant of the inability to generalise from the findings of this study and those cited, it is significant to recognise that some evidence of the problem does exist and warrants further research.

What is also highlighted in the text is the unpredictability and chaotic nature of change on the ward. When this is interpreted in the context of what Hall (1983) describes as monochronic and polychronic time, it is possible to see the pull between the requirement for effective organisational structure and patient centred care. According to Allen (2002), the work of the nurse in acute hospital settings is shaped by their attempts to balance the tension between polychronic time, which involves doing many things at once with an emphasis on human relations and the completion of whole transactions, and monochronic time, which is a linear process of time

measured by hours and minutes and governed by protocols, tasks and procedures. When this is applied to the text in this study, it shows that the stress experienced by Marian (6.39) occurs when she tries to balance polychronic time, supporting the needs of the critically ill patient, focusing on patient need and the necessary completion of patient focused care, with monochronic time, maintaining the remaining ward routine and practice.

In the example given by Mary (7.7), the situation has become more complex in that there are a number of patients and relatives requiring help and support seemingly outside the normal routine and practice of the ward. In this situation, Mary, in order to meet the needs of her patients, has committed to allocating time according to patient need rather than dividing her time into slots to be shared by all recipients involved (patient focused as opposed to task focused care). Stress in this situation is related to not being able to meet all the patients' needs and the routines of practice prescribed by the organisational structure.

Finally, as well as the strain associated with excessive workload and potentially compromised patient safety, the participants also described feelings of frustration associated with communicating with the medical team, as highlighted in theme three. In the following example, Carol shares a situation when there was evidence of cultural misunderstandings and conflict between the medical team and the nurse:

> **2.47 Carol**
> *It was a locum registrar from a different culture, I came
> on and the patient was grey, his colour looked terrible
> and basically his Hb was dropping to 6 or 7, he was
> bleeding from somewhere, he really shouldn't have come
> here, as the night went on we wanted the registrar to
> speak to his wife, we had ..... in charge and she was not
> long been an E grade, not long been in charge
> by night and there were only three of us on then. And we
> rang up but he wouldn't come and there was friction, it's
> uncomfortable ringing someone then. Dr ...X... came up
> then, the consultant, it was awful he told us to call the
> registrar, he went home and we tried to get hold of the
> registrar and basically the patient was only 42, he went
> bradycardic and he was a goner.*

What the text reveals in this story is a pattern of factors that influenced the development of friction and conflict between the professional groups. These include: the locum registrar, a new and temporary member of the team who does not recognise

the team rules and structure of the on-call system; a staff nurse who is inexperienced in her role as a team leader; a consultant who transfers the responsibility for calling the registrar back to the nurse; and finally a breakdown in communication that led to dire consequences for the patient and his family. This situation occurred at night, as did the second example (6.26, below) and highlights the imbalance between the availability of medical and nursing staff between the hours of 17.00 hours and 09.00 hours the following day.

According to Allen (2002), the different temporal-spatial organisation of nurses' and doctors' work can lead to a blurring of boundaries between medical and nursing work and emotional divisions of labour that can lead to conflict in clinical decision making. Her findings are based on the argument that nurses have to balance the tension between monochronic and polychronic ways of organising their work that are different to the way the medical team organise their work. This becomes further complicated by the differences in working hours and location of work that often influence the ability of the doctor to attend.

In the second example (6.26), Marion describes a situation where the registrar did not believe the patient was deteriorating and refused to see the patient during the night and came to see him the following morning. When the patient was eventually referred to a cardiology registrar, both Marian and the medical house officer received criticism from the registrar concerned and this appeared to add to the participant's frustration:

6.26 Marian
The cardiology reg (registrar) came up after we'd got the doctors to him and he was just so rude to me and said why wasn't he called earlier? Couldn't I see that he was showing a massive infarct? And I told him that I was quite capable of reading an ECG and that's why I was so frustrated that I couldn't get a medic because I could see what was happening. And then he laid into the doctor as well and said that if he was getting calls like this that he should attend and call the registrar. I think we're trained to have more knowledge now and it's frustrating when you can see changes, see deterioration in the patient and the medics just won't listen to you. And the juniors, only just out of school, still falling over their own feet, just won't take it from the nurses, they are the doctor. Very frustrating!

This text and the example above reveals a lack of mutual trust and collaboration between the professionals concerned. When considered in the light of emotional intelligence (identified in theme five), it lacks evidence of mutual empathy for each other's roles and the skills required to be emotionally balanced in order to obtain a productive outcome from the interactions.

The findings in this theme support the presence of situations leading to the experience of emotional labour in assessing and managing clinical deterioration. In this study, these situations were found to include emotional work related to: the nurse/patient relationship, as demonstrated in theme five; the doctor/nurse relationship; and organisational constraints, as demonstrated in themes two, three and four. Where emotional work was constructive and skilled, the capacity for teamwork and effective communication promoted an effective response to patients demonstrating clinical deterioration. A central feature of this theme and themes two, three and five focuses on the need to recognise and make mutually inclusive the strengths and limitations of nursing and medical clinical roles in practice situations so that a culture of honesty and support is nurtured.

5.4 Presentation of a shared horizon of understanding: the professional gaze and hermeneutic interpretation

The aim of this section is to present a shared horizon of understanding of nurses' experiences of caring for patients with clinical deterioration and critical illness. This understanding has emerged as the result of the researcher entering the hermeneutic circle in order to engage in the play of dialogue between the historically affected consciousness of the researcher and the interview transcripts as text. As the dialogue with the text moved forward and back between the whole and the particulars, the practice of nurses developing clinical concern and responding to patients' changes in condition emerged. In this study, this practice has been interpreted as an illustration of professional gaze. For the purpose of this study, the researcher has defined professional gaze as:

> "The professional practice of engaging in scanning, selective perception, recognition, diagnosis of and response to clinical deterioration".

The phenomenon of the clinical gaze is not new and has been described by Foucault ([1973] 1989) as an illustration of how the medical profession developed a professional knowledge and power base through the objectification of the subject. In his book, "The Birth of the Clinic: an archaeology of medical perception", Foucault identifies a defining change in the language and style of medical practice that occurred towards the end of the eighteenth century and focused on the juxtaposition between clinical observation as the objectification of the clinical gaze and the scientific nature of medical knowledge. This ultimately led to the visualisation of disease as an objective, measurable, systematic and scientific element of the subjective body (Shawver, 1998; Parker and Wiltshire, 1995; Henderson, 1994).

According to Foucault ([1973] 1989, p. x), the purpose of the clinical gaze is to perpetuate the scientific accuracy of medical diagnosis, the net effect of which is the achievement of clinical power and the justification of medical knowledge. Thus, medicine is moved from a practice "lacking any perceptual base [that] speaks to us in the language of fantasy" to a practice of scientific reasoning and the discipline of medicine. This transition began with the art of observing and treating disease as part of both a scientific endeavour as well as an educational process through the construction of teaching hospitals. The necessary conditions for the clinical gaze mapped by Foucault by the end of the 18th century therefore focused on reading the

"*deep structures*" of visibility in the "*field*" (the patient) in association with the "*codes of knowledge*" required for perceptual interpretation. These codes of knowledge included clinical signs and symptoms and the structure of the case, for example, clinical examination; language as a balance between visible and expressional characteristics of the disease; pathological phenomena and clinical experience.

Within the context of clinical signs and symptoms, Foucault presents the dynamic development of a nominalistic and pathological reduction of the patient's disease to its most essential elements. For Foucault ([1973] 1989, p. 147), "the clinical gaze is a gaze that burns things to their furthest truth". Once the essential characteristics of the disease are defined by what Foucault describes as the process of anatomo-clinical perception, the gaze, through a clinical reading of the case, moves to establish the impact and outcome of the disease on the body.

When Foucault's historical understanding of the clinical gaze is applied to the development of track and trigger systems to monitor patients' clinical deterioration, much of the medical research has focused on identifying the essential clinical elements of the condition. For example, the identification of clinical antecedents to cardiac arrest including alterations in respiratory rate and pulse in the hours prior to cardiac arrest by Goldhill and McNarry (2003); Hodgetts *et al.* (2002b); Hillman *et al.* (2001); Goldhill *et al.* (1999a) and Fieselmann *et al.* (1993). In this context, it can be argued that, when clinical analytical processes such as the hypothetico-deductive method are applied to clinical decision making, an objective diagnosis of clinical deterioration can be achieved.

This assumption can be challenged, however, when considered in the context of the social world of practice where judgements are influenced by the use of language, tacit knowing, pattern recognition, clinical wisdom and organisational culture (White and Stancombe, 2003; Benner *et al.* 1999; Atkinson, 1995). To reduce the perception and recognition of clinical deterioration to its essential physiological elements, therefore, may highlight some necessary conditions for diagnosis. However, this may not be sufficient to produce a clinical reading of the case and its

impact on patient outcome. This argument leads to the questions: "Can the process of being alert to and responding to patient clinical deterioration be contained within an objective scientific structure?" and " Do, and if so how do, nurses operate within a structure akin to the clinical gaze when caring for patients with clinical deterioration?"

When the findings of this study were examined in the context of a shared understanding, the researcher was able to map the conditions necessary for the professional gaze and clinical action when caring for patients with clinical deterioration. A new understanding of this phenomenon revealed a clinical gaze that went beyond the objective clinical characteristics to reveal a process that incorporated a mixture of subjective and objective characteristics of clinical deterioration that when assessed in the context of skilled practitioners and team working led to effective management of the patient's condition. When the conditions for this process were limited by factors such as lack of experienced practitioners, poor communication and team work, there was evidence of suboptimal care.

The notion of the clinical gaze has been applied to nursing and the concept developed as a framework for nursing practice described by Ellefsen *et al.* (2007), as a theoretical framework for sharing ways of knowing within the nursing handover (Parker and Wiltshire, 1995) and in relation to nursing observation in an acute psychiatric inpatient unit (Hamilton and Manias, 2007).

The *"professional gaze"* as a phenomenon became evident in theme one when two features of the participants' practice emerged from the text. The first feature involved the requirement to watch the patient for cues as the first signs of concern. This implied a responsibility for assessing and monitoring the patient situation as it applied to the nurses' professional role and was evident in themes one, four and five. The second feature was concerned with the nature of the nurses' watchfulness and included the play of movement between the *"professional scan"*, *"focused observation"* and *"waiting and balancing"* leading to a clinical response. A conceptual framework for the professional gaze is illustrated in Figure 5.4 and examined in the following sections.

5.4.1 Professional scan

The professional scan is what the participants described as vigilance in the process of watching and scanning for potential problems, in this case clinical deterioration. This vigilance in the scanning and watching process included all the patients in their proximity, from those in whose care they were directly involved to those patients on the perimeter of their vision. This process was described by Cathy (1.189) as having sideways vision while at the same time concentrating on the particulars of practice. The scan, described by the participants as *"the visual thing"*, included utilisation of the raw senses of perception, sight, hearing, smell and touch and selectively attended to changes in the patient's behaviour, appearance, temperature and smell while listening to the patient as part of the interpersonal process. The focus of the scanning process appeared to be subjective and included cues such as picking at the sheets, struggling for breath, agitation or confusion. If the participants recognised and interpreted cues or changes in the patient during the scanning process, they described feeling that there was something wrong; often they didn't know what was wrong but they felt concern for the patient.

This description of the *"professional scan"* is consistent with the nursing scan described by Hamilton and Manias (2007) and Parker and Wiltshire (1995) who describe nurses relying on their sight and other senses to inform the scanning process. The notion of scanning or trouble shooting for patient problems does not occur in Foucault's ([1973] 1989) description of the clinical gaze, instead the gaze begins with focused observation of the particulars. In this study, the focus and nature of the clinical scan appeared to be determined by the knowledge and experience of the nurse and the contextual situatedness of the patients in the nurse's perimeter of vision. A deeper questioning of the text revealed a number of conditions necessary for optimal utilisation of the professional scan. These conditions appeared to be inclusive for all elements of the professional gaze and included: clinical, historical and experiential knowledge of the patients' conditions and/or situation; clinical assessment skills related to the subjective, contextual and objective elements of the patient situation; knowledge of clinical cues and patterns of cues; and knowledge of the individual patients and their clinical history.

5.4.2 Focused observation

If the attention of the participant was alerted through the scan, the cues then alerted their focussed attention to pattern recognition and triggered feelings that signified concern and the requirement to look further in order to interpret and diagnose the problem. Thus, the nurse embraced the *"professional gaze"* with a more focused and probing observation of the patient. This can be described as *"focused observation"* and includes questioning the validity of their concerns with a deeper inspection of the cues in order to move towards a belief in their concerns that could be justified through evidence. In this process, the nurse entered the play of movement by questioning what was before her. She then entered into a continuing cycle of surveillance involving the processes of questioning the patient, the patient's history, her own knowledge and experience of situations, the patient's clinical observations and investigations, and her colleagues. Within the back and forward movement of watching, the participants combined an assessment of the patient's distress with their personal interpretation of patterns of cues learnt through combining theory - *"the knowledge"*, as identified in theme four - with patterns learnt through practice and experience, supported by scientific observation of clinical data. This demonstrates the play of movement between question and answer and recognition of the situation as open in character and subject to change and is consistent with the conditions necessary for hermeneutic interpretation identified in Chapter 4.

In the text, some participants described looking for the little things, interpreting and waiting for the evidence or a picture of the problem to emerge, as illustrated by Cathy (1.52). This process of focused observation was not evident for all the participants, with Imogene presenting as an exception in this section. In her story, Imogene (4.10; 4.11; 4.15) describes being a relative newcomer to her role as a critical care nurse and was unable to demonstrate the historical, experiential, contextual and situational knowledge manifested by the other participants. She describes recording and reporting any thing that has changed to the senior nurse rather than scanning for and interpreting the little cues that lead to feelings of concern. What this highlights is that, without all of the conditions necessary for operationalising the professional gaze, Imogene was unable to move from scanning to focused observation and pattern recognition without the support of senior staff.

5.4.3 Waiting and balancing

The play of movement within the *"professional gaze"* continued while the participants waited and balanced the requirement to call for help with knowing there was a problem but not being able to prove it to others in a context influenced by the juxtaposition between balancing the needs of the unstable patient with the needs of other patients. In this study, the process of *"waiting and balancing"* was influenced by the historically affected consciousness of the participants, described by Gadamer ([1975]1989) as the subjects' unique experience of history that informs how they interpret and understand their world. This was illustrated in the text when participants described how they made decisions based on their past experiences of similar situations and the way their assumptions or prejudices informed their decision-making. Examples of this were often related to attitudes towards junior house officers and are illustrated in themes four, five and six.

An analysis of the conditions necessary for optimal use of waiting and balancing revealed that, as well as the conditions referred to above, the participants required: prioritizing skills; skills that facilitated teamwork; knowledge of and mutual respect within the team; and self-confidence in their professional role. When these conditions were present, the participants were able to balance the subjective and objective data with the clinical and social context and manage the patient's care. In situations where these conditions were absent or challenged, the potential for suboptimal care emerged. There is the potential therefore to undertake further research in order to examine the conditions necessary for an effective professional gaze in nurses when caring for patients with the potential for clinical deterioration.

Returning to Hall's (2005) argument that different professional groups in health care possess different cognitive maps of how the patient is viewed through the clinical gaze, what the findings of this study present is a view of how nurses utilise the clinical gaze in the practice of caring for patients with clinical deterioration leading to critical illness. Future research, therefore, could consider areas of study that develop and test the concept of clinical gaze in different professional groups. This could involve research questions such as: "Can the concept of professional gaze identified in this study be developed and tested using either a different group or skill mix of nurses or a larger sample size that could be generalised to a wider population of nurses?" and "What are the similarities and differences in the structure and process

of the clinical gaze within different professional groups working in health care?"
Answers to these questions could begin to unravel the complexities of managing these
patients in acute settings and make overt the shared and different conceptual
perspectives of professional groups in health care.

Overall, the aim of this chapter was to present and discuss the researcher's
hermeneutic understanding of nurses' experience of recognising and managing
clinical deterioration in their patients. This has been achieved by recognising the
horizons of pre-understanding and entering into a hermeneutic dialogue with the
interviews as text, the pre-understandings, history and wider literature. As the
researcher has moved through the process of question and answer, a shared
understanding of what it is like to care for patients in this context has emerged. The
chapter has ended with a series of questions to promote further dialogue in order to
place this understanding in the context of history and move forward to the
development of new understandings. The final summary, concluding comments,
strengths and limitations of the study are presented and discussed in Chapter 6.

Figure 5.4
Professional gaze: a framework for perceiving and responding to clinical deterioration

The curved arrows connecting the circles represent the play of movement between the horizons of scanning, focused observation and waiting and balancing.

Necessary conditions for the professional gaze:

Knowledge
Historical
Theoretical
Clinical
Situational
Experiential

Professional scan:
Vigilance
Visual cues
Observation of subjective and objective data
A feeling

Perception and Memory
Cues
Pattern recognition
Tacit knowing

Professional ethical practice

Focused observation:
Focused attention
Interpreting the clinical picture

Emotional work

Emotional intelligence

Feeling in control
Resources
Self confidence

Waiting and balancing:
The evidence
The diagnosis
Prioritizing
Knowing when and who to call

Mutual respect
Reciprocity

Chapter 6

Conclusions

6.1 The strengths and limitations of the methodology

The aim of the researcher in this section is to reflect on the strengths and limitations of hermeneutic interpretation informed by Gadamer's philosophical hermeneutics. The adoption of a hermeneutic approach based on Gadamer's ([1975]1989) conditions necessary for hermeneutic interpretation have enabled the researcher to use a dialogical approach seeking answers to the research questions posed at the beginning of the study. A key factor in the development of this work has been the recognition and accommodation of the researcher's clinical and educational experience in relation to the interpretation and findings of this study. For the researcher, the process of adopting the seven conditions necessary for hermeneutic interpretation has provided a process for recognising the influence of history, tradition and pre-understandings (prejudices) in the flow of the research. The inclusion of a dialogue with the researcher's critical incident highlighted for her the pre-understandings that have influenced her practice and facilitated an examination of the theoretical underpinnings that informed the interpretative process. In this way, the researcher provided what is described by Koch (1999) as a critical self-consciousness of her background, experiences and prejudices.

