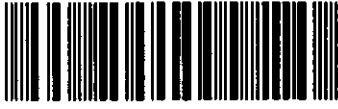# COPYRIGHT STATEMENT

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EXPLORING THE PROVISION OF HIGH DEPENDENCY CARE IN CHILDREN'S WARDS

by

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ABSTRACT

MARGARET JANE DOMAN

EXPLORING THE PROVISION OF HIGH DEPENDENCY CARE IN CHILDREN'S WARDS

Aim
The aim of this qualitative research study was to explore the provision of high dependency care in children's wards in SW England and to identify and evaluate individual and organisational factors influencing this care.

Background
Concerns about paediatric intensive care have been reported, leading to the implementation of many changes in practice. High dependency care, which is usually provided on children's wards, is included in the organisational framework for critical care, but has received far less attention. Definitions and recommendations lack clarity, which could lead to difficulties in determining the most appropriate environment, staffing and equipment for care provision.

Methods
A two-stage approach was adopted. In the Preparatory Work, focus groups were conducted with nurses to identify key factors influencing high dependency care for children. The emerging factors formed a basis for the Main Study, which used an ethnographic approach. Fieldwork was undertaken in three children's wards using observation, individual interviews and selective documentary scrutiny. Data from each ward were analysed separately, then combined to enable the comparison of findings across settings.

Findings
Three main themes were identified: the child's 'journey' to high dependency care, obstacles to high dependency care, and facilitators. Despite nurses recognising deterioration, high dependency care could be delayed, especially if a child needed to be moved to a high dependency unit. Differences demonstrated between the wards appeared to be influenced by the organisational culture of the hospital setting.

Conclusions
The findings contribute to our understanding of high dependency care provision in children's wards and reveal differences between hospital settings that have not previously been recognised. These differences are partially explained by theories of organisational culture that have received limited attention in nursing to date. Ethnography and observational methods are rarely used in children's nursing, but in this study enabled identification of variations in the child's journey to high dependency care in the wards studied. The influence of organisational culture and care setting should be acknowledged in future policy and practice.

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AUTHOR'S DECLARATION

At no time during the registration for the degree of Doctor of Philosophy has the author been registered for any other University award without prior agreement of the Graduate Committee.

A programme of advanced study was undertaken, which included attendance at staff development workshops organised by the Graduate School, University of Plymouth.

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CHAPTER 1:   INTRODUCTION

1.0 Introduction

The care of acutely or critically ill children has received increasing attention in the last two decades in England. The needs of sick children may vary, from those requiring intensive care, to others who are unwell but can be managed safely in a children's ward. High dependency (HD) care is often portrayed as a 'step down' from intensive care but is also a 'step up' from care normally provided on a children's ward, offering an important intermediate stage (see Glossary of Terms). Successive reports and recommendations have inferred that HD care is part of the organisational framework for paediatric critical or intensive care (e.g. British Paediatric Association, 1993; Department of Health (DH), 1997a, 1997b, 2002), yet this level of care has received minimal attention and resources in comparison with intensive care. It is acknowledged that the development of services to meet the needs of the sickest children should take priority. In view of the inclusion of HD care in the framework, however, failure to address this level of care could increase pressure on intensive care services and/or children's wards. Moreover, despite explicit definitions of what constitutes intensive care having been provided (e.g. DH, 1997a), definitions of HD care lack clarity. Consequently, difficulties may arise when attempting to determine the most appropriate environment, staffing and equipment required to provide this level of care.

This study sought to explore how HD care was being provided in children's wards in South West (SW) England. In this chapter, the background and rationale for the study will be summarised, followed by presentation of the aims

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and research questions guiding the study and an overview of the thesis structure.

1.1 Background

Concerns about the care of critically ill children in the UK were first raised following a survey carried out under the auspices of the British Paediatric Association (BPA, 1993), which highlighted wide discrepancies in the availability of paediatric intensive care (PIC) beds. Three levels of PIC were described: level 1: high dependency care and levels 2 and 3: intensive care (BPA 1993, see Glossary). The survey also underlined the unsuitability of some of the environments in which critically ill children were treated and the variable numbers and expertise of staff caring for them. A series of recommendations relating to PIC emanated from the survey, but, perhaps because many of these were not supported by evidence from the survey, limited action on the part of government and local service managers resulted.

In 1995, a child, Nicholas Geldard, died in a Paediatric Intensive Care Unit (PICU) a considerable distance from the hospital to which he was originally admitted. An inquiry was conducted into his death (NHSE NW, 1996), which highlighted various problems within the NHS, particularly the questionable ability of PIC services to cope with peaks in demand (DH, 1997b). In response to the inquiry, the DH instigated a further review of PIC services, culminating in two reports designed to be read in conjunction with one another: 'A Framework for the Future (DH, 1997a) and 'A Bridge to the Future' (DH, 1997b). The former report was developed by a National Co-ordinating Group (NCG) and provided advice on standards for achieving quality of care and outcomes for all

units providing intensive care for children (levels 2 and 3). The Chief Nursing Officer (CNO) was asked to set up a multidisciplinary taskforce to consider nursing standards and education in response to recommendations from the NCG (DH, 1997b). An organisational framework designed to integrate PIC services was also described.

Following the publication of the DH (1997a, 1997b) reports, substantial resources were provided to enable the recommendations regarding the provision of levels 2 and 3 (intensive) care to be implemented (DH, 2000a). These children usually require invasive respiratory support (intubation and ventilation) and/or other more advanced interventions such as renal dialysis or complex monitoring following major surgery or trauma (DH 1997a). Delivery of this care was restricted to hospitals with a PICU or designated adult Intensive Care Unit (ICU) with appropriate staffing and resources.

Despite the inclusion of HD care in the organisational framework for PIC, this received less attention, with minimal consideration in the DH (1997a, 1997b) reports. A definition was provided, based on that offered in the BPA (1993) report, which has since been widely cited:

> 'Care provided to a child who may require closer observation and
> monitoring than is usually available on an ordinary children's ward,
> though much of this care is already provided, with higher staffing levels
> than usual, in such locations. For example the child may need
> continuous monitoring of the heart rate, non-invasive blood pressure
> monitoring, or single organ support (but not respiratory support). The
> child may, for example, be suffering from moderately severe croup,
> suspected intestinal obstruction or suspected poisoning.'
>
> (DH 1997a: 7).