The challenge of making pre-understandings visible was critical to this study and required an approach that focused on the emergence of pre-understandings rather than a personal reflection of the researcher as the subject of inquiry. This involved the utilisation of "temporal distance" and "question and answer". Temporal distance was achieved by choosing a critical incident that was described prior to the commencement of this study so that it was part of the researcher's history. This process also allowed the researcher to stand back from the incident as the subject of the text to gain what is described by Palmer (1969, p. 185) as "aesthetic distance". The incident was interpreted though the process of question and answer focusing on the transcript as historical text, rather than reflecting on the incident through a process of identifying feelings and knowledge of self. In this way, the researcher was able to focus on pre-understandings that emerged through a dialogue with the text as opposed to using the self as the subject of the text.

Reflecting back on the prejudices influencing the researcher (summarised in Section 5.2.3) stated at the onset of the dialogue with the interview texts, it is evident that none of these has been directly challenged as part of the dialogical process. They

have, however, been questioned as part of the dialogical process and a relationship between these statements and the findings of the research has been illustrated. The first statement identified holistic care as a necessary condition for nursing assessment and interpretation of the patient problem. This statement has been found to be closely associated with the process of scanning and focused observation of the patient when viewed in the context of Cave's (2000) definition of holistic care, as the patient being viewed in the wider proximity of care, utilizing the knowledge and experience of the nurse. This also supports the second statement relating to the nurse using subjective and objective knowledge within the assessment process and involves the nurse in the scanning and focused observation of the patient.

The third statement related to the nurses' requirement to ensure patient safety. This statement was supported in principle by the findings and illustrated in the process of maintaining vigilance while scanning and waiting and balancing, although this was not always achieved by the participants in the study. This finding did question the researcher's pre-understandings and led her to look for the conditions necessary for safe practice and contributed to the conditions necessary for the nurses' professional gaze.

In statement four, when the researcher considered the therapeutic value of emotional labour, the findings of this research again questioned if and when the emotional work of the nurse always contributed to the therapeutic care of the patient. For example, Carol (Extracts 2.26-2.30; pp. 222-223) describes trying to meet the psychological and physical needs of the patient, only to find that the patient had been transferred to intensive care, seemingly in contradiction to the diagnostic and prognostic findings of the medical team. This appeared to challenge the understanding of palliative care as accepted by the patient and nurse in the story.

In statement five, the focus on the effectiveness of team working was illustrated in relation to the conditions necessary for waiting and balancing the evidence and responding to the problem. In this study, the conditions necessary were identified as the requirement for mutual respect and reciprocity between professional groups as well as emotional intelligence.

Finally, the requirement for operational standards to determine when care was optimal or sub-optimal did again appear relevant to this study. The operationalisation of these measures, however, has so far been unable to demonstrate a measurable and reliable improvement in patient outcome when associated with the introduction of

variables such as outreach services and the use of physiological track and trigger tools.

Overall, the use of pre-understandings as a process for examining the relationship between what influenced the researcher's interpretation and the new understanding produced can be considered as a strength of the methodology. It has made the methodological process more visible in terms of the relationship between what is known and understood prior to the commencement of this study and the understanding that was reached. This is supported by Madison (1988) who argues that Gadamerian hermeneutic interpretation needs to demonstrate comprehensiveness of the process from pre-understandings to completion and appropriateness in relation to how the questions emerged from the text. In this research, the pre-understandings acted as a springboard text to trigger a process of questioning between the pre-understandings and the interviews as text. This strength can be challenged from a positivist perspective in that the process of interpretation is seen to be influenced by biases informed by the pre-understandings and the random nature of questioning (Silverman, 2000; Madison, 1988; Ricoeur, 1981). The epistemological basis for this research, however, is hermeneutic, interpretive and constructivist and is not synonymous with positivist perspectives.

The utilisation of "temporal distance" and "question and answer" as the process of interpretation continued as the researcher entered into the play of movement between the horizons of tradition, pre-understandings and the interview transcripts as text until a new shared understanding was reached. Using this dialogical process has allowed the researcher to question and seek answers in the text, as a progressive analytical process. This process began with the literature review and continued through the play of movement to a new horizon of understanding.

The arrival at a new understanding in this research offers one completion of the hermeneutic circle but does not close the circle of understanding. Instead, it offers one view of shared understanding based on the process of hermeneutic interpretation of the researcher's historically affected consciousness and the interview transcripts as text. The aim of the researcher was not to arrive at a final objective solution but rather to present a different understanding of how nurses experience the care of patients with clinical deterioration and this has been achieved. For the researcher, the hermeneutic circle represents cycles of movement where the play of movement can lead back and

forward into a new horizon of understanding, so that this new understanding as text can exist in its historicity and be exposed to further questioning.

The purpose of these findings is not to present an objective truth but an understanding of the truth in its historical and practical context that, by its nature, is dynamic and influenced by history. The findings of this study cannot be measured in terms of their generalisability and reliability but rather by the quality of the process followed. In this study, the quality of the process was guided by the researcher's interpretation of Gadamer's ([1975]1989) conditions necessary for hermeneutic interpretation and Madison's (1988) process of responsible interpretation. Where appropriate, attention has been drawn to how these principles were applied. The researcher therefore has invited the reader to embark on a shared interpretation of what it is like to care for patients with clinical deterioration leading to critical illness in one hospital in Wales. The shared understanding has been presented as one way of understanding this experience and provides an interpretation of practice in the context of its history and tradition.

6.2 Summary and discussion of key findings: implications for practice and research

The aim of this research was to interpret and present an understanding of how nurses experience the care of patients' clinical deterioration leading to critical illness in a NHS Trust in Wales. In order to achieve this, the researcher has constructed a hermeneutic interpretation of nurses' experience in this context based on Gadamer's ([1975] 1989) guiding principles of hermeneutic interpretation. The findings produced have led to a historical and contextual understanding of the nurses' experiences of caring for this group of patients and provided an answer to the research questions below:

1. What is it like to nurse patients with clinical deterioration leading to critical illness?

2. What is it like to nurse patients with critical illness in the context of history, change and innovation in one NHS Trust in Wales?

The key findings discussed in this section emerged as a "fusion of horizons" from a dialogue with the text. The text consisted of: transcripts constructed from in-depth interviews with eight nurses who have cared for patients with clinical deterioration leading to critical illness; the history and tradition of caring for critically ill patients; the researcher's pre-understandings; and related theory, research and policy.

The key findings summarised in this section focus on the professional gaze and the conditions necessary for optimal practice within the process of the professional gaze. This includes findings related to: the potential to identify signs of clinical deterioration before it can be verified through physiological evidence; the complex and holistic nature of the professional gaze; the recognition of the multiple sources and types of knowledge utilised to inform perception of the problem; the self confidence of the nurse and a related sense of feeling in control; and the requirement for reciprocity in professional ethical practice and emotional intelligence. The process of perception, interpretation and understanding of the clinical situation as described by the participants is also summarised in the context of Gadamer's conditions necessary for hermeneutic interpretation. What the researcher found was that, within the complex process of the professional gaze, all the conditions necessary for hermeneutic interpretation were met.

The *"professional gaze"* appeared to be a cyclic and continuous process of perceiving and responding to patient clinical deterioration. This process involved the *"professional scan"* that demonstrated an alertness to cues ranging from the centre to the perimeter of their vision. Once triggered, these led to a more focused and detailed observation of the patient. This *"focused observation"* involved seeing the patient as a person involved in a situation. Within this process, the nurse assessed the patient's reaction to the situation and interpreted the clinical picture through visual signs, clinical observations, investigations, knowledge of the patient and patterns of illness learnt through the application of theory to knowledge of related past experiences. The final element in the process involved *"waiting and balancing"* and referred to deciding when the participants should call for help. This process was influenced by the nurses' ability to demonstrate confidence in their knowledge of the situation and evidence of clinical deterioration, balanced with managing the situation with the resources available.

The participants in this study recognised the potential for critical illness by selective attention to and acquisition of subjective visual cues, *"the visual thing"*. When participants with at least three years' experience described this process, they related visual cues to a feeling of concern for the patient. This appeared to be related to their ability to recognise patterns of clinical deterioration based on their knowledge of theory and practice as well as past experiences. Observations of physiological parameters were used to provide the evidence of clinical deterioration and confirmed the progression of the patient's condition towards critical illness. For the junior staff nurse in this study, the connectedness between visual triggers, the nurse's feelings of concern and physiological evidence was different to that of the staff with more nursing experience and showed only limited evidence of pattern recognition. The nurse's coping strategy to overcome this was to check every change, no matter how small, with a more senior nurse.

The notion of *"the visual thing"* emerged again in subsequent themes in the context of diagnosing and responding to critical illness. When nurses described being concerned, they continued to watch and wait for evidence of physiological deterioration until they had a justified belief that the patient had deteriorated. The study revealed that the nurses did not rely solely on the evidence of physiological parameters to diagnose clinical deterioration, but related the patient's condition to subjective observations of visual and interpersonal cues related to "knowing the

patient", as well as the nurse's ability to "feel in control" of the situation. This sense of feeling in control was related to their degree of clinical knowledge, experience and available resources.

When this finding was examined in the context of clinical examples, the text revealed that, by using all of the factors identified, nurses were able to recognise the potential for clinical deterioration before the objective physiological determinants occurred and that this subsequently increased their scope for preventing further deterioration in the patients concerned. This was illustrated in the extracts from Carol (Extract 2.16, p. 179) and Cathy (Extract 1.94, p. 193). When this was considered in the context of the current debate concerning the paucity of strong clinical evidence to support the use of physiological track and trigger scoring to improve patient outcome, the researcher concluded that, for the participants in this study, the use of physiological signs was not sufficient to track clinical deterioration. What the nurses in this study used was a combination of subjective, experiential, historical and physiological knowledge to trigger cause for concern and subsequent verification of the patient's clinical deterioration.

This finding cannot be generalised to the wider population but it does raise questions about how and what should be included in clinical guidelines for the optimal management of tracking clinical deterioration. For example, can and if so how can clinical concern be defined? Also, if the participants in this study used multiple strategies for decision making based on knowledge and experience of theoretical and clinical situations that appeared to facilitate the successful management of patients with clinical deterioration, can this be tested and generalised to a wider population?

The relationship between knowledge and experience of the clinical situation and the participants having a sense of control over the situation is also significant here. The findings of this study revealed that, when the participants were involved in situations where they had theoretical and experiential knowledge of similar situations, they were able to use selective perception and pattern recognition to guide fast thinking in dynamic clinical situations. The participants also described their desire to continually learn and update their practice in order to maintain control and recognised when this was lacking in others (Cathy, Extracts 1.223, 1.217, p. 211; Olive, Extract 8.50, p. 212; Carol, Extract 2.36, p. 213). This finding is consistent with studies where an association has been identified between knowledge and context related experience

and accurate and timely cue perception and diagnosis (Hancock and Durham, 2007a, 2007b; Benner *et al.*, 1999; Patel, 1996; Leprohon and Patel, 1995). This finding, if tested and generalised to a wider population, has implications for how nurses are educated and prepared for their clinical role in that any preparation would need to take into account the theory, practice situation and clinical competencies required for effective practice. The question of whether nurses should be moved outside their area of speciality is also something that requires further research, in that, if nurses have specialist knowledge and skills in one area of practice, can this be assumed to be sufficient for recognising and responding to clinical deterioration when practicing outside her specialist area?

The process of responding to the patient's clinical deterioration and the conditions that influenced the success of the response were found to relate to the quality of the teamwork evident in the clinical examples studied. Closer questioning of the factors revealed that, when nurses felt in control of the clinical situation, they were able to demonstrate evidence of compassion, conscience, competence, confidence and commitment to the patient situation. These elements were found to be consistent with Roach's (1987) attributes of behaviour related to professional caring. When the nurses were involved in situations where a patient had deteriorated, these elements of their role appeared to enable them to have the power to assess and communicate effectively with other professional groups in order to achieve the desired goal.

The findings of this study are consistent with Hokanson Hawk's (1991) theory that the professional *"power to..."* achieve clinical goals is related to demonstrations of knowledge and competence as they are perceived by other professional groups as well as the nurses involved. When medical practitioners did not perceive, understand or accept the source of the nurse's clinical and professional *"power to..."*, the text revealed that the process of getting help was impeded. This included examples of the nurse not being believed or their concerns not being accepted as a valid reason to visit the patient. In the examples included from Carol's transcript (Extract 2.47, p. 229) and Marian's transcript (Extract 6.26, p. 230), both situations resulted in conflict occurring between professional groups and offered an insight into the emotional work of nurses and doctors in such situations, as they work towards an outcome. However, in both of the situations above the outcome was synonymous with suboptimal care.

The key to obtaining a successful outcome for the patient was reciprocity between the nurses, medical teams and specialist nurses in the context of their professional role. This included demonstrations of mutual trust, empathy and professional accountability. In relation to the participants in this study, the text revealed that this process of obtaining a successful outcome for the patient often involved the emotional work of managing to maintain a professional face in situations involving patient distress and interprofessional conflict. The researcher proposed that the skills required to manage emotional work effectively are consistent with the skills required to develop emotional intelligence as an integral part of the professional role. While there is limited evidence in the literature to determine if emotional intelligence is naturally inherent in individuals or a skill to be learnt, there is growing evidence to support a positive relationship between emotional intelligence and professional efficiency (Akerjordet and Severinsson, 2007; Cummings *et al.*, 2005; Jordon and Troth, 2002). The findings of this study do support the presence of a positive relationship between emotional intelligence and professional efficiency as well as highlighting the nature of emotional work involved in managing patients' clinical deterioration. This finding again has implications for practice and research in that the tentative findings presented in this study can lead to questions such as "What is the relationship between emotional intelligence and the effectiveness of interprofessional consultations in situations involving patient clinical deterioration?"

By using the professional gaze as a structure for examining the participants' experiences, the researcher was able to interpret the conditions necessary for the participants to achieve optimal care. When one or more of these conditions were identified as absent in the participants' stories, the potential for examples of suboptimal care appeared to increase. These conditions are illustrated in Figure 5.4 (p. 239) as a model for professional gaze. This conceptual framework, developed by the researcher, offers clinicians and researchers the opportunity to question and test the elements and conditions inherent in the process through application to practice and research.

Finally, this process of perception, interpretation and understanding of the clinical situation can be understood as an example of hermeneutic interpretation and has been illustrated by Cathy (Extract 1.94, pp. 193-194) when she describes her patient as someone with a prolonged series of problems and by Marian (pp. 207-208) as she describes trying to get the junior doctor to see her patient. For the researcher,

interpreting the participants' stories in the context of the professional gaze illustrated the application of the seven conditions necessary for hermeneutic interpretation and understanding (Section 4.3). The play of movement is represented by the to and fro between the processes of scanning, focused observation and waiting and balancing. The historically affected consciousness is integral to the knowledge and experience that informs the perception and pattern recognition leading to focused observation. The patterns and tacit knowing represented by a feeling of concern are informed by the pre-understandings of the participants as they perceive the patient as a text to be understood. The patient's condition represents the text as open to continuing change and interpretation as the dialogue with the text continues, asking questions and interpreting the clinical picture as text that can be translated into a clinical picture that can be understood.

The implication of understanding this process as hermeneutic interpretation is that it accommodates the objective elements of the disease or patient condition with a historically affected dialogue with the patient as text. This understanding brings the research full circle and back to Gadamer's interpretation of understanding as an encounter with the text. Thus, for Gadamer ([1975] 1989, pp. 490-491):

> ... there is undoubtedly no understanding that is free of all
> prejudices, however much the will of our knowledge must
> be directed toward escaping their thrall. Throughout our
> investigation it has emerged that the certainty achieved by
> using scientific methods does not suffice to guarantee truth.
> ...Rather, what the tool of method does not achieve must –
> and really can – be achieved by a discipline of questioning
> and inquiring, a discipline that guarantees truth.

In relation to this study, nursing includes the practice of questioning and inquiring and can be recognised as a core element of the professional role. The findings also appear to validate professional knowing and clinical expertise as core elements in the recognition, interpretation and management of patients who have the potential for clinical deterioration. Future considerations for research should not therefore be limited to research related to objective measures of physiological variables and their relationship to clinical outcome measures. They should instead focus more widely on all the conditions necessary for optimal recognition of clinical deterioration.

References

Akerjordet, K. and Severinsson, E. (2007) Emotional intelligence: a review of the literature with specific focus on empirical and epistemological perspectives *Journal of Clinical Nursing* 16:1405- 1416

Albarran, J. and Fulbrook, P. (1998) Advanced nursing practice: an historical perspective. In Rolfe, G. and Fulbrook, P. (editors) *Advanced nursing practice* Oxford: Butterworth Heinemann Chapter 1: 11-32

Alcott, L. M. (1863) *Hospital Sketches* Boston: James Redpath

Allan, P. and Jolley, M. (1982) *Nursing, Midwifery and Health Visiting since 1900* London: Faber and Faber

Allen, D. (1997) The nursing and medical boundary: a negotiated order? *Sociology of Health and Illness* 19(4): 498-520

Allen, D. (2002) Time and space on the hospital wards: shaping the scope of nursing practice. In Allen, D. and Hughes, D. (Editors) *Nursing and the Division of Labour in Healthcare* Houndmills: Palgrave Macmillan 23-51

All Wales Critical Care Development Group (2003) *Standards for Adult Critical Care in Wales* accessed at:
http://www.wales.nhs.uk/sites/documents/371/Final%20version%20CCDGstandardsJan%202003.pdf

Almerud, S., Alapack, R. J., Fridlund, B. and Ekebergh, M. (2007) Of vigilance and invisibility – being a patient in technology intense environments *Nursing in Critical care* 12: 3: 151-158

Almerud, S., Alapack, R. J., Fridlund, B. and Ekebergh, M. (2008) Beleaguered by technology: care in a technologically intense environments *Nursing Philosophy* 9: 55-61

Altheide, D. L. and Johnson, J. M. (1994) Criteria for assessing interpretative validity in qualitative research. In Denzin, N. K. and Lincoln, Y. S. (editors) *Handbook of Qualitative Research* London: Sage Publications pp. 485-499

Alvesson, M. and Skoldberg, K. (2000) *Reflexive Methodology: New Vistas for Qualitative Research* London: Sage

Anderson, J. R. ([1983] 1996) *The Architecture of cognition* New Jersey: Erlbaum Hillsdale

Andrews, R. and Martin, S. (2007) Has devolution improved public services? *Public Money and Management* April 2007 149-156

Andrews, M., Lyne, P., and Riley, E. (1996) Validity in qualitative health care research: an exploration of the impact of individual researcher perspectives within collaborative enquiry *Journal of advanced Nursing* 23: 441-447

Angen, M. J. (2000) Evaluating interpretative inquiry: reviewing the validity debate and opening the dialogue *Qualitative Health Research* 10(3): 378-395

Anspach, R. R. (1997) *Deciding Who Lives: Fateful Choices in the Intensive-care Nursery* Berkeley: University of California Press

Anspach, R. R. and Mizrachi, N. (2006) The field worker's fields: ethics, ethnography and medical sociology *Sociology of Health and Illness* 28:(6) 713-731

Ashworth, P. (1996) Presuppose nothing! The suspension of assumptions in phenomenological psychological methodology *Journal of Phenomenological Psychology* 27(1): 1-25

Atkinson, B. (1986) The British Association of Critical Care Nurses (BACCN) *Care of the Critically Ill* 2 (3): 111

Atkinson, B. (1987) The intensive care unit *Nursing* 15: 547-551

Atkinson, P. (1995) *Medical Talk and Medical Work* London: Sage Publications

Atkinson, P. and Hammersley, M. (1994) Ethnography and participant observation In Denzin, N. K. and Lincoln, Y. S. (editors) Handbook of Qualitative Research London: Sage Publications pp. 248-261

Attride-Stirling, J. (2001) Thematic networks: an analytic tool for qualitative research *Qualitative research* 1(3) 385-405

Atwal, A. and Caldwell, K. (2006) Nurses' perception of multidisciplinary teamwork in acute health-care *International Journal of Nursing Practice* 12: 359-365

Audit Commission (1999) *Critical to Success: The Place of Efficient and Effective Critical Care Services within the Acute Hospital* London: Audit Commission

Ayres, S. M. (1994) Preventing cardiac arrest *Critical Care Medicine* 22: 189-191

Ball, C., Kirby, M. and Williams, S. (2003) Effect of the critical care outreach team on patient survival to discharge from hospital and readmission to critical care: non-randomised population based study *British medical Journal* 327: 1014-1018

Ball, C. and McElligot, M. (2003) Realising the potential of critical care nurses': an exploratory study of the factors that affect and comprise the nursing contribution to the recovery of critically ill patients *Intensive and Critical care Nursing* 19: 226-238

Baly, M. (1980) *Nursing and Social Change* (2nd edition) London: Heinemann Medical Books

Baly, M. (1995) *Nursing and Social Change* (3rd edition) London: Heinemann Medical Books

Bartlett, F. C. (1932) *Remembering* Cambridge: Cambridge University Press

Beauchamp, T. L. and Childress, J. F. (2001) *Principles of biomedical ethics* (5th edition) New York: Oxford University Press

Beech, I. (1999) Bracketing in phenomenological research *Nursing Research* 6(3): 35-51

Beck, U., Giddens, A. and Lash, S. (1994) *Reflexive modernisation: Politics, Tradition and Aesthetics in the Modern Social Order* Cambridge: Polity Press

Bedall, S. E. Deitz, D. C., Leeman, D. and Delbanco, T. L. (1991) Incidence and characteristics of preventable iatrogenic cardiac arrests *Journal of the American Medical Association* 265 (21): 2815-2820

Benner, P. (1984) *From Novice to Expert* Menlo Park: Addison- Wesley

Benner, P. and Wrubel, J. (1989) *The Primacy of Caring: Stress and Coping in Health and Illness* Menlo Park, California: Addison-Wesley Publishing Company

Benner, P., Hooper-Kyriakidis, P. and Stannard, D. (1999) *Clinical Wisdom and Interventions in Critical Care* Philadelphia: W.B. Saunders Company

Bolton, S. C. (2000) Who cares? Offering emotion work as a 'gift' in the nursing labour process *Journal of Advanced Nursing* 32(3): 580-586

Bourdieu, P. (2003) Participant objectivisation *Journal of the Royal Anthropological Institute* 9: 281-294

Bowling, A. (1997) *Research Methods in Health, Investigating Health and Health Services* Buckingham: Open University Press

British Medical Association Planning Unit. (1967) *Report of the Working Party on Intensive Care in the United Kingdom* London: British Medical Association

Brink, J. and Wood, J. (1994) *Basic Steps in Planning nursing Research* (4th ed) Boston: Jones and Bartlett Publishers

Bryman, A. (1988) *Quantity and Quality in Social Research* London: Unwin Hyman

Buck, N., Devlin, H. B. and Lunn, J. N. (1987) *The Report of the Confidential Inquiry into Perioperative Deaths* London: Nuffield Provincial Hospitals Trust

Buist, M., Moore, G., Bernard, S., Waxman, B., Anderson, J. and Nguyen, T. (2002) Effects of a medical emergency team on reduction of incidence of and mortality from unexpected cardiac arrests in hospital: preliminary study *British Medical Journal* 324(7334): 387-390

Buist, M., Bernard, S., Nguyen, T. V., Moore, G and Anderson, J. (2004) Association between clinically abnormal observations and subsequent in-hospital mortality: a prospective study *Resuscitation* 62:137-141

Butterfield, J. (Editor)(2003) *Collins English Dictionary: Complete and Unabridged* Glasgow: Harper Collins Publishers

Campbell, S. M., Hann, M., Hacker, J. Durie, A. Thapar, A. and Roland, M. O. (2002) Quality assessment of three common conditions in primary care: validity and reliability of review criteria developed by expert panels for angina, asthma, and type 2 diabetes *Quality and Safety in Health Care* 11: 125-130

Campbell, S. M., Braspenning, J., Hutchinson, A. and Marshall, M. N. (2003) Improving the quality of health care: Research methods used in developing and applying quality indicators in primary care *British Medical Journal* 326:816-819

Casey, W. F. (1984) Cardiopulmonary resuscitation: a survey of standards among junior hospital doctors *Journal of Research Sociology and Medicine* 77: 921-924

Cave, P. (2000) The error of excessive proximity preference – a modest proposal for understanding holism *Nursing Philosophy* 1: 20-25

Chadderton, H. (2004) Hermeneutics and Nursing Research, in Rapport, F. (editor) *New Qualitative Methodologies in Health and Social Care Research* London: Routledge, Taylor and Francis Group 3: 55-78

Chadderton, H. (2003) 'Familiar dwelling, fractured dwelling and new dwelling: A Heideggerian-Gadamerian hermeneutic study of the Being of older people in nursing homes' Unpublished PhD thesis: University of Wales College of Medicine, Cardiff

Charny, M. (2001) What is evidence in health care? *British Journal of Health Care Management* 7(2): 70-72

Chellel, A., Higgs, D. & Scholes, J. (2006) An evaluation of the contribution of critical care outreach to the clinical management of the critically ill ward patient in two acute NHS trusts *Nursing in Critical Care* 11(1): 42-51

Cioffi, J. (1997) Heuristics, servants to intuition, in clinical decision making *Journal of Advanced Nursing* 26: 203-208

Cioffi, J. (1998) Decision making by emergency nurses *Accident and emergency Nursing* 6: 184-191

Cioffi, J. (2000a) Nurses' experiences of making decisions to call emergency assistance to their patients *Journal of Advanced Nursing* 32 (1): 108-114

Cioffi, J. (2000b) Recognition of patients who require emergency assistance: a descriptive study *Heart and Lung* 29 (4): 262-268

Cioffi, J. (2001) A study of the use of past experiences in clinical decision making in emergency situations *International Journal of Nursing Studies* 38: 591-599

Cioffi, J. and Markham, R. (1997) Clinical decision making: managing case complexity *Journal of Advanced Nursing* 25: 265-272

Clark, J. (1998) The unique function of the nurse *Nursing Standard* 12(16): 39-42

Clarke, J.B. (1999) Hermeneutic analysis: a qualitative decision trail *International Journal of Nursing Studies* 26: 363-369

Coad, S. and Haines, S. (1999) Supporting staff caring for critically ill patients in acute areas *Nursing in Critical Care* 4(5): 245-248

Coad, S., Haines, S. and Lawrence, B. (2002) Supporting ward staff in acute areas: the past, present and future *Nursing in Critical Care* 7(3): 126-131

Cohen, M. Z. (2000) Introduction. In Cohen, M. Z., Kahn, D. L. and Steeves, R. H. (Editors) *Hermeneutic Phenomenological Research: A Practical Guide for Nurse Researchers* Thousand Oaks: Sage Publications Incorporated 1-12

Cohen, M. Z., Kahn, D. L. and Steeves, R. H. (2000) In Cohen, M. Z., Kahn, D. L. and Steeves, R. H. (Editors) *Hermeneutic Phenomenological Research: A Practical Guide for Nurse Researchers* Thousand Oaks: Sage Publications Incorporated 71-83

Cohen, M. Z. and Omery, A. (1994) Schools of phenomenology: implications for research. In Morse, J. M. (Editor) *Critical Issues in Qualitative Research* Thousand Oaks: Sage Publications Incorporated 136-156

Colaizzi, P. (1978) Psychological research as the phenomenologist views it. In Valle, R. and King, M. (eds) *Existential phenomenological alternatives for psychology* New York: Oxford University Press 48-71

Considine, J. (2005) The role of the nurse in preventing adverse events related to respiratory dysfunction: literature review *Journal of Advanced Nursing* 49(6): 624-633

Coombs, M. (2003) Power and conflict in intensive care clinical decision making *Intensive and Critical care Nursing* 19: 125-135

Corben, V. (1999) Misusing phenomenology in nursing research: identifying the issues *Nurse Researcher* 6(3): 52-66

Corcoran, S. A. (1986) Task complexity and nursing expertise as factors in decision making *Nursing Research* 35(2): 107-112

Coulter, M. A. (2001) Severity of illness – an important concept for critical care nursing *Intensive and Critical Care Nursing* 17: 183-186

Council Directive 93/104/EC (1993) *Official Journal of the European Community* L307: 18-24

Cox, H., James, J. and Hunt, J. (2006) The experience of trained nurses caring for critically ill patients within a general ward setting *Intensive and Critical Care Nursing* 22: 283-293

Cummings, G. Hayduck, L. and Estabrooks, C. (2005) Mitigating the impact of hospital restructuring on nurses *Nursing Research* 54: 2-11

Cutcliffe, J. R. (2003) Reconsidering reflexivity: Introducing the case for intellectual entrepreneurship *Qualitative Health Research* 13(1): 136-148

Cutler, L. R. (2002a) From ward-based critical care to educational curriculum1: a literature review *Intensive and Critical Care Nursing* 18:162-170

Cutler, L. R. (2002b) From ward-based critical care to educational curriculum 2: a focused ethnographic case study *Intensive and Critical Care Nursing* 18: 280-291

Daffurn, K., Lee, A., Hillman, K. M., Bishop, G. F. and Bauman, A. (1994) Do nurses know when to summon emergency assistance? *Intensive and Critical Care Nursing* 10: 115-120

Davey, N. (2006) *Unquiet understanding: Gadamer's philosophical hermeneutics* Albany: State University of New York Press

DeBard, M. L. (1981) Cardiopulmonary resuscitation: analysis of six years experience and review of the literature *Annuls of Emergency Medicine* 10: 408-416

Denscombe, M. (2002) *Ground Rules for Good Research: a ten point guide for social researchers* Buckingham: Open University Press

Denzin, N. and Lincoln, Y. S. (1994) Introduction to part V: The art of interpretation, evaluation and presentation In Denzin, N. K. and Lincoln, Y. S. (editors) *Handbook of Qualitative Research* London: Sage Publications 479-483

Denzin, N. K. and Lincoln, Y. S. (2005) (editors) *The Sage Handbook of Qualitative Research* 3rd edition London: Sage Publications

Department of Health. (1970) *Hospital Building Note 27: Intensive Therapy Unit* London: Department of Health and Social Security

Department of Health (1994) *The Challenges for Nursing and Midwifery in the 21st Century: The Heathrow Debate* London: Department of Health

Department of Health (1998) *Clinical Governance: Quality in the New NHS* London: Department of Health

Department of Health (2000) *Comprehensive Critical Care: A Review of Adult Critical Care Services* at www.doh.gov.uk/nhsexec/compcritcare.htm

Department of Health (2001a) *The Nursing Contribution to the Provision of Comprehensive Critical care for Adults: A Strategic Programme of action*

Department of Health at www.doh.gov.uk/jointunit/jip.htm

Department of Health (2001b) *Research Governance Framework for Health and Social Care* London: Department of Health at www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAn dGuidance/DH_4008777

Department of Health (2003) *Critical care Outreach 2003: Progress in Developing Services* Department of Health NHS Modernisation Agency, at www.modernnhs.uk/critical;care

Descartes, R. ([1641] 1996) Meditations on First Philosophy Translated by Cottingham, J. (revised edition 1996) Cambridge: Cambridge University Press

DeVault, M. L. (1997) Personal writing in social science: issues of production and implementation. In Hertz, R. (editor) *Reflexivity and Voice* Thousand Oaks, Ca: Sage

DeVita, M. A., Bellomo, R., Hillman, K., Kellum, J., Rotondi, A. *et al.* (2006) Findings of the first consensus conference on medical emergency teams *Critical Care Medicine* 34(9): 2463-2478

De Witt, L. and Ploeg, J. (2006) Critical appraisal of rigour in interpretative phenomenological nursing research *Journal of Advanced Nursing* 55(2): 215-229

Dillner, L. (1995) Babies' deaths linked to suboptimal care *British Medical Journal* 310: 757

Dilthey, W. (1991) *Wilhelm Dilthey selected works volume 1: Introduction to the human sciences* edited by Makkreel, R. and Rodi, F. Princeton: Princeton University Press

Donaldson, S. K. and Crowley, D. M. (1978) The discipline of nursing Nursing Outlook 26: 113-120. Reprinted in Kenney, J. W. (1999) (Editor) Philosophical and theoretical perspectives for advanced nursing practice (2nd edition) 10-21 Sudbury: Jones and Bartlett Publishers

Dostal, R. J. (2002) Gadamer's relation to Heidegger and phenomenology. In Dostal, R. J. (Editor) *The Cambridge Companion to Gadamer* Cambridge: Cambridge University Press 247-266

Dowling, M. (2007) From Husserl to van Manen: A review of different phenomenological approaches *International Journal of Nursing Studies* 44: 131-142

Drakeford, M. (2006) Health policy in Wales: making a difference in conditions of difficulty *Critical social policy* 26: 543-561

Dreyfus, H. L. and Dreyfus, S. E. (1986) *Mind over Machine* Oxford: Basil Blackwell

Edwards, S. D. (2001) *Philosophy of Nursing* Palgrave, Basingstoke

Dubois, R. W. and Brook R. H. (1988) Preventable deaths: who, how often and why? *Annuls of Internal Medicine* 109 (7): 582-589

Durbin, C. (2006) Team model: advocating for the optimal method of care delivery in the intensive care unit *Critical Care Medicine* 34(3) (Supplement): S12-S17

Ebrahim, S. (2002) Ageing, health and society *International Journal of Epidemiology* 31: 715-718

Edbrooke, D., Hibbert, C. and Corcoran, M. (1999) *Review of the NHS Executive of Adult Critical care Services: An International Perspective (Research Report)* Sheffield: Medical Economics and Research Centre (August)

Ellefsen, B., Kim, H. S. and Han, K. J. (2007) Nursing gaze as a framework for nursing practice: a study from acute care settings in Korea, Norway and the USA *Scandinavian Journal of Caring* 21: 98-105

Fairley, H. B. (1961) The Toronto general hospital respiratory unit *Anaesthesia* 16: 267-274

Fairman, J. (1992) Watchful vigilance: nursing care, technology and the development of intensive care units *Nursing Research* 4(11):56-60