In comparison with the definitions for intensive care, which enabled the identification of children requiring these levels of care and where and by whom

their care should be managed, this definition of HD care lacked clarity and was, therefore, open to interpretation. The report from the CNO Taskforce (DH, 1997b) endorsed the DH (1991) standard of at least two Registered Children's Nurses (RSCN or RN Child) on duty at any time in children's wards or departments and repeated the BPA's (1993) recommended staffing ratio of at least one children's nurse: two children receiving HD care. Additionally, the nurse would be supported by advice from 'an experienced nurse with [an] intensive care qualification[s]' (DH, 1997b: 14 & 18). However, this could be from the Lead Centre and not necessarily in the hospital where HD care was being provided. Consequently, if a child was receiving HD care, there may only have been one RN Child available to the remaining children and families in a ward/unit. Furthermore, because the 'closer observation and monitoring' that was a feature of level 1 care had previously been provided on 'ordinary children's wards', this situation continued, with no guidance regarding what constituted HD rather than 'routine' ward care, nor what resources should be available.

Children may receive HD care in a range of settings, including tertiary and District General Hospital (DGH) wards, adult and paediatric HDUs, emergency departments and post-anaesthetic recovery units. However, the majority of HD care for children is delivered in DGH hospital wards (DH, 2003). Nurses working in such environments may provide care for infants, children and young people ranging in age from a few hours/days old to 16 years and over, with a variety of health problems. As a result, they are required to develop a broad repertoire of knowledge and skills so that the needs of individual children and families can be met (Doman, 1998). Furthermore, due to their relative

physiological immaturity, children are more vulnerable to both rapid changes in their condition and the effects of delay in treatment. Consequently, nurses require vigilance, well-developed observational skills and expertise in order to recognise changes and respond appropriately.

Whilst HD care had previously been a requisite of all courses leading to registration as a children's nurse in England (English National Board, 1993), changes to the pre-registration curriculum and the introduction of a separate child branch included greater focus on 'health' instead of 'illness'. This may have led to a decrease in experience of caring for 'sick' children in hospital due to more time spent in community settings and hence to considerable differences in individual nurses' actual experiences of HD care. The working environment, staffing levels and resources available may also vary according to the hospital setting and size of the children's ward(s)/unit. Despite these differences, all children's wards were expected to provide HD care and initiate level 2 care.

1.2 Rationale for study

Guidance offered in the DH (1997a, 1997b) reports suggested that seriously ill children were cared for either in a designated area or on a children's ward with higher staffing levels than usual. However, anecdotal evidence from nurses undertaking a module in children's HD care at a university in the SW suggested that this was not always the case. At that time (early 2000), only one paediatric HDU existed in the SW region, although others were being planned. In accordance with the DH (1997a) standards, two Lead Centres regularly provided levels 2 and 3 intensive care in their PICU for critically ill children in the region and one hospital offered specialist services at levels 2 and 3. The

remaining hospitals in the SW were DGHs, four of which were designated Major Acute General Hospitals, able to provide level 2 care in the adult ICU and nine DGHs, several of which had a single children's ward in the hospital. The majority of nurses undertaking the HD care module worked on children's wards, not HDU and they reported that many very sick children were receiving HD care on wards without the increased staffing levels or extra resources recommended (DH, 1997b).

A preliminary search of databases Cumulative Index of Nursing and Allied Health Literature (CINAHL), Ovid, PubMed and British Nursing Index (BNI) was conducted, but no evidence relating to the provision of children's HD care was found. Several reports and recommendations for adult and paediatric critical care were available (e.g. Audit Commission 1999, DH 1997a, 1997b, 2000b), but only two (BPA, 1993; Fairfield, 1997) included data relating directly to children's HD care. Both studies were surveys, the BPA (1993) collecting data on critically ill children nationally and Fairfield (1997) within the Yorkshire region only.

There were a number of flaws in the BPA (1993) survey, however. The response rate was reported as 83.9% (307 hospitals from a total of 366), yet not all wards or departments within each hospital responded, hence the extent of missing data was under-reported. Additionally, failure by the majority of units to distinguish between dependency levels of 'critical care' may have led to errors in the classification of HD or intensive care, again resulting in inaccuracies. The report also offered numerous recommendations for PIC that were not based on

evidence, yet, despite data being collected on HD care, this received only cursory attention.

In the Yorkshire study (Fairfield, 1997), similar difficulties were reported in identifying dependency levels of sick children. Definitions of HD care were devised by categorising 'types of intervention' in an attempt to identify children in any setting, including children's wards, who required this level of care. Although the survey was well-conducted and a response rate of 100% was achieved for both parts of the study, as with the BPA (1993) survey, there were missing or wrongly classified data. Results indicated that, on average, 14.7% children nursed on general wards received HD care and of these, 90% were considered 'routine practice', but the accuracy of these figures was unknown. Moreover, much of the data on HD care collected in Fairfield's (1997) study was not fully analysed due to lack of time and so the report was incomplete.

Two publications emanating from the SW 'Critically Ill Children's Study' (Henderson et al, 1999; Warne et al, 2000) were retrieved, which included criteria developed specifically to identify children at the lower end of the dependency spectrum, i.e. requiring HD care. Despite data being collected on 730 children requiring this level of care between 1996 and 1998, the study failed to include children receiving HD care on children's wards. Comparison of the numbers of children reported in the study as having received HD care with data obtained from a designated paediatric HDU in the region (Syers, 1998) over the same period suggested that the majority of children requiring this level of care were not accounted for in the total. Moreover, they were subsequently excluded from the study because this focused on intensive care. As with the

BPA (1993) and Fairfield (1997) studies, therefore, opportunities to inform the provision of HD care were lost due to the exclusion of these data from the analysis or resulting recommendations.

In view of the reported concerns of nurses undertaking the HD module and the lack of robust evidence regarding the provision of HD care or the implementation of policy recommendations, there was an urgent need to find out what was actually happening in practice. As a result, a literature review was undertaken to find evidence of where and how HD care was being delivered, followed by a local study to investigate the provision of HD care in children's wards in SW England.

1.3 Aim of study

The main aim of the study was to explore the provision of HD care on children's wards in SW England and to identify and evaluate individual and organisational factors influencing this care. A secondary aim was to investigate nurses' experience of providing HD care on children's wards.

1.4 Research questions

The aims of the study were translated into the following questions:

1. What are the experiences of nurses providing high dependency care in children's wards?

2. How do nurses recognise a sick child's need for high dependency care and what then happens to the child?

3. What knowledge and skills are needed to nurse children requiring high dependency care?

4. What preparation, support and resources do nurses require to provide high dependency care for children?

5. What individual or organisational factors may enhance or hinder the provision of high dependency care in children's wards?