Fairman, J. and Lynaugh, J. E. (1998) *Critical care Nursing: a History* Philadelphia: University of Pennsylvania Press

Field, P.A. and Morse, J.M. (1985) *Nursing Research, the application of qualitative approaches* London: Croom Helm

Field, P. A. (1991) Doing fieldwork in your own culture, in Morse, J. M. (editor) *Qualitative Nursing Research: a Contemporary Dialogue* (revised edition) Newbury Park: Sage Publications Inc 6: 91- 104

Fieselmann, J., Hendryx, M. and Helms, C. (1993) Respiratory rate predicts cardiopulmonary arrest for internal medicine in-patients *Journal of Internal Medicine* 8: 354-360

Finlay, L. (2002a) "Outing" the researcher: the provenance, principles and practice of reflexivity *Qualitative Health Research* 12(4): 531-545

Finlay, L. (2002b) Negotiating the swamp: the opportunity and challenge of reflexivity in research practice *Qualitative Research* 2(2): 209-230

Fleming, V., Gaidys, U. and Robb, Y. (2003) Hermeneutic research in nursing: developing a Gadamerian-based method *Nursing Inquiry* 10:113-120

Flew, A. (editor) (1979) *A Dictionary of Philosophy* London: Macmillan Publishers

Foucault, M. ([1973] 1989) Translated by Sheridan, A. M. *The Birth of the Clinic* London: Routledge Classics

Fox, N. (1993) *Postmodernism, Sociology and Health* Buckingham: Open University Press

Franklin, C. and Matthew, J. (1994) Developing strategies to prevent in hospital cardiac arrest: analysing responses of physicians and nurses in the hours before the event *Critical Care Medicine* 22: 244-247

Freidson, E. (1970a) *Professional Dominance* New York: Atherton Press Incorporated

Freidson, E. (1970b) *Profession of medicine: a Study in the Sociology of Applied Knowledge* New York: Dodd, Mead and Company

Freshwater, D. and Rolfe, G. (2001) Critical reflexivity: a politically and ethically engaged research method for nursing *Nursing Times Research* 6(1): 526-537

Gadamer, H. ([1962]1976) *Philosophical hermeneutics* Translated and edited by Linge, D. London: University of California Press

Gadamer, H. ([1975]1989) *Truth and Method* Translated and edited by Weinsheimer, J. and Marshall D.G. (2nd revised edition) London: Sheed and Ward

Galloway, D. J. R. (1996) *An Ethnographic Study of Nurses Work in a General Intensive care Unit* Unpublished MSc Dissertation, Cardiff: University of Wales College of Medicine

Galloway, D. J. R. (2003) Making nursing visible. In British Association of Critical Care Nursing (2003) *Developing our Knowledge Base for Critical Car: Conference Abstracts* Glasgow: British Association of Critical Care Nursing (September)

Gao, H., McDonnell, A., Harrison, D. A., Moore, T., Adam, S., Daly, K., Esmonde, L., Goldhill, D. R., Parry, G. J., Rashidian, A., Subbe, C. P. and Harvey, S. (2007) Systematic review and evaluation of physiological track and trigger warning systems for identifying at-risk patients on the ward *Intensive Care Medicine* 33: 667-679

Geanellos, R. (1998a) Hermeneutic philosophy part I: implications of its use as methodology in interpretive nursing research *Nursing Inquiry* 5(3) 154-163

Geanellos, R. (1998b) Hermeneutic philosophy part II: a nursing research example of the imperative to address forestructures/pre-understandings *Nursing Inquiry* 5(4) 238-247

Gerdtz, M. F. and Bucknall, T. K. (2001) Triage nurses' clinical decision making. An observational study of urgency assessment *Journal of Advanced Nursing* 35(4): 550-561

Giorgi, A. (Editor) (1985) *Phenomenology and Psychological research* Pittsburgh, Duquesne University Press

Godden, J. and Helmstadter, C. (2004) Woman's mission and professional knowledge: Nightingale nursing in colonial Australia and Canada *Social History of Medicine* 17(2): 157-174

Goldhill, D. (2000) Medical emergency teams *Care of the Critically Ill* 16(6): 209-212

Goldhill, D. R., McNarry, A. F., Mandershoot, G. and McGinley, A. (2005) A physiologically-based early warning score for ward patients: the association between score and outcome *Anaesthesia* 60: 547-553

Goldhill, D. and McNarry, A. (2003) Physiological abnormalities are associated with increased mortality- Appendix 2. In National Outreach Forum (2003) Critical *care outreach 2003: Progress in developing services* London: Department of Health? NHS Modernisation Agency Accessed at: http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPoli cyAndGuidance/DH_4091873

Goldhill, D. R. and McNarry, A. F. (2004) Physiological abnormalities in early warning scores are related to mortality in adult inpatients *British Journal of Anaesthesia* 92: 882-884

Goldhill, D. and Sumner, A. (1998) Outcomes of intensive care patients in a group of British intensive care units *Critical Care Medicine* 26: 1337-1345

Goldhill, D., White, S. A., and Sumner, A. (1999a) Physiological values and procedures in the 24 hours before ICU admission from the ward *Anaesthesia* 54: 853-860

Goldhill, D., Worthington, L., Mulcahy, A., Tarling, M. and Sumner, A. (1999b) The patient at risk team: identifying and managing seriously ill ward patients *Anaesthesia* 54:853-860

Goleman, G. (1998) *Working with Emotional Intelligence* USA: Bantam Books

Gonzalez, F. J. (2006) Dialectic and dialogue in the hermeneutics of Paul Ricoeur and H.G. Gadamer *Continental Philosophy Review* 39:313–345

Goodwin, L. and Goodwin, H. (1984) Qualitative vs. quantitative or qualitative and quantitative research? *Nursing Research* 33: 378-380

Gortner, S. R. (1980) Nursing science in transition *Nursing Research* 29: 180-183

Green, A. L. and Williams, A. (2006) An evaluation of an early warning clinical marker referral tool *Intensive and Critical Care Nursing* 22: 274-282

Greer, S. L. (2004) Four Way Bet: How devolution has led to four different models for the NHS London: The Constitution Unit (21 pp., February 2004) (available from www.ucl.ac.uk/constitution-unit)

Griffiths, P. (2008) Ethical conduct and the nurse ethnographer: consideration of an ethic of care *Journal of Research in Nursing* 13: 350

Grondin, J. (2002) Gadamer's basic understanding of understanding. In Dostal, R. J. (Editor) *The Cambridge Companion to Gadamer* Cambridge: Cambridge University Press 36-51

Groom, P. (2001) Critical care outreach teams- a prayer answered? *Nursing Times* 97(43): 34-35

Gross, R. (2005) *Psychology: the Science of Mind and Behaviour* (Fifth edition) London: Hodder Arnold

Grossman, S. C. and Wheeler, K. (1997) Predicting patients' deterioration and recovery *Clinical Nursing Research* 6: 45-58

Guba, E. G. and Lincoln, Y. S. (2005) Paradigmatic controversies, contradictions and emerging confluences. In Denzin, N. K. and Lincoln, Y. S. (editors) *The Sage Handbook of Qualitative Research* (3rd edition) London: Sage Publications 191-215

Guba, E. G. and Lincoln, Y. S. (1994) Competing paradigms in qualitative research. In Denzin, N. K. and Lincoln, Y. S. (editors) *Handbook of Qualitative Research* London: Sage Publications 105-117

Guba, E. G. and Lincoln, Y. S. (1989) *Fourth Generation Evaluation* Newbury Park, California: Sage Publications

Haines, S. and Coad, S. (2001) Supporting ward staff in acute care areas: expending the service *Intensive and Critical Care Nursing* 17: 105-109

Haines, S., Crocker, C. and Leducq, M. (2001) Providing continuity of care for patients transferred from ICU *Professional Nurse* 17(1): 17-21

Hall, E. T. (1983) *Dance of Life: the Other Dimension of Time* Garden, New York: Anchor Press

Hall, P (2005) Interprofessional teamwork: professional cultures as barriers *Journal of Interprofessional Care* 19(Supplement):188-196

Ham, C. (1999) *Health Policy in Britain* (Fourth edition) Houndmills: Palgrave

Hamilton, B. E. and Manias, E. (2007) Rethinking nurses' observations: psychiatric nursing skills and invisibility in the acute inpatient setting *Social Science and Medicine* 65: 331-343

Hammersley, M. (1992) *What's Wrong with Ethnography?* London: Routledge

Hammersley, M. and Atkinson, P. (1983) *Ethnography: Principles in Practice* (1st edition) London: Routledge

Hammersley, M. and Atkinson, P. (1995) *Ethnography: Principles in Practice* (2nd edition) London: Routledge

Hammersley, M. and Atkinson, P. (2007) *Ethnography: Principles in Practice* (3rd edition) London: Routledge

Hancock, H. and Durham, L. (2007a) Critical care outreach: the need for effective decision-making in clinical practice (Part 1) *Intensive and Critical Care Nursing* 23:15-22

Hancock, H. and Durham, L. (2007b) Critical care outreach: the need for effective decision-making in clinical practice (Part 2) *Intensive and Critical Care Nursing* 23: 104-114

Harrington, A. (2000) Objectivism in hermeneutics? Gadamer, Habermas, Dilthey *Philosophy of the Social Sciences* 30(4): 491-507

Harrison, J. (2004) Addressing increasing patient acuity and nursing workload *Nursing Management* 11(4): 20-25

Heidegger, M. ([1926]1962) *Being and Time* Translated by Macquarrie, J. and Robinson, E. Oxford: Blackwell Publishers Limited

Henderson, A. (1994) Power and knowledge in nursing practice: the contribution of Foucault *Journal of Advanced Nursing* 20: 935-939

Henderson, V. (1980) Preserving the essence of nursing in a technological age *Journal of Advanced Nursing* 5: 245-60

Hershey, C. O. and Fisher, L. (1982) Why outcome of cardiopulmonary resuscitation in general wards is poor *Lancet* 1: 31-34

Hillman, K.M. (1990) European intensive care *Intensive Care World* 7: 2: 75-76

Hillman, K.M., Bristow, P. J., Chey, T., Daffurn, T., Jacques, T., Norman, S. L., Bishop, G. F. and Simmons, G. (2001) Antecedents to hospital deaths *Internal Medicine Journal* 31: 343-348

Hochschild, A. R. (1983) *The Managed Heart: commercialisation of human feeling* Berkeley: University of California Press

Hodgetts, T. J., Kenward, G., Vlackonikolis, I., Payne, S., Castle, N., Crouch, R., Ineson, N. and Shaikh, L (2002a) Incidence, location and reasons for avoidable in-hopsital cardiac arrest in a district general hospital *Resuscitation* 54: 115-123

Hodgetts, T. J., Kenward, G., Ioannis, G., Vlackonikolis, I., Payne, S. and Castle, N., (2002b) The identification of risk factors for cardiac arrest and formulation of activation criteria to alert a medical emergency team *Resuscitation* 54: 125-131

Hokanson Hawks, J. (1991) Power: a concept analysis *Journal of Advanced Nursing* 16: 754-762

Holloway, I. and Todres, L. (2003) The status of method: flexibility, consistency and coherence *Qualitative Research* 3(3): 345-357

Holloway, I. and Walker, J. (2000) *Getting a PhD in health and social care* London: Blackwell Science

Holloway, I. and Wheeler, S. (1995) Ethical issues in qualitative nursing research *Nursing Ethics* 2(3): 223-232

Holloway, I. and Wheeler, S. (2002) *Qualitative research for nurses* (2nd edition) Oxford: Blackwell Science L.T.D.

Hopkinson, R. B. (1996) General intensive care units in Tinker, J., Browne, D. R. and Sibbald, W. J. (editors) *Critical care: Standards, Audit and Ethics* London: Arnold

Horrocks, S. (1998) Heidegger and the nurse curriculum in Edwards, S. (editor) (1998) *Philosophical Issues in Nursing* Basingstoke: Macmillan Press LTD 129- 145

Hourihan, F., Bishop, G., Hillman, K. M., Daffurn, K. and Lee, A. (1995) The medical emergency team: a new strategy to identify and intervene in high-risk patients *Clinical Intensive Care* 6: 269-272

Hughes, D. (1988) When nurse knows best: some aspects of nurse-doctor interaction in a casualty department *Sociology of Health and Illness* 10: 1-22

Hughes, D. (2002) Nursing and the division of labour: sociological perspectives. In Allen, D. and Hughes, D. (Editors) *Nursing and the Division of Labour in Healthcare* Houndmills: Palgrave Macmillan 1-21

Hunter, B. (2004) Conflicting ideologies as a source of emotion work in midwifery *Midwifery* 20:261-272

Hunter, B. (2005) Emotion work and boundary maintenance in hospital based midwifery *Midwifery* 21: 253-266

Hupsey, J. (2000) Feeling safe: the psychosocial needs of ICU patients *Journal of Nursing Scholarship* 4th quarter: 361-367

Husserl, E. ([1964]1999) The train of thoughts in the lectures. In Polifroni, E. C. Welch, M. (Editors) *Perspectives on Philosophy of Science in Nursing: An Historical and Contemporary Anthology* 19: 247-262 (Reprinted with permission, original source *The Idea of Phenomenology* 3-12) Philadelphia: Lippincott

Husserl, E. ([1931]1962) *Ideas: General Introduction to Pure Phenomenology* Translated by Gibson, W. R. B. New York: Collier Macmillan

Ihde, D. (2001) *Expanding Hermeneutics* Department of Philosophy, Suny Stony Brook University accessed at: www.sunysb.edu/philosophy/research/ihde_6.html on 09/04/07

Intensive Care Society (2002a) *Levels of Critical Care for Adult Patients: Standards and Guidelines* London: Intensive Care Society

Intensive Care Society (2002b) *Guidelines for the introduction of outreach services: Standards and Guidelines* London: Intensive Care Society

International Council of Nurses (ICN) (2006) *The ICN Code of Ethics for Nurses* Geneva, Switzerland: International Council of Nurses

Jacobs, J. L., Apatov, N. and Glei, M. (2007) Increasing vigilance on the medical/surgical floor to improve patient safety *Journal of Advanced Nursing* 57(5): 472-481

Jacques, T., Harrison, G. A., McLaws, M. L. and Kilborn, G.(2006) Signs of critical conditions and emergency responses (SOCCER): a model for predicting adverse events in the inpatient setting *Resuscitation* 69: 175-183

James, N. (1992) Care = organisation + physical labour +emotional labour *Sociology of Health and Illness* 14(4): 488-509

James, T. and Whittaker, D. (1998) Researching hidden worlds: dilemmas for nurse researchers, in Smith, P. (Editor) *Nursing Research: Setting New Agendas 7*: 139-159

Jasper, D. (2004) *A Short Introduction to Hermeneutics* Louisville: Westminster John Knox Press

Johns. C. (2002) *Guided Reflection Advancing Practice* Oxford: Blackwell Publishing

Johnson, R. B. and Onwuegbuzie, A. J. (2004) Mixed methods research: a research paradigm whose time has come *Educational Researcher* 33(7) 14-26

Johnstone, C. C., Rattray, J. and Myers, L. (2007) Physiological risk factors, early warning scoring systems and organisational changes *Nursing in Critical Care* 12(5): 219-224

Jordan, P. J and Troth, A. C. (2002) Emotional Intelligence and conflict resolution in nursing *Contemporary Nurse* 13: 94-100

Kahn, D. L. (2000) How to conduct research, In Cohen, M. Z., Kahn, D. L. and Steeves, R. H. (Editors) *Hermeneutic Phenomenological Research: A Practical Guide for Nurse Researchers* Thousand Oaks: sage Publications, Incorporated 6: 57-70

King, L. and Appleton, J. V. (1997) Intuition: a critical review of the research and rhetoric *Journal of Advanced Nursing* 26(1): 194-202

Kelly, D., Ross, S., Gray, B. and Smith, P. (2000) Death, dying and emotional labour: problematic dimensions of the bone marrow transplant nurses role? *Journal of Advanced Nursing* 32(4): 952-960

Kemmis, S. and McTaggart, R. (2005) Participatory Action Research. Communicative action and the public sphere In Denzin, N. K. and Lincoln, Y. S. (editors) *Handbook of Qualitative Research* (3rd edtn.) London: Sage Publications pp. 559-603

Kendrick, K. (1995) Nurses and Doctors: a problem of partnership. In Soothill, K., Mackay, L and Webb, C. (Editors) *Interprofessional Relations in Health Care* London: Edward Arnold 239-252

Kinsella, E. A. (2006) Hermeneutics and critical hermeneutics: exploring possibilities within the art of interpretation *Forum: Qualitative Social Research* 7(3): article 19

Kitson, A. (1999a) The essence of nursing *Nursing Standard* 13(23): 42-46

Kitson, A. (1999b) The essence of nursing: part II *Nursing Standard* 13(24): 34-36

Koch, T. (1999) An interpretative research process: revisiting phenomenological and hermeneutical approaches *Nurse Researcher* Spring 6(3): 20-34

Koch, T. (1996) Implementing a hermeneutic inquiry in nursing: philosophy, rigour and representation *Journal of Advanced Nursing* 24: 174-184

Koch, T. (1995) Interpretative approaches in nursing research: the influence of Husserl and Heidegger *Journal of Advanced Nursing* 21: 827-836

Koch, T. and Harrington, A. (1998) Reconceptualizing rigour: the case for reflexivity *Journal of Advanced Nursing* 28(4): 882-890

Kögler ([1992] 1999) *The power of dialogue critical hermeneutics after Gadamer and Foucault* translated by Hendrickson, P. Cambridge, Massachusetts: M.I.T Press