1.5 Design

The study was conducted in two distinct stages. In the Preparatory Work, focus groups were conducted with nurses providing HD care for children in SW England and aimed to address the first research question. The findings from this stage were used to inform the Main Study, which involved an ethnographic approach incorporating participant observation and individual interviews with nurses in three children's wards. This was designed to answer research questions 2 – 5 and also addressed issues that emerged during the Preparatory Work. All data in the study were analysed using a form of thematic analysis.

1.6 Methodological considerations

An exploratory, descriptive approach was adopted in view of the paucity of existing research into children's HD care. It was deemed essential that the views of practitioners who were currently providing HD care were elicited and a qualitative approach ensured that participants' experiences of the 'real world' were captured in their own words. This aspect was particularly important for the Preparatory Work because the findings from this were to be used to inform and develop the Main Study. Furthermore, it was considered that an ethnographic approach in the Main Study would enable the research questions relating to the provision of HD care to be explored in the context of the working environment of children's wards.

1.7 Presentation of the thesis

Chapter 2 is a literature review, which provides a context for the study and a critique of literature relating to HD care for children. It should be noted that little published evidence pertaining to children's HD care existed prior to the study's inception and so relevant research published subsequent to the commencement of this study is incorporated into the discussion of findings in Chapter 7.

In Chapter 3, the Preparatory Work, which was undertaken to provide a basis for the Main Study, is presented and discussed. Here, an overview of focus groups and justification for their use is followed by a description of the focus group interviews, including a discussion of recruitment, the role of the moderator and data collection and analysis. Following discussion of these preliminary findings, key issues relating to research questions 2 – 5 identified for further investigation in the Main Study are presented.

Chapter 4 starts with a critique of ethnography to justify the use of this approach, followed by discussion of the plan for the Main Study. This includes the selection of settings and participants, process of gaining access to these and methods of data collection and analysis. 'Experiences of Fieldwork' are discussed in Chapter 5, where descriptions are provided of the experience of undertaking participant observation, individual interviews and collecting documentary evidence, as well as sampling procedures, in the three ward settings. Rigour, reflexivity and the role of the researcher in this ethnographic study are also discussed. The chapter concludes with an overview of the data collection and analysis process.

In Chapter 6, findings from the Main Study are presented and discussed. Eleven categories are described, grouped into three themes: the sick child's 'journey' to HD care, obstacles and facilitators to HD care. Depictions of the child's 'journey' in each of the three ward settings are also presented and discussed. The analysis and synthesis of the findings are discussed in the context of current literature in Chapter 7 and implications for the provision of children's HD care in children's wards are considered.

The final chapter, Chapter 8, is an evaluation of the study as a whole, including limitations and the audit trail, with a discussion of 'trustworthiness'. The implications of the findings are then considered and recommendations made for children's high dependency nursing practice, education and research.

CHAPTER 2:   **LITERATURE REVIEW**

2.0 Introduction

This chapter provides a critique of literature reviewed before the Main Study commenced, concluding with the state of the evidence at the time of data collection. Studies published subsequent to the data collection are included in Chapter 7 in order to set the findings in the context of current practice. There is limited research evidence concerning current understanding and provision of HD care in the UK. Consequently, many of the recommendations relating to this level of care are also reliant on professional consensus, policy documents, clinical audit evidence or service developments; relevant examples of this body of work have been included in the review.

2.1 Search strategy

An initial search for relevant literature was conducted before commencing the Preparatory Work in 2001 in order to establish a sound rationale for the study. The study aims and research questions were used as a basis for the development of search terms, which included 'high dependency', 'child' and 'paediatric/pediatric'. Electronic searches of the databases Cumulative Index of Nursing and Allied Health Literature (CINAHL), Ovid, PubMed and British Nursing Index using these terms within the time frame of 01/1990 – 01/2001 revealed no relevant studies. Further searches of the DH website, library catalogues and 'grey' literature such as reference lists and conference proceedings identified four research studies relating to HD care for children (BPA, 1993; Fairfield, 1997, Henderson et al, 1999; Warne et al, 2000), two reports commissioned by the DH (1997a, 1997b) and good practice guidelines

for NW England (PHDCSGNW, 2000). The search was, therefore, broadened to include adult literature in an attempt to provide a more informed background to the study. Initially, 241 research articles were identified using the term 'high dependency' between 01/1990 – 01/2001. Inclusion and exclusion criteria were then applied to focus the search further. Inclusion criteria were: English language, main focus high dependency (acute hospital) care and research article. Papers excluded were those focusing primarily on emergency/intensive care, specific procedures, clinical specialities such as cardiac surgery or obstetrics, elderly care and mental health. Additionally, those published outside Northern Europe, N. America, Australia or New Zealand were excluded as it was considered that these healthcare systems differed in too many ways from that of the UK for studies to contribute to the review. This resulted in 31 citations and after reading the abstracts, 15 studies that focused on aspects of HD care provision were included in the review. Additionally, two key reports on critical care (Audit Commission, 1999; DH, 2000b), which had implications for HD care, were also identified and included.

The search was repeated in 2002 to find new studies that could help to contextualise the discussion of the findings from the Preparatory Work and inform planning for the Main Study. The same databases and the original search terms were used, this time resulting in a total of 38 citations that related to HD care for children. Following application of the exclusion criteria, the total was reduced to 11 papers and after review of the abstracts, a further six were excluded because they focused on adult care or related specifically to neonates. The remaining five related more generally to HD care of children in the UK, but only one was a research study (Maybloom et al, 2002). The other

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citations discussed educational initiatives (Doman & Browning, 2001), practice development (Phillips & Arnold, 2001) or application of the DH (1997a, 1997b) reports to practice (Crabtree, 2001; Wade, 2002) and so were excluded. As before, in order to provide a more comprehensive review, other sources were searched and a further report relating directly to children's HD care emanating from the DH (2002) was identified and included.

The papers included in this review were categorised into two themes: high dependency care provision and high dependency care for children. Additionally, in view of the limited amount of research into HD care for children and the subsequent reliance on recommendations for practice that are not always evidence-based, the quality and provision of such care may be jeopardised. Consequently, selected studies or reports of relevance to quality of care in children's services will also be discussed.

2.2 High dependency care provision

A total of 19 papers relating to HD care provision were found. This included literature relating to adult HD care due to the absence of papers on HD care for children. Of these, eight reported findings from primary research including surveys, eight were analyses of audit or other existing data such as bed occupancy figures and the remaining three were a literature review, a report from the Audit Commission (1999) and a policy document from the DH (2000b).

A survey undertaken by Thompson & Singer (1995) examined the size and characteristics of HDUs in the UK. Data relating to number of beds, nurse:patient ratios, medical staffing and facilities were collected by telephone

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survey and postal questionnaire sent to the 39 general HDUs identified. Results from the 28 units that responded indicated that HDUs varied in size from three to 13 beds, although only 18 (64%) reported that all beds were available. Additionally, six units were closed due to budgetary constraints. Ridley (1998) conducted a literature review of 'intermediate care' in the UK, providing a summary of existing provision and the potential benefits of HD care. This highlighted important considerations regarding the further development of intermediate care in the form of HDUs to bridge the gap between ICU and general ward care, culminating in recommendations for the expansion of such services, particularly for surgical patients. However, no details were provided about the number of studies included, inclusion/exclusion criteria or the purpose of the review, which, in view of the incorporation of evidence that was predominantly supportive of HD care, suggests a degree of bias. Whilst evidence of the potential benefits of HDUs exists, disadvantages have also been identified. The relative advantages, disadvantages and effectiveness of HDUs will, therefore, be reviewed in turn.

2.2.1 Advantages of high dependency units

Claims regarding the potential benefits of the establishment of HDUs are supported by evidence from primary research studies and audit data. Benefits include: providing intermediate care facilities for acutely ill patients (e.g. Turner et al, 1999), freeing up ICU beds (e.g. Ryan et al, 1997; Fox et al, 1999), or reducing pressure on general wards, especially following surgery (e.g. Jones et al, 1999; Coggins, 2000).

Turner et al (1999) conducted a prospective observational study comparing levels of care (HD or intensive care) requested and provided for patients undergoing major surgery. Data were collected using a questionnaire and non-parametric statistical analyses were conducted to compare mortality levels of patients who did or did not receive the optimum requested level of care. Results indicated that 73.8% (256 out of 349) requests for HD care were not met immediately post-operatively and mortality rates were 1.2% for patients who received optimum requested care and 3.1% for those who did not (p<0.038), thus demonstrating a shortfall in the provision of HD care facilities and consequent potential for increased mortality. However, the questionnaire was designed specifically for the study and its validity is uncertain, which reduces the generalisability of the results.

Other studies have demonstrated that the establishment of an HDU could reduce pressure on ICU beds. In the East Midlands, Thompson & Spiers (1998) found that the use of different criteria for defining HD care identified different patient populations, with the potential for over or under-estimating the need for HD facilities. However, analysis of bed occupancy data revealed that over 20% patients admitted to their ICU only required HD care regardless of the criteria applied. Similar results were reported by Pappachan et al (1999) who analysed admissions to ICUs in 15 hospitals. Inappropriate admissions to ICU of patients assessed as needing HD care have been reported elsewhere (Ryan et al, 1997; Fox et al, 1999) and surveys of children's critical care (e.g. BPA, 1993; Fairfield, 1997) highlighted similar problems. Analysis of audit data by Ryan et al (1997) and Fox et al (1999) demonstrated the positive impact that the presence of an HDU could have on the availability of intensive care

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provision and Fox et al (1999)'s findings also indicated that fewer patients were discharged prematurely from the units, thus reducing pressure on the wards.

Dhond et al (1998) assessed the impact on critical care workload and capacity prior to and following the opening of an HDU contiguous with the existing ICU. Demographic data including severity of illness, diagnosis and outcome were collected, patients were classified according to criteria for intensive or HD care and daily bed occupancy figures for ICU and ICU/HDU combined were calculated. Although the findings were equivocal, advantages such as decreased cancellation rate for elective surgery were identified. Additionally, the authors suggested that quality of care was improved due to the opportunity for patients to be physiologically stabilised prior to return to the ward, although the realisation and impact of this 'opportunity' was not analysed.

The Audit Commission (1999) undertook a comprehensive review of critical care services and the resulting report endorsed suggestions that sick patients should not be nursed in ICUs if they were not in need of this level of care. They also advised that care in wards might be preferable for patients to that in an HDU. However, the potential benefits to ward patients of offering post-operative care to 'higher-dependency' patients in an HDU were highlighted by Jones et al (1999) and Coggins (2000). Jones et al (1999) compared two groups of patients receiving care following major abdominal surgery over a 10 month period, one group in an HDU (n=121) and the other on a general ward (n=71). Data were collected on physiological scores, complications, deaths and length of stay. On all measures, patients managed in a ward fared worse than those in an HDU, but differences were only significant for morbidity (p<0.0005).

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Although Jones et al's (1999) results demonstrated the potential benefits of post-operative management in an HDU compared with care in a general surgical ward, the different hospital environments, nursing and medical staff and resources available may also have contributed to these differences.

In Coggins' (2000) study, comparisons of the observations and interventions required by patients assessed as 'routine' (n=39) or 'inappropriately placed' (in need of HD care, n=28) on a surgical ward were measured over a 39 day period. Significant differences were identified between the groups, with HD patients requiring more interventions such as dressings, analgesia or catheter care and more frequent recording of observations (Mean 11.3/24 hours) than those receiving 'routine' care (Mean 4.2/24 hours, p=0.0004). This had an adverse impact on the care of less dependent patients in terms of nursing time and resources. Coggins (2000) concluded that the absence of an HDU could result in suboptimal care for patients receiving 'routine' post-operative care on the ward. The lack of patient outcome data limited the extent of his claims and the study findings are not generalisable because it was only undertaken in one ward. However, the Audit Commission (1999) confirmed the increasing dependency of patients in general adult wards and so the findings from this study merit consideration.

2.2.2 Disadvantages of high dependency units

Despite the identified potential benefits of HDUs, some have suggested that there may be problems associated with such developments. For example, although Dhond et al (1998) demonstrated benefits associated with the opening of an HDU, overall workload rose by 49% due to the increased number and

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length of stay of primarily older patients following surgery. This had funding implications that outweighed the reduced costs of providing HD care to patients in the ICU.