Kuzel, A, J. (1999) Sampling in qualitative inquiry. In Crabtree, B. F. and Miller, W. L. (editors) *Doing Qualitative Research* (2nd edition) Thousand Oaks, California: Sage Publications 33-45

Kvale, S. (1996) *Interviews: An introduction to Qualitative Research Interviewing* Thousand Oaks, California: Sage Publications

Larkin, P. J. (1998) The lived experience of Irish palliative care nurses *International Journal of Palliative Nursing* 4(3): 120-126

Lassen, H.C.A. (1953) A preliminary report on the 1952 epidemic of poliomyelitis in Copenhagen with special reference to the treatment of acute respiratory insufficiency *The Lancet* January 3rd: 37-41

Lassen, H. C. A., Bjorneboe, M., Ibsen, B. and Neukirch, F. (1954) Treatment of tetanus with curarisation, general anaesthesia and intratracheal positive pressure ventilation *Lancet* ii: 1040-1044

Lebech, F. (2006) The Concept of the Subject in the Philosophical Hermeneutics of Hans-Georg Gadamer *International Journal of Philosophical Studies*, 14 (2) 221 – 236

Ledingham, J. G. (Chairman) The Kings Fund Panel (1989) *Intensive care in the United Kingdom* May: London: Kings Fund

Lee, A., Bishop, G., Hillman, K. M. and Daffurn, K. (1995) The medical emergency team *Anaesthesia and Intensive Care* 23: 183-186

Leininger, M. (1985) *Qualitative research methods in nursing* Orlando: Harcourt Brace Jovanovich

Leininger, M. (1991) The theory of culture care diversity 5-68. In Leininger, M. (1991) (Ed) *Culture care diversity and universality: A theory of nursing* New York: National League for Nursing

Lenihan, J. (1979) The history of Intensive Care *Nursing Focus* 1(2): 75-76

Leprohon, J. and Patel, V. (1995) Decision-making strategies for telephone triage in emergency medical services *Medical Decision Making* 15(3): 240-253

Liaschenko, J. (1998) The shift from the closed to the open body – ramifications for nursing testimony. In Edwards, S. (Editor) *Philosophical Issues in Nursing* Houndmills: Macmillan Press 4: 69-87

Lincoln, Y.S. and Guba, E.G. (1985) *Naturalistic Inquiry* Newbury Park: Sage Publications

Lincoln, Y. S. (1990) The making of a constructivist: a remembrance of transformations past, in Guba, E. G. (editor) *The Paradigm Dialogue* Newbury Park California: Sage 67-87

Lipson, J. G. (1991) The use of self in ethnographic research. In Morse, J. M. (Editor) *Qualitative Nursing Research: a Contemporary Dialogue* Newbury Park, Ca: Sage Publications LTD 73-89

Luborsky, M. R. and Rubinstein, R. L. (1995) Sampling in qualitative research: rationale, issues and methods *Research on Aging* 17(1) 89-113

Luft, J. (1969) *Of Human Interactions: the Johari model* Palo Alto Ca: Mayfield

Mackay, L. (1993) *Conflicts in Care: Medicine and Nursing* London: Chapman and Hall

Madison, G. B. (1988) *The Hermeneutics of Postmodernity: Figures and Themes* Bloomington: Indiana University Press

Maggs-Rapport, F. (2001) Best research practice: In pursuit of methodological rigour *Journal of Advanced Nursing* 35(3): 373-383

Mak, Y. and Elwyn, G. (2003) Use of hermeneutic research in understanding the meaning of desire for euthanasia *Palliative Medicine* 17: 395-402

Mantzoukas, S. and Jasper, M. A. (2004) Reflective practice and daily ward reality: a covert power game *Journal of Clinical Nursing* 13: 925-933

Marcus, G. (1998) What comes (just) after "post"? The case of ethnography. In Denzin, N. and Lincoln, Y. (editors) (1998) *The Landscape of Qualitative Research: Theories and Issues* London: Sage Publications

Mason, J. (2002) *Qualitative Researching* (2nd edtn.) London: Sage

May, K.A. (1991) Interview techniques in qualitative research: concerns and challenges, In Morse, J.M. (editor) *Qualitative Nursing Research: a Contemporary Dialogue* London: Sage 188-201

McArthur-Rouse, F. (2001) Critical care outreach services and early warning systems: a review of the literature *Journal of Advanced Nursing* 36(5): 696-704

McCallin, A. and Bamford, A. (2007) Interdisciplinary teamwork: is the influence of emotional intelligence fully appreciated? *Journal of Nursing Management* 15: 386-391

McGaughey, J., Alderdice, F., Fowler, R., Kapila, A., Mayhew, A., and Moutray, M. (2007) Outreach and Early Warning Systems (EWS) for the prevention of Intensive Care admission and death of critically ill adult patients on general hospital wards. *Cochrane Database of Systematic Reviews* 3

McGloin, H., Adam, S. and Singer, M. (1999) Unexpected deaths and referrals to intensive care of patients on general wards. Are some cases potentially avoidable? *Journal of the Royal College of Physicians of London* 33: 255-259

McGrath, M. (2008) The challenges of caring in a technological environment: critical care nurses' experiences J*ournal of Clinical Nursing* 17: 1096-1104

McGrath, R. B. (1987) In-house cardiopulmonary resuscitation - after a quarter of a century *Annuls of Emergency Medicine* 16: 1365-1368

McQuillan, P., Pilkington, S., Allan, A., Taylor, B., Short, A., Morgan, G., Nielson, M., Barrett, D. and Smith, G. (1998) Confidential inquiry into quality of care before admission to intensive care *British Medical Journal* 316 (748):1853-1858

Melia, K. (1987) *Learning and working: The Occupational Socialisation of Nurses* London: Tavistock

Michaels, C. (2006) Content validity and the language of breathing *Heart and Lung* 35(6): 405-411

Miles, M.B. and Huberman, A.M. (1994) *Qualitative Data Analysis: an Expanded Source Book* (2nd ed) London: Sage Publications

Millar, B. (1994) Living through critical illness: the family perspective. In Millar, B. and Burnard, P. (Editors) *Critical Care Nursing: Caring for the Critically Ill Adult* London: Bailliere Tindall

Mills, C. (1997) Presence in critical care: an action research study. In Chelsea and Westminster Health Care NHS Trust *Intensive Care and Nursing Development Unit: Annual Report 1996/1997* London: Chelsea and Westminster Health Care NHS Trust 3-6

Ministry of Health. (1962) *Progressive Patient Care: Interim Report of a Departmental Working Group* Ministry of Health and Public Health Laboratory Services 21: 218-226

Morgan, R and Mugglestone, M. (2002) National critical care outreach survey accessed at: http://www.modern.nhs.uk/criticalcare/5032/5197/2002%20outreach%20survey%20results.doc

Morrice, A. and Simpson, H. J. (2007) Identifying level one patients: a cross sectional survey of in-patient hospital population *Intensive and Critical Care Nursing* 23: 23-32

Morse, J. M. (1991) Subjects, respondents, informants and participants *Qualitative Health Research* 1: 403-406

Morse, J. M., Bottorff, J. L., Neander, W. and Solberg, S. (1992) Comparative analysis of conceptualisations and theories of caring. In Morse, J. M. (Editor) *Qualitative Health Research* Newbury Park, Sage Publications

Morse, J. (1994) Editorial: Going in 'Blind' *Qualitative Health Research* 4(1): 3-5

Morse, J.M. and Field, P.A. (1996) *Nursing Research: the Application of Qualitative Approaches* London: Chapman and Hall

Mulhall, S. (1996) *Routledge Philosophy Guidebook to Heidegger and Being and Time* London: Routledge, Taylor and Frances Group

Munhall, P. L (2001) *National League for Nursing: Nursing Research a Qualitative Perspective* (3rd edition) *Sudbury*, Massachusetts: Jones and Bartlett Publishers

Murphy, E., Dingwall, R., Greatbatch, D., Parker, S. and Watson, P. *Qualitative Research Methods in Health Technology Assessment: a review of the literature: Health Technology Assessment NHS R & D HTA Programme* 2(16) retrieved on 5/10/04 from: http://www.ncchta.org/ProjectData/3_project_record_published.asp?PjtId=929

Naeem, N. and Montenegro, H. (2005) Beyond the intensive care unit: a review of interventions aimed at anticipating and preventing in-hospital cardiopulmonary arrests *Resuscitation* 67: 13-23

National Institute of Health and Clinical Excellence (2007) *Acutely Ill Patients in Hospital: Recognition of and response to Acute Illness in Adults in Hospital (NICE Clinical guideline 50)* London: National Institute of Health and Clinical Excellence (July)

National Patient Safety Agency (2007a) *Safer Care for the Acutely Ill Patient: Learning from Serious incidents* London: National Patient Safety Agency

National Patient Safety Agency (2007b) *Recognising and Responding Appropriately to Early Signs of Deterioration in Hospitalised Patients* London: National Patient Safety Agency (November)

Neale, G. (1998) Risk management in the care of medical emergencies after referral to hospital *Journal of the Royal College of Physicians of London* 32 (2): 125-129

Nightingale, F. (1860) *Notes on Nursing: what it is what it is not* New York: Appleton and Company, accessed on 25/04/08 at: http://digital.library.upenn.edu/women/nightingale/nursing/nursing.html#XIII

Nolan, L. (2006) Caring connections with older persons with dementia in an acute hospital setting – a hermeneutic interpretation of the staff nurse's experience *International Journal of Older People Nursing* 1: 208-215

Nortvedt, P. (1998) Sensitive judgement: an inquiry into the foundations of nursing ethics *Nursing Ethics* 5(5): 385-392

Norman, D. A. and Shallice, T. (1986) Attention to action: willed and automatic control of behaviour. In Davidson, R. J., Schwartz, G. E. and Shapiro, D. (Editors) *The Design of Everyday Things* New York: Doubleday

Northcutt, W. (1997) Better to define and enhance the role of ward surgical nurses *British Medical Journal* 314: 1347

Nursing and Midwifery Council (NMC) (2008) *The Code: Standards of Conduct, Performance and Ethics for Nurses and Midwives* London: Nursing and Midwifery Council

Odell, M., Forster, A., Rudman, K. and Bass, F. (2002) The critical care outreach service and the early warning system on surgical wards *Nursing in Critical Care* 7 (3): 132-135

Office of Public Sector Information (1998) Public Interest Disclosure Act 1998 at http://www.opsi.gov.uk/acts/acts1998/ukpga_19980023_en_1. Accessed on 11/04/09

Oh, T.E. (1996) The development, utilisation and cost implications of intensive care medicine: strategies for the future. In Tinker, J., Browne, D.R. and Sibbald, W.J. (1996) *Critical Care: Standards, Audit and Ethics* London: Arnold

Omery, A. (1983) Phenomenology: a method for nursing research *Advances in Nursing Science* 24: 49-62

Orb, A., Eisenhauer, L. and Wynaden, D. (2001) Ethics in qualitative research *Journal of Nursing Scholarship* 33(1) 93-96

Paddison, A. (2005) *Theological Hermeneutics and I Thessalonians* Cambridge: Cambridge University Press

Paley, J. (1997) Husserl, phenomenology and nursing *Journal of Advanced Nursing* 26:187-189

Paley, J. (1998) Misinterpretive phenomenology: Heidegger, ontology and nursing research *Journal of Advanced Nursing* 27: 817-824

Paley, J. (2005a) Phenomenology as rhetoric *Nursing Inquiry* 12: 106-116

Paley, J. (2005b) Error and objectivity: cognitive illusions and qualitative research *Nursing Philosophy* 6: 196-209

Palfrey, C. (2000) *Key Concepts in Health Care Policy and Planning: An Introductory Text* Houndmills, Basingstoke: Macmillan Press Limited

Palmer, R. E. (2001) *The Liminality of Hermes and the meaning of hermeneutics* MacMurray College at: http://www.mac.edu/faculty/richardpalmer/liminality.html Accessed on 09/03/07

Palmer, R. E. (1969) *Hermeneutics: Interpretation Theory in Schleiermacher, Dilthey, Heidegger and Gadamer* U. S., Northwestern University Press

Parker, J. M. (2004) Nursing on the medical ward *Nursing Inquiry* 11: 210-217

Parker, J. and Wiltshire, J. (1995) The handover: three modes of nursing practice knowledge. In Gray, G. and Pratt, R. (Editors) *Scholarship in the Discipline of Nursing* Melbourne: Churchill Livingstone 151-168

Parry, O. and Mauthner, N. S. (2004) Whose data are they anyway? *Sociology* 38(1): 139-152

Patel, V. L., Kaufman, D. R. and Magder, S. (1996) The acquisition of medical expertise in complex dynamic decision-making environments In:Ericsson, K. A. (ed.) *The Road to Excellence: the Acquisition of Expert Performance in the Arts and Sciences, Sports and Games* Hillsdale: Erlbaum 127-165

Patton, M. Q. (1990) *Qualitative Evaluation and Research Methods* 2nd ed California: Sage, Newbury Park

Payne, J.P. and Bushman, J.A. (1980) Artificial *Ventilation: Technical, Biological and Clinical Aspects* London: Academic Press

Payne, J. N., Milner, P. C., Saul, C., Browns, I. R., Hannay, D. R. and Ramsay, L. E. (1993) Local confidential inquiry into avoidable factors in deaths from stroke and hypertensive disease *British Medical Journal* 307:1027-30

Phillips, B. (2007) Nursing care and understanding the experiences of others: a Gadamerian perspective *Nursing Inquiry* 14(1): 89-94

Phillips, B., Ball, C., Sackett, D., Badenoch, D., Straus, S., Haynes, B. and Dawes, M. (2001) *Levels of Evidence and Grades of Recommendations* Oxford Centre for Evidence Based Medicine at: http://www.minervation.com/cebm2/docs/levels.html

Plato (year unknown) *Dialogues of Plato* Translated by Jowett, B. (1898) New York: Appleton and Company

Polanyi, M. (Original date of publication 1966, reprinted with permission by Smith, P.) (1983) *The Tacit Dimension* Gloucester, Massachusetts, USA: Doubleday and Company Incorporated

Polanyi, M. (1974) *Personal Knowledge: Towards a post-critical Philosophy* (Paperback edition) Chicago: University of Chicago Press

Pollock, A. M. (1999) Devolution and health: challenges for Scotland and Wales *British Medical Journal* 318: 1195-1198

Pope, C. and Mays, N. (Editors) (1999) *Qualitative Research in Health Care* (2nd edition): retrieved 5/10/04 from: http://www.bmjpg.com/qrhc/contents.html

Porter, S. (1991) A participant observation study of power relations between nurses and doctors in a general hospital *Journal of Advanced Nursing* 16: 728-735

Prowse, M. and Allen, D. (2002) 'Routine' and 'emergency' in the PACU: the shifting contexts of nurse – doctor interaction. In Allen, D. and Hughes, D. (Editors) *Nursing and the Division of Labour in Healthcare* Houndmills: Palgrave Macmillan 75-97

Pyles, S. H. and Stern, P. N. (1983) Discovery of nursing gestalt in critical care nursing: the importance of the grey gorilla syndrome *Image: Journal of Nursing Scholarship* 15(2): 51-57

Quinn,T. and Thompson, D. (1995) The changing role of the nurse *Care of the Critically Ill* 11 (2):48-49

Rabinow, P. (1984) (Editor) *The Foucault Reader: an Introduction to Foucault's Thought* St Ives: Penguin

Ray, M. A. (1987) Technological caring: a new model in critical care *Dimensions of Critical Care* 6(3): 166-173

Ray, M. (1994) The richness of phenomenology: philosophic, theoretic and methodologic concerns. In Morse, J. M. (editor) *Critical Issues in Qualitative Research Methods* California: Sage Publications

Reader, T. W., Flin, R., Mearns, K. and Cuthbertson, B. H. (2007) Interdisciplinary communication in the intensive care unit *British Journal of Anaesthesia* 98(3): 347-352

Reason, P. (1988) *Human Inquiry In Action: developments in new paradigm research* London: Sage Publications

Reed, J. and Ground, I. (1997) *Philosophy for Nursing* London: Arnold

Reischman, R. R. and Yarandi, H. N. (2002) Critical care cardiovascular expert and novice diagnostic cue utilization *Journal of Advanced Nursing* 39(1): 24-34

Resuscitation Council (UK) (2004) General information about the resuscitation council: retrieved 21/03/08 at: http://resus.org.uk/pages/info.htm

Rheaume, A. (2003) The changing division of labour between nurses and nursing assistants in New Brunswick *Journal of Advanced Nursing* 41(5), 435-443

Ricoeur, P. (1981) *Hermeneutics and the Human Sciences: Essays on Language, Action and Interpretation* Edited and translated by Thompson, J. B. New York: Cambridge University Press

Riessman, C.K. (1993) *Narrative analysis* Newbury Park: Sage Publications

Ridley, S., Dixon, M., Bodenham, A. O'Riordan, B., Goldhill, D, Bray, K. and Ford, P. (2003) *Evolution of intensive care in the UK* London: Intensive Care Society retrieved on 20/03/08 from: http://www.ics.ac.uk/downloads/ICM%20Prof_Pulications_Other%20publicatio ns/Other%20ICS%20Publications%20for%20top%20of%20page/History%20of %20IC%20UK.pdf

Ringrose, T. and Garrard, C. (1999) Doctors don't review patients that nurses identify as highly dependent. In (1999) Letters to the editor *British Medical Journal* 318(7175): 51

Roach, M. S. (1992) *The Human Act of Caring: a Blueprint for the Health Professions* Ottawa: The Canadian Hospital association Press

Robertson-Malt, S. (1999) Listening to them and reading me: a hermeneutic approach to understanding the experience of illness *Journal of Advanced Nursing* 29(2): 290-297

Robson, C. (2002) *Real World Research: A Resource for Social Scientists and Practitioner-Researchers* (2nd edtn.) Oxford: Blackwell

Rolfe, G. (2000) *Research, Truth and Authority: Modern Perspectives on Nursing* Houndmills, Basingstoke: Macmillan Press Limited

Rolfe, G. (1997) Beyond expertise: theory, practice and the reflexive practitioner *Journal of Clinical Nursing* 6(2): 93-97

Rolfe, G., Freshwater, D. and Jasper, M. (2001) *Critical Reflection for Nursing and the Helping Professions* Basingstoke: Palgrave

Roser, L. A. (1967) Cardiopulmonary resuscitation experience in a general hospital *Archives of Surgery* 95:658-663

Rudland, J. R. and Mires, G. J. (2005) Characteristics of doctors and nurses as perceived by students entering medical school: implications for shared teaching *Medical Education* 39(5): 448-455

Sackett, D. L., Haynes, R. B., Guyatt, G. H. and Tugwell, P. (1991) *Clinical Epidemiology: a Basic Science for Clinical Medicine* (2nd edition) Boston: Little, Brown

Sandelowski, M. (1995) Focus on qualitative methods: sample size in qualitative research *Research in Nursing and Health* 18: 179-183

Sandelowski, M. (1993) Rigor or rigor mortis: The problem of rigour in qualitative research revisited *Advances in Nursing Science* 16: 1-8

Sandelowski, M. (1986) The problem of rigour in qualitative nursing research *Advances in Nursing Science* 8(3) 27-37

Saukko, P. (2005) Methodologies for cultural studies In Denzin, N. K. and Lincoln, Y. S. (editors) *Handbook of Qualitative Research* (3rd edtn.) London: Sage Publications pp. 343-356

Sax, F. L. and Charlson, M. E. (1987) Medical patients at high risk for catastrophic deterioration *Critical Care Medicine* 15 (5): 510-515

Schaff, P. (1997) History *of the Christian Church* Oak Harbor, WA: Logos Research Systems, Inc. (This material has been carefully compared, corrected, and emended (according to the 1910 edition of Charles Scribner's Sons) by The Electronic Bible Society, Dallas, TX, 1998) at: www.bible.ca/history/philip-schaff/7_ch03.htm Accessed on 11/04/2007

Schein, R. M., Hazday, N., Pena, M., Ruben, B. H. and Sprung, C. L. (1990) Clinical antecedents to in-hospital cardiopulmonary arrest *Chest* 98 (6): 1388-1392

Schneider, A. P., Nelson, D. J. and Brown, D. D. (1993) In-hospital cardiopulmonary resuscitation: a thirty year review *Journal of the American Board of Family Practitioners* 6: 91- 101

Scholes, J., Freeman, F., Gray, M., Wallis, B., Robinson, D., Matthews-Smith, G. and Miller, C. (2004) *Evaluation of Nurse Education Partnerships* at: www.brighton.ac.uk/inam/research/projects/partnerships_report.pdf

Scholes, J. and Moore, M. (1997) *Making a difference: the way in which the nurse interacts with the critical care environment and uses herself as a therapeutic tool* Occasional Paper Series ITU NDU No 2 University of Brighton: Centre for Nursing and Midwifery Research

Scholes, J. and Smith, M. (1997) *Starting Afresh: the impact of the critical care milieu on newcomers and novices* Occasional Paper Series ITU NDU No 1 University of Brighton: Centre for Nursing and Midwifery Research

Schon, D. (1987) *Educating the reflective practitioner* San Francisco: Jossey-Bass

Schon, D. (1983) *The reflective Practitioner* New York: Basic Books

Scott, I. (2001) Clinical governance: a framework and models for practice. In Bishop, V. and Scott, I. (2001) *Challenges in Clinical Practice: professional developments in nursing* Basingstoke: Palgrave

Scottish Executive, Health Department (2000) *Better Critical care: Report of Short-Life Working Group on ICU and HDU Issues* Scottish Executive Health Department at www.show.scot.nhs.uk/sehd/publications/coverltr.html

Shawver, L. (1998) Notes on reading the Birth of the Clinic. Retrieved from http://www.california.com/~rathbone/foucbc.htm on 26/08/2008

Silverman, D. (2000) *Doing Qualitative research: a practical handbook* London: Sage Publications LTD

Skinner, D. V., Camm, A. J. and Miles, S. (1985) Cardiopulmonary resuscitation skills of pre-registration house officers *British Medical Journal* 290: 1549-1550

Smith, A. F. and Wood, J. (1998) Can some in-hospital cardio-respiratory arrests be prevented? A prospective survey *Resuscitation* 37: 133-137

Smith, G., Osgood, V., Crane, S. and A.L.E.R.T Course Development Group. (2002) ALERT- a multiprofessional training course in the care of the acutely ill adult patient *Resuscitation* 52: 281-286

Smith, G. B. and Poplett, N. (2002) Knowledge of aspects of acute acre in trainee doctors *Postgraduate Medical Journal* 78: 335-338

Smith, P and Redfern, S. (1989) The quality of care and students experiences in hospital wards. In Wilson-Barnett, J and Robinson, S. (1989) *Directions in Nursing Research* London: Scutari Press

Smith, C. M., Perkins, G. D., Bullock, I. and Bion, J. F. (2007) Undergraduate training in the care of the acutely ill patient: a literature review *Intensive Care Medicine* 33: 901-907

Smith, J. (1984) The problem of criteria for judging interpretative inquiry *Educational Evaluation and Policy Analysis* 6: 379-391

Smith, P. (1992) *The Emotional Labour of Nursing* Houndmills: Macmillan Education

Smith, S. (1988) An analysis of the phenomenon of deterioration in the critically ill *Image: Journal of Nursing Scholarship* 20: 12-15

Snelgrove, S. and Hughes, D. (2000) Interprofessional relations between doctors and nurses: perspectives from South Wales *Journal of Advanced Nursing* 31: 661-667

Snelgrove, S. and Hughes, D. (2002) Perceptions of teamwork in acute medical wards. In Allen, D. and Hughes, D. (Editors) *Nursing and the Division of Labour in Healthcare* Houndmills: Palgrave Macmillan 53-74

Snider, G. (1983) Thirty years of mechanical ventilation *Archives of Internal Medicine* 143(April): 745-749

Sorensen, R., Iedema, R. and Severinsson, E. (2008) Beyond profession: nursing leadership in contemporary healthcare *Journal of Nursing Management* 16: 535-544

Sorrell Dinkins, C. (2005) Shared inquiry: Socratic-Hermeneutic Interpre-viewing. In Ironside, P. M. (Volume editor) *Interpretive Studies in Health Care and Human Sciences: Beyond Method: Philosophical Conversations in Healthcare Research and Scholarship* Volume IV(3): 111-147

Stenhouse, C., Coates, S., Tivey, M., Allsop, P. and Parker, T. (2000) Prospective evaluation of an early warning score to aid earlier detection of patients developing critical illness on a general surgical ward *British Journal of Anaesthesia* 84(5): 663P

Stewart, D.W. and Shamdasani, P.N. (1990) *Focus Groups, Theory and Practice* London: Sage Publications

Strahan, E, McCormick, J., Uprichard, E., Nixon, S. and Lavery, G. (2003) Immediate follow-up after ICU discharge: establishment of a service and initial experiences *Nursing in Critical Care* 8(2): 49-55

Stein, L. I. (1967) The doctor-nurse game *Archives of General Psychiatry* 16: 699-703

Stein, L. I., Watts, D. T. and Howell, T. (1990) The doctor-nurse game revisited *Nursing Outlook* 36(6): 264-268

Strauss, A. and Corbin, J. (1998) *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory* (2nd edition) Thousand Oaks: Sage Publications

Svensson, R. (1996) The interplay between doctors and nurses – a negotiated order perspective *Sociology of Health and Illness* 18(3): 379-398

Swartz, N. (1997) *The Concepts of Necessary Conditions and Sufficient Conditions* Department of Philosophy, Simon Fraser University U.S.A. accessed on 14/09/07 at http://www.sfu.ca/philosophy/swartz/conditions1.htm

Sykes, K., Hahn, C.E. and Adams, A.P. (1995) *Principles and Practice Series: Respiratory Support* London: BMJ Publishing Group

Taffet, G. E., Teasdale, T. A.,and Luchi, R. J. (1988) In-hospital cardiopulmonary resuscitation *Journal of the American Medical Association* 260: 2069-2072

Tanner, C. A. (1984) Factors influencing the diagnostic process. In Carnevali, D. L., Mitchell, P. H., Woods, N. F. and Tanner, C. A. (Editors) *Diagnostic Reasoning in Nursing* Philadelphia: Lippincott (61-82)

Tarassenko, L., Hann, A. and Young, D. (2006) Integrated monitoring and analysis for early warning of patient deterioration *British Journal of Anaesthesia* 97: 64-68

Thompson, C. and Dowding, D. (2002) Decision making and judgement in nursing – an introduction. In Thompson, C. and Dowding, D. (Editors) *Clinical Decision Making and Judgement in Nursing* Edinburgh: Churchill Livingstone (1-20)

Thornley, C. (2000) A question of competence? Re-evaluating the roles of the nursing auxiliary and health care assistant in the NHS *Journal of Clinical Nursing* 9: 451-458

Tinker, J. (1978) General intensive Therapy *Nursing Times Publication* 2-4

Tinker, J. and Porter, S.W. (1980) *A Course in Intensive Therapy Nursing* London: Edward Arnold

Tunstall-Pedoe, H., Bailey, L., Chamberlain, D. A., Marsden, A. K., Ward, M. E. and Zideman, D. A. (1992) Survey of 3765 cardiopulmonary resuscitations in British hospitals (the BRESUS study): methods and overall results *British Medical Journal* 304: 1347-1351

Van Maanen J. (1983) The moral fix: on the ethics of field work. In Emerson, R. M. (ed.) *Contemporary Field Research: Perspectives and Formulations* 1st edtn. Longrove, IL: Waveland Press

Van Manen, M. (1990) *Researching lived experience: human science for an action sensitive pedagogy* New York: State University of new York Press

von Post, I. and Eriksson, K. (1999) A hermeneutic textual analysis of suffering and caring in the peri-operative context *Journal of advanced Nursing* 30(4): 983-989

Wales Office of Research and Development for Health and Social Care (2001) *Research Governance Framework for Health and Social Care in Wales* Cardiff: Wales Office of Research and Development for Health and Social Care, at: www.word.wales.gov.uk/content/governance/governance-framework-e.pdf

Walters, A. J. (1994) The comforting role in critical care nursing practice: a phenomenological interpretation *International Journal of Nursing Studies* 31(6): 607-616

Walters, A. J. (1995a) A Heideggerian hermeneutic study of the practice of critical care nurses *Journal of Advanced Nursing* 21 (3): 492-497

Walters, A. J. (1995b) The phenomenological movement: implications for nursing research *Journal of Advanced Nursing* 22 (4): 791-799

Watkinson, P. J., Barber, V. S., Price, J. D., Hann, A., Tarassenko, L. and Young, J. D. (2006) A randomised controlled trial of the effect of continuous electronic physiological monitoring on the adverse event rate in high risk medical and surgical patients *Anaesthesia* 61: 1031-1039

Watson, J. (1985) *Nursing: Human Science and Human Care: a Theory of Nursing* Norwalk: Appleton-Century-Crofts. Reprinted 1988 New York: National League of Nursing

Watson, L. A. and Girard, F. M. (2004) Establishing integrity and avoiding methodological misunderstanding Qualitative *Health Research* 14(6): 875-881

Webster, C. (1998) *The National Health Service: A Political History* Oxford: Oxford University Press

Welch, M. (1999) Phenomenology and hermeneutics. In Polifroni, E. C. and Welch, M. (Editors) *Perspectives on Philosophy of Science in Nursing: An Historical and Contemporary Anthology* Philadelphia: Lippincott section 5: 235-246

Welsh Assembly Government (2006) *Design for life: Quality Requirements for Adult Critical Care in Wales* March: Cardiff: Welsh Assembly Government

White, J. (1999) The impact of clinical experiences during pre-registration diploma in nursing courses on initial career choice *Journal of Nursing Management* 7: 157-165

White, S. and Stancombe, J. (2003) *Clinical Judgement in the Health and Welfare Professions* Maidenhead: Open University Press

Whitehead, L. (2004) Enhancing the quality of hermeneutic research: decision trail *Journal of Advanced Nursing* 45(5): 512-518

Whittaker, J. and Ball, C. (2000) Discharge from intensive care: a view from the ward *Intensive and Critical Care Nursing* 16: 135-143

Wildsmith, J. A., Dennyson, W. G. and Myers, K. W. (1972) Results of resuscitation following cardiac arrest. A review from a major teaching hospital *British Journal of Anaesthesia* 44: 716-719

Williams, K. (1980) From Sarah Gamp to Florence Nightingale: A critical study of hospital nursing systems from 1840 to 1897. In Davies, C. (Editor) *Rewriting Nursing History* London: Croom Helm 41-75

Wikström, A. and Larsson, U. (2003) Technology – an actor in the ICU: a study in workplace research tradition *Journal of Clinical Nursing* 13: 555-561

Wilkin, K and Slevin, E. (2004) The meaning of caring to nurses: an investigation into the nature of caring work in an intensive care unit *Journal of Clinical Nursing* 13: 50-59

Wolcott, H. F. (2001) *Writing up Qualitative Research* (Second edition) Thousand Oaks: Sage Publications

Wood, I., Douglas, J. and Priest, H. (2004) Education and training for acute care delivery: a needs analysis *Nursing in Critical Care* 9: 159-166

Wood, J. and Smith, A. (1999) Active management should prevent cardiopulmonary arrests. In (1999) Letters to the editor *British Medical Journal* 318(7175): 51

Woods, S. (1998) Holism in nursing. In Edwards, S. (Editor) *Philosophical issues in nursing* Houndmills: Macmillan Press 4: 69-87

World Medical Association (2004) *World Medical Association Declaration of Helsinki: Ethical Principles for Medical Research Involving Human Subjects* Tokyo: World Medical Association

Wynne, G, Marteau, T. M., Johnstone, M., Whitely, C. A. and Evans, T. R. (1987) Inability of trained nurses to perform basic life support *British Medical Journal* 294: 1198-1199

Youngs, P. (1999) Inadequate staffing means problems are missed. In (1999) Letters to the editor *British Medical Journal* 318(7175): 51

Zainal, G. and Scholes, J. (1997) *Adapting to Crisis: the Relatives Experience of Intensive Care and the Nurse's Therapeutic Role with the Family* University of Brighton: Occassional Paper series: ITU NDU No 3

Zalumas, J.C. (1989) *Critically Ill and Intensively Monitored: Patient, Nurse and Machine- the Evolution of Critical Care Nursing* unpublished PhD thesis: Emery University

Zalumas, J. (1995) *Caring in Crisis: an Oral History of Critical Care Nursing* Philadelphia: University of Pennsylvania Press

Appendices

Appendix A
Standard letter, participant information sheet and consent form
posted to relevant wards and units in NHS Trust X

Figure A1
Standard letter

December 2003/January 2004

Ward Manager

Reference: Research into the experience of nurses caring for critically ill patients in NHS Trust X

Dear

I am a lecturer in Critical Care Nursing in the School of Health Science and I have been granted permission to undertake research into the experience of nurses caring for critically ill patients. As a result I am keen to contact nurses working on ward x. in order to identify any staff who would consider taking part in this study.

My intention is to interview nurses from a variety of clinical areas including; medical and surgical wards, high dependency units, intensive therapy and care units who have been involved in the care of critically ill patients during the last 18 months. The purpose of the research is to gain an understanding of nurses' experience of caring for critically ill patients during a period of change, following a review of critical care services in England and Wales by the Department of Health in 2000.

I would welcome the opportunity to meet with you and share information with you and your staff about the research and invite nurses to participate in the study and I'll contact you in the next few days to confirm a date for this.

Please find enclosed a copy of the Participant information sheet and consent form, which gives details of the research process. If you require further information or clarification, my contact details can be found on the participant information sheet.

I look forward to meeting you and your staff.

Yours sincerely,

Desiree Tait, Nurse Lecturer

Figure A2
Participant information sheet

Information Sheet for Nurses Who Are Invited To Take Part In The Following Research: A Study of Nurses who have cared for critically ill people in a Hospital Trust

You are being invited to take part in a research study about nursing critically ill patients.
Before you decide it is important for you to understand why the research is being done and what it will involve for you, if you choose to take part. Please take time to read the following information carefully and if you wish, discuss it with friends and colleagues.

If there is an area which is unclear or you would like to know more about the research please contact me using the details listed below.

Purpose of the study
During the last few years the Department of Health has recommended a number of changes to the provision of critical care services in NHS Trusts. As a result nurses are being asked to care for and monitor critically ill patients in general ward areas as well as in intensive care units. The purpose of the study is to gain an understanding of what it is like to nurse critically ill patients in both acute and critical care settings. I am a critical care nurse lecturer in the School of Health Science and the results of the research will form part of my submission towards a Doctorate in Nursing Science.