In their report of critical care services, the Audit Commission (1999) identified the potential for de-skilling of ward staff if sick patients were nursed in an HDU, but also acknowledged the need for increased training and skills development for nurses caring for higher-dependency patients in ward areas. Analysis of data relating to admissions to 24 ICUs in N. Thames over a 4-year period identified higher mortality rates in patients admitted from wards compared with other departments (Goldhill & Sumner, 1998; Goldhill et al, 1999). In addition to supporting calls for more HDU facilities, results from these analyses highlighted failure by ward staff to recognise and respond to physiological abnormalities or patient deterioration, compounded by poor documentation of vital signs despite severity of illness and the inexperience and lack of critical care skills of junior doctors.

In response to these problems, the DH (2000b) recommended developments such as emergency or outreach teams and early warning scoring systems to support nursing and medical staff and assist in the recognition of sick adult patients in ward areas. These required further evaluation to determine sensitivity, specificity and efficacy, but could provide guidance to staff caring for patients requiring HD care in wards. Although considerable modification would be required for these to be appropriate for children, similar developments could assist staff caring for seriously ill children in ward areas.

2.2.3 Effectiveness of high dependency units

Despite the identified benefits of HDUs, a paucity of studies examining the efficacy of these units in terms of patient outcomes, improved quality of care or cost was identified. This may reflect the potential ethical and practical considerations inherent in comparative studies or controlled trials. De Silva et al (2001) attempted to address this by studying the outcomes of 100 consecutive patient admissions to an HDU for over 48 hours. They identified that the physiological status of the majority of patients had improved, concluding that HD care was effective. However, further evidence from larger studies and conducted in other hospitals are required to establish the effectiveness of HDUs.

Studies of the cost-effectiveness of HDUs have produced conflicting results. In a review of HD care, Ridley (1998) acknowledged that, although an HDU could decrease demand for intensive care facilities, thus potentially reducing costs, increased resources would be required to establish a new unit. His assertions were supported by the findings of studies by Singer et al (1994) and Dhond et al (1998) but, despite the development of a costing system by Edbrooke et al (1997), this has not been widely used. Singer et al (1994) conducted a detailed retrospective (1988-9) and prospective (1991) audit of expenditure in a combined ICU/HDU. Despite substantial differences in the average daily costs of providing HD care (£437.83) and intensive care (£1148.72), considerable additional 'hidden' expenditure was associated with the opening of an HDU, such as staff costs, greater demand for equipment and supplies and general maintenance. The findings from these studies require consideration when

proposals for HDUs are made, as there are a range of factors that may influence the success of such developments.

2.2.4 Summary

Despite the increasing number of studies asserting the value and efficacy of HDUs, the majority of these were conducted in individual hospitals using a variety of outcome measures or criteria, producing problems in comparing results. Studies examining larger data sets (e.g. Goldhill & Sumner, 1998; Pappachan et al, 1999) have wider relevance, but generalisability is still limited. Furthermore, although the studies discussed above confirmed several benefits to patients and staff of offering HDU facilities, the extent of disadvantages, such as de-skilling of ward staff and increased costs, has not been measured. These considerations are applicable to HD care for children, especially in DGHs where child patients are in a minority and a paediatric HDU could only offer facilities for a limited patient population.

Although the evidence relating to HD care for adults is not comprehensive, a number of studies have been conducted that add to our understanding of this level of care. Similar investigation of HD care for children is now urgently required in order to ensure that developments are planned and provided appropriately.

2.3 High dependency care for children

Nine papers relating to the provision of HD care for children were found, the majority of which include this within the framework of critical care. Of these, five reported findings from surveys or audit data and four were policy documents

offering recommendations for HD care, including staffing. The papers were, therefore, categorised into three sections: studies of critical/HD care, reports and recommendations and staffing for children's HD care.

The establishment of paediatric intensive care as a speciality in the UK is relatively recent (DH, 1997b), with the Paediatric Intensive Care Society (PICS), a multidisciplinary organisation, being established in 1987. Several reports into 'critical care' for children have been published, yet, despite HD care being included within the framework of intensive care, the majority of these focus on PIC (e.g. DH, 1997a, 1997b). By contrast, HD care for children has received minimal attention, which may explain the dearth of related research, apart from attempts to identify how this differed from intensive care. Whilst care for the sickest children should be prioritised, surveys by the BPA (1993) and Fairfield (1997) identified sizeable numbers of children receiving HD care in a range of settings, whose needs also required attention. No studies have since been published that address HD care for children, nor whether improvements are discernible. As with adults, HD care for children may be a 'step up' from care in a general ward or a 'step down' from intensive care.

2.3.1 Studies of critical/high dependency care for children

An intercollegiate working group led by the BPA (1993) conducted a survey funded by a grant from the DH during 1991-3. This sought information about the provision of intensive care for children in 1991, attempting to extend information gained in a previous survey that had excluded children receiving critical care in wards or units other than general (adult) ICUs or PICUs. A two-part questionnaire was designed and sent to all nurse managers for NHS

hospital units admitting children as in-patients (n = 464). All units were requested to complete Part I and those providing 'intensive care' (using levels 1, 2 and 3, for which criteria were included) completed Part II. Hospitals not admitting children overnight or only providing neonatal care were subsequently excluded from the survey, leaving a total of 366 hospitals. Replies were received from 307 hospitals (response rate 83.9%), but not all wards or units within each hospital responded. Although this was a national survey, therefore, it was conceivable that there were a number of gaps in the data collected.

For Fairfield's (1997) study, a project team and steering group was set up in the Yorkshire region to assess the need for and inform future strategic planning of intensive and HD care for children on behalf of the Yorkshire Purchasing Chief Executives. Their study was commissioned following recommendations from the BPA (1993) report, (although the shortcomings were acknowledged), and also in response to the inquiry into the death of Nicholas Geldard, in 1995 (NHSE NW, 1996).

The Yorkshire study (Fairfield, 1997) was designed in two parts: retrospective and prospective studies. In the retrospective study, data on all children (up to and including 16 years of age) receiving intensive or HD care in the Yorkshire region between April 1995 and March 1996 were collected using survey forms piloted in one hospital in the region. Survey forms were sent to all wards and units providing care for sick children (n=80), including adult ICUs, specialist wards/HDUs, neonatal units and adult wards admitting more than 50 children per year and all responded (response rate 100%). In the prospective study, the same sampling frame was used, apart from the exclusion of 10 adult wards

identified as providing no intensive or HD care (n=70). Data were again collected on all children (up to and including 16 years of age) receiving intensive or HD care in the Yorkshire region, this time between November 1996 to February 1997. Different survey forms were sent to wards and other units, but both requested information about HD care. As in the retrospective study, response rate was 100%.

Results from the BPA (1993) survey indicated that, of 12,822 children who received 'intensive care' in the responding hospitals during 1991, 51% (6,524) were cared for in a PICU, 20.5% (2,627) in adult ICUs and 28.5% (3,671) in children's wards. Despite requesting data on dependency levels, many units failed to classify the care provided due to lack of information. As a result, much of the 'intensive care' may only have been level 1, HD care. Fairfield (1997) reported that, in the retrospective study, data were collected on 927 children who had received HD care: 92 (10%) in ICU/PICU, 410 (44%) in specialist wards or units with HDU facilities and 425 (46%) on general wards. However, the majority of wards were unable to provide data on HD care, thereby indicating the potential for considerable under-reporting, which could have implications for the future provision of HD facilities. In the prospective study, 40 children received HD care in ICU/PICU and 32 on designated units. Details of HD care on wards were not provided, but on average 14.7% admissions to children's wards received HD care, 90% of which were considered 'routine care', with no HD or ICU bed being requested.

Data were collected from 11 paediatric HDUs in the BPA (1993) survey. These had enhanced facilities for observation and monitoring, which would not have

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been available on the wards (e.g. arterial lines, peritoneal dialysis, 'assisted ventilation'). Although no skillmix details were provided, higher staffing levels than the wards were reported, which enabled 'critically ill' children to be nursed in a separate environment by staff with greater expertise.

Numerous changes in the staffing, training, organisation and commissioning of PIC services were recommended on the basis of the BPA (1993) survey. Recommendations for improving retrieval and audit were also included. However, these were not directly supported by the results or other evidence cited in the discussion. Gaps in the data collected, such as dependency levels and accurate numbers, and the lack of standard information such as patient outcomes were particular limitations of the study, preventing comparisons being made between units. By contrast, despite the data regarding HDUs reported, minimal attention was paid to recommendations for HD care. In the absence of criteria for paediatric HDUs, the report's authors made comparisons with adult HD care guidelines and recommended further study of HD care for children.

Despite the comprehensive collection of data related to HD care for children in Fairfield's (1997) study, these were not 'fully analysed due to the time constraints', (p107, para 15.27). Although the results may not have been generalisable because data were only collected in the Yorkshire region, this incomplete data analysis reduced the availability of evidence for HD care, which was already extremely limited.

Studies were also conducted in SW England by Henderson et al (1999, 2002) and Warne et al (2000) as part of the 'Critically Ill Children' (CIC) Study. Data

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were collected on critically ill children (up to 16 years) admitted to hospital in the SW region between December 1996 and November 1998. The aim of the observational study was to collect data relating to severity of illness, place of treatment and survival rates and to compare results for children receiving care in a tertiary PICU and adult ICUs in the region. Pre-defined criteria for 'critical illness' were developed by the team; these included criteria for HD care, but because the focus of the study was on intensive care, data relating to children receiving HD care were subsequently excluded. However, the criteria provided a basis for the ensuing SW Audit, data from which has been provided on request throughout the course of this study.

Maybloom et al (2002) conducted a prospective needs assessment to determine numbers of critically ill children and where they were managed to help with planning of future services. 'Critical care' was defined as the presence of acute body system or multi-system failure. Using a survey, data were collected on children requiring tracheal intubation in all wards/units (n=68) admitting acutely ill children in the Thames regions of SE England between December 1996 and November 1997. A total of 61 of the 68 wards/units responded (response rate 90%). However, because the definitions or criteria for HD care were vague at the time, all of the data for HDUs and children's wards were combined. As with the BPA (1993) and Yorkshire (Fairfield, 1997) studies, data from several of the children's wards were missing or not provided. Additionally, because the data sets were combined, information relating to HD care in wards and HDUs was not well-defined. Although the authors highlighted potential decreases in critical illness due to vaccination programmes for meningococcal disease, improved antenatal screening and technological/clinical

advances, they also argued for clearer clinical criteria to identify children who could be nursed in HDUs.

Evidence of the existence of HDUs for children was provided in the results of all the studies discussed above, yet only two presented separate data from wards and HDUs: the studies by the BPA (1993) and Fairfield (1997). However, no evaluation of the efficacy of HDUs or their impact on ICU admissions or ward patients was reported, nor were any recommendations made regarding development of such facilities. Further studies are, therefore, required to increase the evidence base for HD care developments.

2.3.2 Reports and recommendations for critical/high dependency care for children

Two reports on PIC were published by the DH in 1997. A National Co-ordinating Group (NCG) was set up in 1996, tasked by the NHS Executive to draw up a policy framework for PIC following the death of Nicholas Geldard (DH, 1997a). The Terms of Reference for the NCG included indication of 'the role of adult intensive care units and of high dependency beds within the paediatric intensive care service' (DH, 1997a, p4, para 3iii), but HD care was deliberately excluded from the report. This was because the NCG asserted that HD care was different from intensive care and previous inclusion of this level of care in PIC or 'critical care' (BPA, 1993) was 'misleading' (DH, 1997a, p9), despite its incorporation into the organisational structure. The Chief Nursing Officer's Taskforce was set up alongside the NCG to develop plans for the future PIC nursing workforce and education (DH, 1997b) in the light of recommendations from the NCG (DH, 1997a).

Although mention was made of an 'ad hoc survey' conducted in November 1996 (DH, 1997a, p26), no details were provided and so the majority of recommendations in these reports were reliant on published evidence, not all of which related directly to the UK, and professional consensus. Furthermore, the focus of these reports was intensive care; HD care received brief mention in relation to the organisational framework for initiation of level 2 care prior to retrieval or transfer (DH, 1997a) and the development of knowledge and skills including multidisciplinary training (DH, 1997b). Definitions of the levels of care were also included, but that for HD care was very vague. Considerable improvements in the provision of intensive care for children resulted from these recommendations (DH, 2002), but the lack of attention to HD care was a major limitation and may have contributed to delays in the development of level 1 facilities.

Children's HD care was not addressed until 2001, when the Expert Advisory Group presented their report (DH, 2002) for endorsement by the NCG in November of that year. The final report was not released for general circulation until 2002. The aim of the Expert Advisory Group report (DH, 2002) was to provide guidance on HD care provision, including staffing, equipment and drugs.