Taking part in the study
You have been chosen for inclusion in this study because you have nursed critically ill people as an employee of this Trust during the last 18 months. You are one of up to 12 nurses who will be invited to take part in the research. The study will involve inviting you to take part in an interview.

However, it is up to you to decide whether or not you take part. If you decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason.

The period for collecting data will be no more than 6-8 months and involve a minimum of one meeting to a maximum of four meetings with the researcher usually in or near your work area at a time convenient to you. The initial interview will last no less than an hour and no more than ninety minutes. and any subsequent meetings will involve opportunities to clarify your continued agreement to be included in the study.

(continued)

Figure A2 (continued)

Confidentiality
All information which is collected from you during the course of the research will be kept strictly confidential. With your permission, your interview will be recorded; however, when the recording is processed all personal details will be removed and all interviews will be number and letter coded to maintain participant confidentiality. Following completion of the research study all recorded interviews will be erased although a hard copy of the coded interview transcript may be kept to support the research findings.

Research findings
The results of the study are likely to be published two years from the completion of the interview process and a report of the published results will be made available to the Trust at the end of this time. Some of the research finding will be published in a professional journal but at no time will you be identified in any report or publication.

Further information
If you have any questions about participating in this research study please contact me, Desi Tait on 01792 xxxxxx. If I am not available, I will return you call as soon as possible, with your permission. My E-mail address is D.J.R.Tait@swansea.ac.uk.

Thank you for considering taking part in this study and if you choose to take part in the research you will be given a copy of the information sheet and a signed copy of your consent form.

Desi Tait

December 2003

Figure A3
Consent form

Title of the project: **A study of nurses who have cared for critically ill people in a NHS Trust**

Name of researcher: **Mrs Desi Tait**

1. I confirm that I have read and understood the information sheet (dated December 2003) for the above study and have had the opportunity to ask questions.

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason.

3. I agree to take part in the above study.

Name of participant................................... **Date**.................

Signature...

Name of person taking consent...................... **Date**.................

Signature...

Researcher... **Date**.................

Signature...

Appendix B
Reflexive diary and table of the decisions made during the process of sampling

Please note that the diary entries are identified in italics.

Process	Analytical activity	Key issues and questions
Constructing an interview schedule	Identify relevant issues in the literature review and determine the key issues that need to be accounted for in the interview schedule.	• Defining a critically ill patient? • Participant history and experience? • What is the experience like for them? • Telling the story
Constructing the first interview	What are the significant features and categories as they appear in the data, how do they link with the locality and participants' clinical experience and grade?	• Participant 1: senior staff nurse, had previous critical care experience • Location: specialist medical ward • *Interview took place towards the end of a late shift on the ward*
Constructing the second interview	What factors from the first interview influence the choice of participant and location of the interview? • *Early ideas continue to focus on the medical unit* • *Need to know more about how nurses define critical illness*	• Participant 2: senior staff nurse, no previous critical care experience • Location: specialist cardiac • *Night interview due to the busy nature of the ward* • *Continue to focus on medical wards* • *Continue to focus on how the participant defines critical illness* • *Continue to encourage participants to tell their own stories*

Process	Analytical activity	Key issues and questions
Constructing the third interview	What factors from the second interview influence the choice of participant and location of the interview? • *How does a nurse manager describe the experience of caring for critically patients?* • *How does a very junior member of staff describe the experience of caring for critically patients?*	• Participant 3: senior staff nurse no previous critical care experience • *Location: MAU seems central to the management of patients in acute medical areas* • *Very busy unit, difficult to access the sample group. Opted to interview at night*
Constructing the fourth interview	What factors from the third interview influence the choice of participant and location of the interview? • *How do ITU nurses determine when someone is critically ill?* • *Is it the same or different to ward nurses?* • *How does experience and location impact on the experience?*	• Participant 4: junior staff nurse • Location: Critical Care Unit • First job since qualifying • *Interviewed following an early shift on site in a 'quiet' room in the unit*
Constructing the fifth interview	What factors from the fourth interview influence the choice of participant and location of the interview? • *Junior nurse is very reliant on senior staff to support her* • *Strong focus on patient monitoring and being directed by others*	• Participant 5: Sister • Location: Critical Care • *Interviewed following an early shift* • *Interviewed on the unit*

Process	Analytical activity	Key issues and questions
Constructing the sixth interview	What factors from the fifth interview influence the choice of participant and location of the interview? • *Manager sees herself as a trouble-shooter and co-ordinator - is this consistent?* • *Works as a team of fellow sisters covering all shifts, always a Sister in charge; is this followed through on to nights?*	• Participant 6: Sister • Location: Critical Care • *Interviewed on night duty on the unit*
Constructing the seventh interview	What factors from the sixth interview influence the choice of participant and location of the interview? • *How does this compare to a ward manager on days and nights?*	• Participant 7: ward sister • Location: medical unit • *Interviewed off site, away from the ward due to the ward being too busy and lack of space for interviewing*
Constructing the eighth interview	What factors from the seventh interview influence the choice of participant and location of the interview • *Outreach is identified as part of a support network that was available for a while; how and where did this impact on patients and staff? Where was the service based? Why is the service no longer active?*	• Participant 8: nurse who was involved in setting up and taking part in the outreach programme • *Interviewed away from the clinical area in an office in the Trust*

Appendix C
Interview guide

Title of the research
A study of the experience of nurses caring for critically ill people in an Acute Hospital Trust in Wales at least two years after a review of adult critical care services in England and Wales by the Department of Health

Research questions
1 What is it like to nurse patients with clinical deterioration leading to critical illness?
2 What is it like to nurse patients with critical illness in the context of history, change and innovation in one NHS Trust in Wales?

Opening remarks
- Thank you for agreeing to participate in the research.
- Do you have any questions, concerns or reservations about the research or this interview?
- Please be reassured that you and your workplace will be coded for the purpose of the research so that I will be the only person who will have a record of identity.
- This is to protect both you and patient confidentiality.
- Are you happy to go ahead with the interview?
- Are you agreeable to have the interview taped?
- I will make a few notes as we go if that's OK?

Read out the title of the research and research questions.

STAGE 1: BIOGRAPHICAL INFORMATION

CODE:

Please tell me a little about yourself and your current post.
- Age:
- Academic qualifications:
- Professional qualifications:
- Clinical grade:
- Outline of career to date:
- Current job:
- How long in current post:
- Overview of current job, location, number of beds, number of trained staff on an average shift, student allocation:

(continued)

Appendix C (continued)

STAGE 2: RESPONDING TO THE INTERVIEW QUESTIONS

Guiding questions if the participant needs prompting
- *In your opinion how would you describe a critically ill patient, how would you know that a patient was becoming critically ill?*
  - ➤ Use the participant's definition of critical illness
  - ➤ Recognise the parameters the participant uses and clarify if necessary

- *How often do you care for patients like you've described above?*

- *Do you think that the number of patients of this type have changed over the last few years?*

- *If response is yes/no, why do you think that is?*

- *Can you tell me about one or more of these patients that you've looked after?*
  - ➤ Invite them to give a brief history of the patient

- *When did it happen (time of year/day)?*

- *What was it like?*
  - ➤ A good or bad experience, stressful? etc.

- *How did it make you feel?*

- *What happened next?*

- *How do you feel that you coped?*

- *What was the outcome for you? For the patient?*

- *Do you wish that some things had happened differently?*

- *Where did you get support from during this event?*

- *What kind of support did you need?*

Appendix D
Example of the process of data analysis using a dialogic approach

Table D1
Summary of participants' profiles

Participant code	Current clinical role and grade	Skill mix and beds in current post	Years in current post	Years as a nurse	Qualifications	Previous posts
1	Staff nurse, cardiology ward; Band 6	3 trained nurses/shift, HCSW, 3rd year students; 24 beds of which 6 are for day cases	7	16	RGN, DN; Currently studying for BSc Nursing	Elderly Care 5 yrs; ITU 1 yr; works in the critical care bank; 3 months secondment to cardiac HDU for updating
2	Staff nurse, CCU; Band 6	5 trained nurses/shift, 3rd yr students; 9 beds including a chest pain assessment bed.	6	12	RGN, DN, Foundation in Cardiac Nursing module	Medical admissions; Medicine; Surgery
3	Sister, ICU; Band 7	16 trained nurses/shift, HCSW, technicians, 3rd year students; 20 bed unit including 6 HDU beds	9	13	DN, ITU module, management module	Medical and orthopaedic rotations; ICU/CCU
4	Staff nurse, ICU; Band 5	16 trained nurses/shift, HCSW; technicians; 3rd year students; 20 bed unit including 6 HDU beds	1	1	RN adult, DN	None
5	Sister, ICU; Band 7	16 trained nurses/shift, HCSW; technicians; 3rd year students; 20 bed unit including 6 HDU beds	1	13	RGN, DN, ITU module	Elderly care
6	Sister, medical ward; Band 7	2 trained nurses/shift, 4 HCSW/students; 33 beds	4.5	18	RGN, DN	Acute medicine; Cardiology; Medical admissions
7	Staff nurse, MAU; Band 6	3 trained staff, 3 HCSWs, students; 22 beds	3	3	DN, RN adult	
8	Sister, project manager for the introduction of PAR/ITU; Band 7	-	0.5 (7 in ITU)	26	EN, RGN, specialist practitioner ITU, BSc Nursing (ITU)	Orthopaedics; Acute medicine and surgery then ITU; A/E then ITU; Took a break; Acute medicine and surgery, rehabilitation, occupational health

HCSW: Health Care Support Workers
MAU: Medical Admissions Unit

Table D2
Theme: recognising and understanding the problem

Step one The trigger	Step two Diagnosing critical illness
Sub category: Intuitive feelings **Elements:** • You get that feeling, Oh I don't like the look • I felt that he's not right, he's really not right	**Sub category:** Establishing the criteria for critical illness **Elements:** • Failure to respond to treatment • Evidence of a prolonged series of problems • Sudden severe deterioration • Unstable patient where the nurse is no longer in control of the situation • Failure of two or more systems (ITU)
Sub category: Observable clinical evidence **Elements:** • Patient colour • Patient behaviour • Patient response • Patient breathing pattern	
Sub category: Measurable clinical evidence **Elements:** • Temperature • Pulse • Blood pressure • Respiratory rate/Sa O_2	

Figure D1
Themes

Recognising critical illness

Intuitive feelings:
➢ You get that feeling, Oh I don't like the look
➢ I felt that he's not right, he's really not right

The trigger

Observable clinical evidence:
➢ Patient colour, behaviour, response, breathing pattern

Measurable clinical evidence:
➢ Temperature, pulse, blood pressure, respiratory rate, Sa O_2

Failure to respond to treatment

Diagnosing situations that precipitate critical illness

Knowing and establishing the criteria for critical illness

Evidence of a prolonged series of problems

Sudden severe deterioration

Unstable patient where the nurse is no longer in control of the situation

Failure of two or more systems

Figure D2
Dialogue: recognising clinical deterioration/critical illness

Recognising clinical deterioration/ critical illness

Intuitive sense or feelings
(When this is the trigger, it appears to be related to experience; with more experience with deteriorating patients, the clinical recognition becomes automatic and is recognised as a feeling or visual thing)
➤ You get that feeling, Oh I don't like the look
➤ I felt that he's not right, he's really not right

The trigger

"Visual"
(Most frequently cited as the trigger; it's what they see rather than what they measure that raises the nurses' concern)
Observable clinical evidence
➤ Patient colour, behaviour, response, breathing pattern

Questions:

1. What comes first, the trigger or evidence for the trigger? (see boxes for answer!)
2. What are the patterns of reasoning illustrated in the text?
3. Is the order of reasoning always the same?
4. If there is evidence to initiate the trigger, is that evidence measurable?
5. Is it "automatic" tacit knowledge?
6. If so, on what evidence is the tacit knowing based?
7. How does this compare with the pre-understandings?
8. How does this compare with the new and current literature?
9. How does this challenge the researcher's prejudices?
10. How would this be understood hermeneutically?

Measurable clinical evidence
(Apart from junior and/or ITU staff who measure clinical signs all the time, this was the last factor and only completed when concern had been raised in the other two areas)
➤ Temperature, pulse, blood pressure, respiratory rate, Sa O₂, ABG's

Figure D3
Patterns of reasoning illustrated in the text that are used by nurses to recognise critical illness - A: "it's a visual thing"

(Question 2 in Figure D2)

A: It's a visual thing

Participant 1
16 years nursing
7 years in current post

1 Usually a visual thing
   ➢ Change in breathing pattern
   ➢ Picking at the sheets
   ➢ Not responding in the same way
   ➢ Patient tells you they don't feel well
2 Go and check, do the ob's
3 Get a colleague to check with you
4 If there is a change in vital signs, tell the Dr; if not keep going back to check

---

Participant 5
13 years nursing
8 years in ICU
1 year in current post

1 The first thing you notice is they become agitated, cyanosed, confused
2 Then changes in temp, BP
3 Patients on ventilators you tend to look more at the vital signs.

Participant 6
18 years nursing
4.5 years in current post

1 Visual changes
   ➢ Usually pick up a change in the patient's behaviour
2 Call the nurse, colleague
3 Check the patient
4 Call the Drs

Participant 2
12 years nursing
6 years in current post

1 It's a visual thing
   ➢ Patient kicking off the sheets
   ➢ General agitation
   ➢ Sweating
2 Check the obs and look for changes in vital signs
3 Call for help

Participant 3
13 years nursing
9 years in current post

1 Measurable clinical evidence rather than visual
2 Changes in vital signs are the trigger for me

Participant 4
Newly qualified
1 year in current post

1 Look for anything that's different from the beginning of the shift (Doesn't seem to recognise the significance of specific changes

---

Participant 7
3 years nursing
3 years in current post

1 You just look at them!
2 Colour
3 Breathing
4 GCS
5 Do the obs, SAT's
6 Call the Dr

Participant 8
26 years nursing
6 months in current joint post

1 It's the clues, mainly visual
   ➢ A bit more sleepy
   ➢ A bit more confused
   ➢ Not responding like they have been
2 Difficult to put your finger on just one clue that tells you to look more closely
3 You do the observations, try and show the evidence for clinical deterioration
4 Call the Dr

Figure D4
Patterns of reasoning illustrated in the text that are used by nurses to recognise critical illness - B: "intuitive - you get that feeling"

(Question 2 in Figure D2)

B: Intuitive - you get that feeling

Participant 1

You get that feeling
➤ I felt he's not right
➤ Usually if you can't find something wrong straight away, you wait and watch
➤ His obs were ok, but I felt he was not right

Participant 8

You get that feeling
➤ It's very tiny, tiny clues- like it's sometimes difficult to put your finger on it, but you just know and it gives you the incentive to look more closely
➤ You can just know when someone is going off.

Participant 2

You get that feeling
➤ Initially the nurses just felt there was something wrong
➤ Dr asks: "can you tell me what's wrong?" "well nothing really - systolic BP has dropped from 95 to 92, he's fidgeting, he's just not right"

Participant 6

You get that feeling
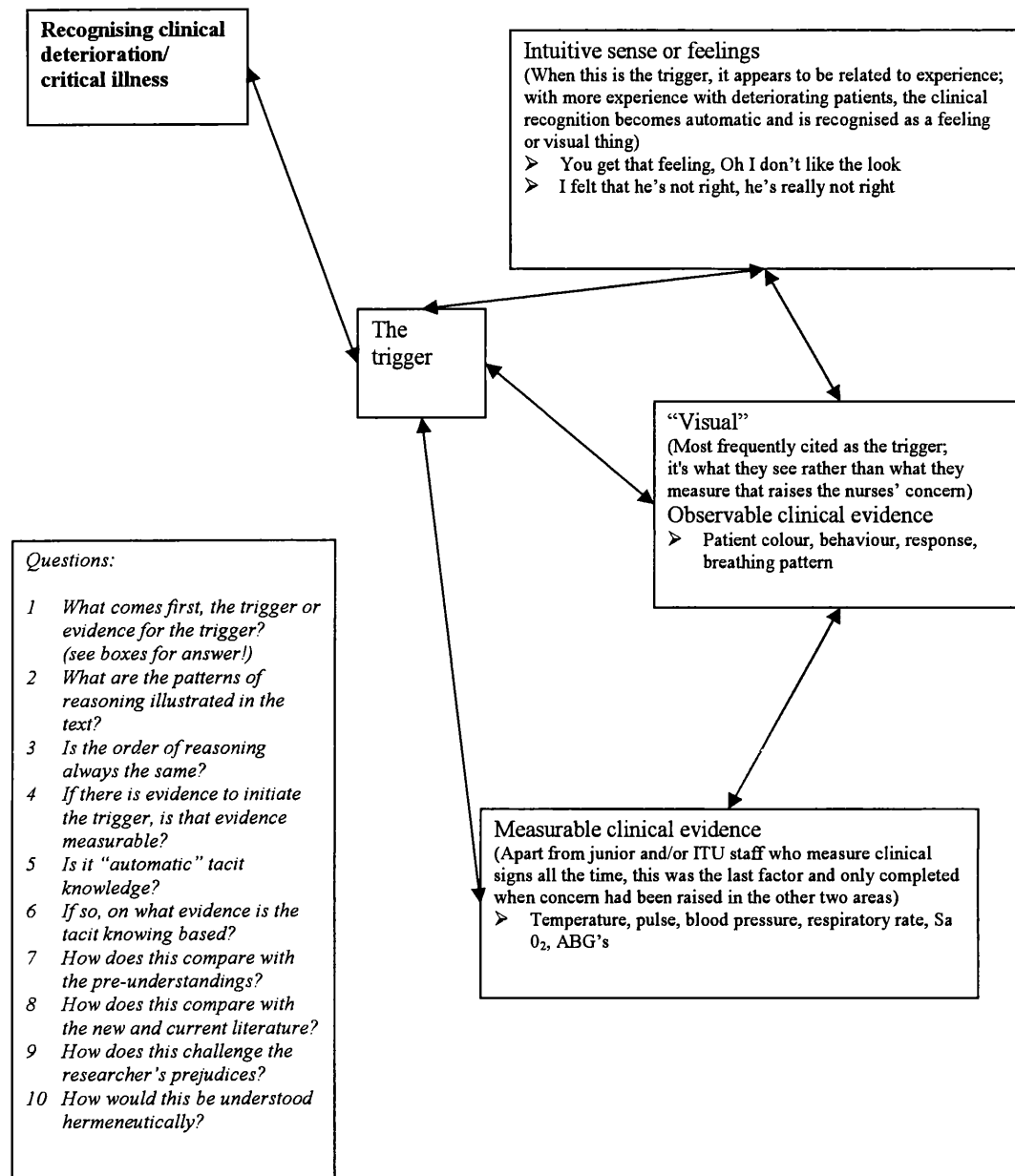➤ You know there's something not right but you can't put your finger on it