Evidence for this guidance was based on previous reports and views of the 'expert group', with a total of 11 references being cited. These included the DH (1997a) report, Fairfield (1997), one article in press and a personal communication. Of the 14 members of the expert advisory group, three were from the DH (but no details of their designation were provided), nine were

medical staff and two were identified as nurses, one of whom was from Great Ormond Street Hospital, the other from a DGH that also provided specialist burns care. This may have led to inadequate consideration of the needs of children requiring HD care in DGH children's wards.

It was acknowledged that definitions for HD care lacked clarity and so attempts were made to agree what constituted HD care by providing a 'core set of high dependency categories' (DH, 2002, p2). These were based on illness classifications, including diabetic ketoacidosis, bacterial meningitis and meningococcal septicaemia, and interventions such as fluid resuscitation or nasal CPAP for bronchiolitis. However, children may vary considerably in their response to illness and these criteria cannot predict the duration or severity of illness, nor the need for HD care.

According to the DH (2002), between 5 – 15% of children admitted to DGHs with acute illness need HD care, but only 0.5 – 1% of these children require stabilisation and transfer to a PICU. Recommended locations for the categories of HD care were offered in the report. These included children's wards, an HDU attached to a PICU or ward and, in some instances, PICU, which appeared to contradict the guidance for HD care. Additionally, it was suggested that children with disorders in the HDU-PIC category should be transferred to a PICU, but again this introduced confusion as to what constituted HD care. Despite asserting that the report would provide the anticipated clarity and guidance on HD care, therefore, the Expert Advisory Group (DH, 2002) failed to achieve their aims, particularly for children cared for in DGHs.

By contrast, a report focusing on HD care was also published for the NW region of England by the Paediatric High Dependency Care Sub-Group (PHDCSGNW) in 2000. This report provided examples of advice and good practice based on work over a 2-year period by the NW Commissioning Group and 'Specialist Practitioners', although no details of these were given. Membership of the Working Group was listed, along with their place of work, but no information was provided regarding their designation, such as whether they were medical or nursing staff or their level of seniority or expertise. Again, minimal evidence was cited in support of the recommendations (four references), but the focus was on HD care throughout and numerous recommendations were made, with particular relevance to care provided in DGHs.

2.3.3 Staffing for children's high dependency care

The BPA (1993) reported that the majority of nursing staff (over 98%) and more than half of the consultants in adult ICUs lacked paediatric qualifications, although they did have intensive care experience. In the children's wards providing critical care, 45% nurses overall had RSCN qualification, compared with the recommended levels of 70% (English National Board, 1991), suggesting a shortfall of children's nurses generally and the potential for serious illness or deterioration to be missed (BPA, 1993).

Recommendations for numbers and qualifications of staff for all levels of care were offered. For HD care, the BPA (1993) endorsed the recommendations of PICS that there should be a minimum of one RSCN with training and experience in the care of seriously ill children caring for two children, although no qualifications were specified. The NW report (PHDCSGNW, 2000) also

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stated that 1 nurse:2 patients should be a minimum, but that in a DGH or when a child was receiving HD care in a cubicle, a ratio of 1:1 was more appropriate. Recommended qualifications for the nurse delivering HD care were RSCN/RN (Child) with HD experience /qualification or Advanced Paediatric Life Support (APLS) course, with support from another RN (Child).

Similar recommendations were made in the DH reports (1997b, 2002) that the nurse providing HD care should be RN (Child) with APLS/PALS/PLS qualifications. Additionally, the DH (1997b) recommended at least two children's nurses per shift in a DGH ward, in line with the DH (1991), and the Expert Advisory Group (DH, 2002) suggested that at least one nurse with APLS qualification should be available over a 24 hour period.

Despite apparent similarities between these recommendations, the DH (1997b, 2002) reports did not appear to offer any flexibility in staffing levels in response to changing circumstances, in contrast to the NW report (PHDCSGNW, 2000). Moreover, the BPA (1993) report was based on primary research findings, albeit with shortcomings, which provided more support for their recommendations on staffing, in contrast to those of the DH (1997b, 2002). Due to their relative currency and national application, however, the latter recommendations are more widely recognised and accepted, which has implications for staffing in DGH wards and units in particular.

2.3.4 Summary

Review of these reports and recommendations indicates that, notwithstanding the existence of data and findings that could inform HD care for children, there

have been a number of lost opportunities. Definitions and criteria for HD care remain vague, despite attempts to elucidate and classify these in successive reports. As a result, understanding of HD care provision in children's wards and HDUs has not progressed and may continue to vary according to local situations due to the absence of effective, evidence-based national guidelines. This may have implications for the quality of care received by sick children nursed in a ward that delivers HD care.

2.4 Quality of care for sick children

There is a paucity of research into 'quality of care' in children's nursing, with more emphasis on audit of services, patient/parent satisfaction surveys or the application of findings from adult studies. Quality of care is an important concept in nursing and Donabedian's (1966) 'structure-process-outcome' model is widely cited as a basis for assessment. However, the model was originally developed to evaluate the quality of medical care and Donabedian (1969) has criticised the approach taken by nursing, calling for reassessment of standards to maintain quality. Furthermore, measurement of quality care may be problematic because interactions between patients and practitioners are not fully understood (Donabedian, 1988). Despite this, many studies attempting to explore or define quality care (e.g. Hogston, 1995; Attree, 2001a) appear to reflect Donabedian's (1966) model.

According to Donabedian's (1966) model, 'structure' incorporates organisational issues such as staffing levels, skillmix, equipment, funding, environment and workload. 'Process' relates to how care is provided and is at a more individual level, including aspects such as competence, teamwork, communication,

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interactions and personal attributes. 'Outcomes' refer to patients' health and personal experiences and includes not only what happens to them in terms of recovery (or otherwise), but how they perceive their care. The latter is often measured using satisfaction surveys. Studies of quality of care should, therefore, include all three elements.

Three grounded theory studies focusing on quality of care were found (Hogston, 1995; Williams, 1998; Attree, 2001a, 2001b), two of which incorporated the three aspects of Donabedian's (1966) model. Findings from Hogston's (1995) study of nurses' perceptions of quality care in a medical unit indicated that nurses tended to focus on issues relating to 'process' and 'outcome' because they had more control over these, whereas 'structure' was seen as the domain of managers. Attree's (2001a) findings provided some support for this view, identifying that, in terms of resources, managers were more interested in budgetary control. However, Hogston's (1995) claim that his was a grounded theory study should be viewed with caution, because only 18 interviews lasting up to 20 minutes were recorded, participants were volunteers and no mention is made of theoretical sampling or constant comparative analysis, although the data analysis process is described. Notwithstanding this, his findings reflected the three components of Donabedian's (1966) model.