---

Figure D5
Patterns of reasoning illustrated in the text that are used by nurses to recognise critical illness - C: "changes in the obs"
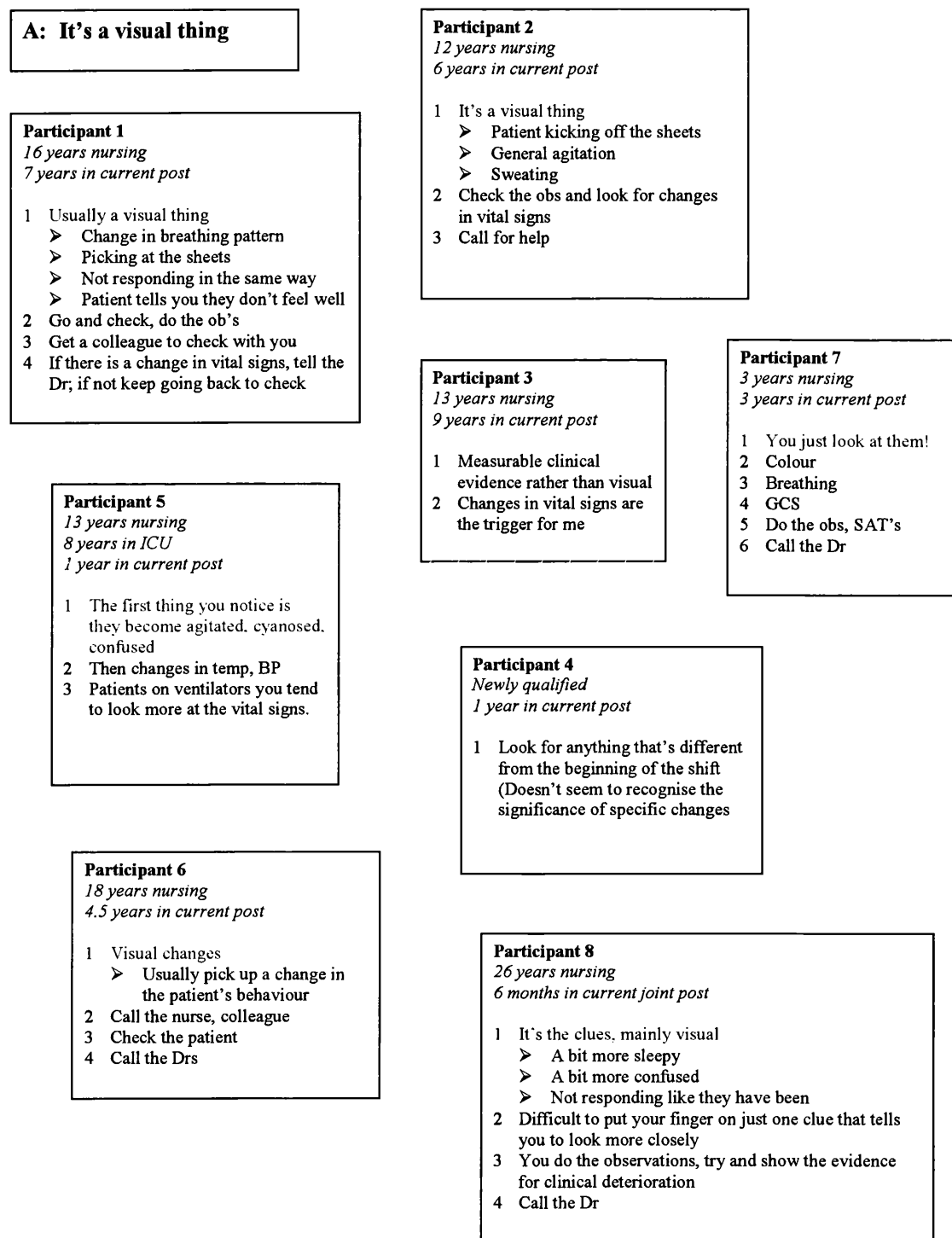
(Question 2 in Figure D2)

C: changes in the obs

Participant 1
Cardiology ward

1 His obs were ok, but I felt he was not right (100)
2 Its our job to do observations post cardiac catheters etc
3 Changes to look for are unstable BP
4 Cardiac arrhythmias
5 Pulse (his output was weak)

Participant 2
Coronary care unit

1 Obs are secondary to the visual thing
2 Pulse, BP
3 ABG's, Hb (2.38, 47)

Participant 6
Medical ward

1 You look at the obs but it's also the general visual thing
2 Resps, SATs, signs of hypoxia and drowsiness, the whole picture (6.11)

Participant 7
Medical admissions unit

1 You just look at them!
   ➤ Colour
   ➤ Breathing
   ➤ GCS
2 Do the obs, SATs
3 It's the whole thing

Participant 4
ICU

1 Look for anything that's different from the beginning of the shift
2 BP, resp, breathing, LOC

Participant 5
ICU

1 The first thing you notice is they become agitated, cyanosed, confused
2 Then changes in temp, BP
3 Patients on ventilators, you tend to look more at the vital signs, lung and renal function

---

Participant 8
Outreach/clinical educator

1 It's the clues, mainly visual:
   ➤ A bit more sleepy
   ➤ A bit more confused
   ➤ Not responding like they have been
2 Difficult to put your finger on just one clue that tells you to look more closely
3 You do the observations, try and show the evidence for clinical deterioration

---

Participant 3
ICU

1 measurable clinical evidence rather than visual
2 Changes in vital signs are the trigger for me
3 Cardiovascularly unstable, BP, pulse, pupils (3.22)

Figure D6
Dialogue: diagnosing situations that precipitate critical illness

Diagnosing situations that precipitate critical illness

Evidence of a prolonged series of problems and failure to respond to treatment

Knowing and establishing the criteria for critical illness

Include a negative case: not critical illness (1DD)

Sudden severe deterioration

Failure of two or more systems

Unstable patient, where the situation is no longer under control

1 How long does the nurse wait before diagnosing this?
2 No obvious trigger factor in this diagnosis; how does the nurse know when it's time to diagnose critical illness?
3 How does it relate to the trigger?
4 Match this with case examples
5 What experience does the nurse have with the patient, similar patients?
6 When or how often do they decide to take action?
7 How experienced is the nurse?

1 Classic example of clinical deterioration "sudden" (Linked with my pre-understandings re emergency situations, e.g. ICP, shock, pain, tension pneumothorax)
2 How severe? When is someone with sudden changes not critically ill? When the nurse is no longer in control, when it's unexpected?
3 Include a case study

1 Classic definition of critical illness - see DOH
2 Which nurses refer to this definition? (This is how ITU nurses described patients admitted to the unit as critically ill)
3. Include a case study

1 This links in with the need for track and trigger - probably a good example of why we should have this!
2 Is this something about the nurse and/or Dr being pushed to the limits of their skill, knowledge and understanding?
3 Is it when fear overcomes doubt?
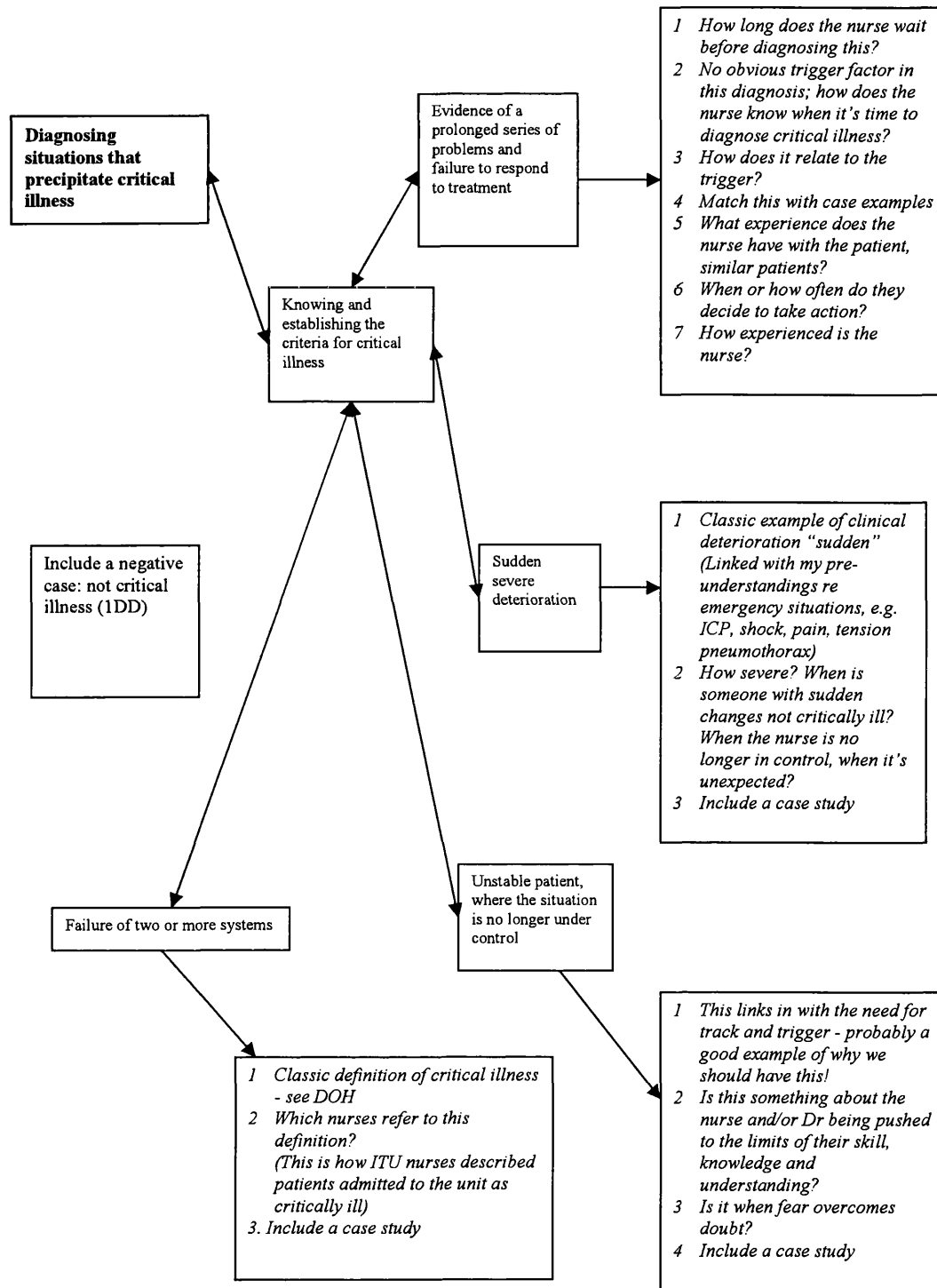*4 Include a case study*

Figure D7
Case study: evidence of a series of problems and/or failure to respond to treatment

---

(1.94-115)

"I think a critically ill patient is someone with a prolonged, series of problems rather than a one-off drop in BP... I had a patient who had a heart bypass and had cardiogenic shock. He had been on coronary care and came to us and then he said that he felt unwell one evening and he couldn't really say what the matter was. His observations were OK, but it was just that I felt that he's not right, he's really not right. Um... so they (SHOs) sent him for a check x-ray (in a wheelchair) to see if there was any sign of infection. And I had a call from the x-ray department that they were worried about him. I went down to check on him, he was really breathless, we put him on a trolley, his blood pressure had dropped and he was very pale and clammy and restless. I thought at this point he was better back on the ward. On the way back he got worse and was going off in the corridor and then when we got back to the ward no one had seemed to notice. When we got back... we did an ECG... his output was weak, very poor. We got the on-call team to come and look at him straight away and talked to his family because he was very poorly, even though we didn't know why. With his low blood pressure, we thought he'd probably gone back into cardiogenic shock. He was so sick, I thought he might arrest... He went to general ITU... He went back to coronary care and then he came to us. He got home."

SHOs: senior house officers;
ITU: intensive therapy unit

Figure D8
Case study: sudden severe deterioration

(6.18-19)

There's one gentleman who came in, had come in previously, and had a fall at home, had presented in casualty with headaches and was assessed, started on warfarin and sent home. He came back into casualty for a warfarin blood check and was brought up to medical admissions and then came to us. He came in as a fairly healthy gentleman, walking and talking, but within a few hours was unconscious. He deteriorated quite rapidly with an alteration in his neuro-obs. The medics were called and they didn't try to scan him at that point until he became unconscious and then they transferred him to neuro ICU. But he came in to us walking and talking with a mild headache and within 48 hours he was unconscious. He deteriorated over an afternoon shift and the nurse that was on duty rang the medics and said that he was deteriorating, the obs were changing, he was becoming more drowsy, not as well. And then within an hour they all changed completely. They were called again at that point, they took him for a scan and found that he had bled.

---

neuro-obs: neurological observations
neuro ICU: neurological intensive care unit

Figure D9
Case study: unstable patient where the situation is no longer under control

---

(8.28)

There was a classic case actually, a night nurse practitioner brought a patient's blood gases up to the unit with a pCO_2 of 8 and a pO_2 of 4! And she was on 28% oxygen. So I said to the night nurse practitioner (who should be an experienced practitioner), "you need to put the oxygen up here don't you?" and (he/she) replied that she was on as much oxygen as she could have because she's a COPD, so I said, "do you want me to contact our reg in ITU?" and (she/he) turned around and said, "our doctors don't like interference from ITU and this was when we were going out and doing assessments on the ward as part of outreach. So I called my reg and said that I didn't like the look of the patient and I think she'll end up arresting and coming to us. So we went out and he phoned up the doctor to ask if he would like another opinion and the doctor was a very junior house officer, he knew very little, he just knew that you couldn't give oxygen to COPD patients. So we went down and the registrar left it to me, he said, "right you go and assess the patient and tell me what you see." Well I could see from the end of the bed that the patient was struggling, she was using all her accessory muscles, she couldn't talk, they did have her on a monitor and her pulse rate was 180, they did have her on an aminophylline infusion and they had her on 28% oxygen and she was centrally blue. So I put the oxygen up, she was peri-arrest at that time so we took her up to the unit and um... she had CPAP for 12 hours and she was back on the ward the next day.

COPD: chronic obstructive pulmonary disease
CPAP: continuous positive airways pressure

Figure D10
Case study: failure of two or more systems

(5.6)

Yes we had a very critically ill young lady recently she was in her 40s and came in with cellulitis on her right breast initially it was very small and then it just escalated and took up the whole of her right side and right arm. She was quite well coming in initially (an HDU patient), the only thing was, was that she was hypoxic, they couldn't get her sats up but she was talking to us, then on the late shift she just deteriorated, she became agitated and increasingly confused, pyrexial, hypotensive and increasingly hypoxic and they just intubated and ventilated her from there. When she came in she was talking but she became increasingly more centrally cyanosed and obviously becoming more and more hypoxic. And she started going quite hypotensive as well, and she started to become very pyrexial, raised white cell count and her lung and renal function were going off as well, there was a trend but the main change in her condition was her confusion and agitation. She actually deteriorated quite rapidly and she had such a change in blood pressure and temperature.

Figure D11
Case study: not critical illness

These examples are is not critical illness: when the nurse is in control and the patient problem has resolved, regardless of where they are. It's about instability and lack of control. Critical illness is not dependent on location.

(1.67)

Of course you get a lot of patients who come back from (cardiac) catheterisation with an unstable blood pressure and cardiac arrhythmias. Of course you know that in five minutes they'll be back to normal. They often drop their rate and blood pressure and you give them oxygen, raise the foot of the bed, inform the doctors, that can happen. I wouldn't class the patient as critically ill with that because it's something that can happen as the result of the investigation or treatment. That's why they come back to us for post- op monitoring.

(3.14)

Well from a physiological point of view we would say someone who has signs of multiorgan failure, yeh or single organ failure where um, as a unit we say that anyone who is on a ventilator is critically ill. But we all know that we have a few weaning patients on here who aren't critical. And somebody who's not yet been intubated could actually be more critical that the vented patient. So to say all ventilated are critical is not a true indicator... Somebody who would need a lot of interventions, lines and blood pressure monitoring, and lots of invasive procedures and lines really. And somebody who really has the potential to be intubated really, they're usually the far more critical patient; once they've been intubated they're far more stable. Like sometimes we get the patient quite late from the ward, and they're often more unstable on the wards than they are here, once they've been intubated.