Findings from Attree's (2001a, 2001b) study, which explored perceptions and criteria for quality of care from the perspective of healthcare professionals, managers and patients in a DGH medical ward, also resonated with Donabedian's (1966) model. Three categories were identified: care resources, care processes and care outcomes. A total of 77 participants contributed to the

development of the criteria and consensus was achieved, although patients' and relatives' perspectives on quality highlighted the importance of individualised care and other contextual issues rather than more technical aspects of care (Attree, 2001b).

Findings from Williams' (1998) study demonstrated how nurses used 'selective focusing' to help them cope with the stress and frustration of limited availability of time and resources to provide quality care. 'Quality care' was assessed in terms of 'therapeutic effectiveness' related to the extent to which patients' needs were met. Interviews were initially conducted with ten nurses from four surgical wards in one hospital in W. Australia, selected by purposive and theoretical sampling. An additional 12 interview transcripts were made available to assist with the development of categories, although the extent to which these participants and the interview format used reflected the initial study design and sampling frame is uncertain. Although nurses recognised what constituted quality care, their ability to achieve it was constrained by the time and resources available. Four phases of 'selective focusing' were described: self, needs, patient and quality focusing, the phase used being dependent on the perceived amount of time available to meet patients' needs and the level of stress being experienced by the nurse. Both 'quality focusing' and 'patient focusing' pertained to 'therapeutic effectiveness', whereas 'needs focusing' and 'self-focusing' did not, relating instead to limited time and high levels of stress.

In contrast to other studies, Williams' (1998) findings do not reflect Donabedian's (1966) structure-process-outcome model, but they still identify issues that may be pertinent to the provision of HD care for children. Concerns

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regarding staffing levels and variability in workload on children's wards providing HD care have been raised, which may have implications for the quality of care received, as Williams' (1998) study identified. However, there is a lack of evidence relating to HD care provision and quality of care in children's nursing and so the extent to which these findings may be transferable cannot be determined.

Hogston (1995) contended that quality of care was a subjective phenomenon because it may have different meanings, depending on whose perspective is being considered. Consequently, definitions and criteria for quality may vary, yet some studies have focused only on the nursing perspective (e.g. Hogston, 1995; Williams, 1998), or on patient (or, for children, parent) satisfaction surveys (e.g. Jackson, 2000; Higson & Hawkins, 2001). Participants in Attree's (2001a) study included nurses, doctors, managers, patients and relatives, but it was conducted in only one adult medical ward and so the results may not be transferable to children's wards.

Despite Hogston's (1995) assertion, various quality assurance measures have been devised for use in adult wards and units and the audit tool 'Junior Monitor' (Galvin & Goldstone, 1988), based on previous versions of 'Monitor', was adapted for use in children's wards. This provided a checklist of criteria designed to enable nurses to measure the quality of care in their wards and identify areas for improvement. Training was required for staff undertaking data collection and, as patients and parents were involved, ethical considerations were also crucial. Although this tool provided useful information for ward staff

and managers, the time required to complete the documentation was a major drawback and its use has diminished.

For paediatric critical care, various tools for measuring aspects of care exist, such as Paediatric Risk of Mortality (PRISM, Pollack et al, 1996) or Paediatric Index of Mortality (PIM, Shann et al, 1997), but the focus is on outcomes, specifically mortality. Potentially of more use in HD care is the Therapeutic Intervention Scoring System (TISS, Cullen et al, 1974; Miranda et al, 1996) which measures interventions and has been used to determine the level of dependency of patients and assist in predictions of nursing manpower in ICU. Although TISS has been adapted for children (Yeh et al, 1982, 1984), scoring systems do not necessarily quantify all components of nursing workload, such as providing support for families, which is a fundamental aspect of quality care for children.

2.5 Summary

This review has demonstrated that there is limited evidence supporting the provision of HD care for children in different settings. Despite successive reports and recommendations relating to critical care for children and the inclusion of HD care in the organisational framework, this level of care has received minimal attention. Much of the literature on adult HD care suggests that further development of these facilities could reduce pressure on ICU beds and general wards as well as improving care for patients, particularly following major surgery. However, due to the differences in criteria and demand for HD care between adults and children, the majority of findings from adult studies are not directly transferable to HD care for children. The implications of this are that

HD care will continue to be provided on children's wards without consideration of the variability in workload or staffing that this engenders and the quality of care for sick children may be compromised. Consequently, research investigating how HD care for children is delivered in different settings is crucial for the development of future policy and practice.

Therefore, a qualitative study of HD care was undertaken. The principal aim of this study was to investigate from the nursing perspective what happened to children who needed HD care in children's wards in SW England and to identify and evaluate factors influencing their care. A secondary aim was to explore nurses' experiences of providing HD care on children's wards.

Five research questions were developed to address these aims:

1. What are the experiences of nurses providing HD care in children's wards?

2. How do nurses recognise a sick child's need for HD care and what then happens to the child?

3. What knowledge and skills are needed to nurse children requiring HD care?

4. What preparation, support and resources do nurses require to provide HD care for children?

5. What individual or organisational factors may enhance or hinder the provision of HD care in children's wards?

This qualitative study has the potential to contribute to understanding of the provision of HD care in children's wards. In turn, this may influence the development of HD care and improve the quality of care for sick children.

CHAPTER 3: PREPARATORY WORK: FOCUS GROUPS

3.0 Introduction

The purpose of this stage of the study was to address research question 1 by exploring nurses' experiences of providing HD care for children in order to inform the methodology and methods for the Main Study. A qualitative approach was adopted because this was considered to be the most effective method of ensuring that nurses' experiences would be captured in their own words. Using focus groups, participants were asked to discuss their experiences of providing HD care for children in their ward or hospital environment, including how they recognised that a child required high dependency care and how this was managed. They were also asked what preparation they had received to help them develop the knowledge and skills required to deliver such care and how this could be improved. Following analysis of these interviews, the main issues which arose in the Preparatory Work were used to inform the planning of the Main Study, which aimed to explore the provision of HD care in children's wards and address research questions 2 – 5.

3.1 Rationale for choice of method

In view of the lack of evidence relating to HD care for children, it was important to elicit views from nurses directly involved in the provision of this care in order to find out what the key issues were. This required a method of data collection that provided opportunities for nurses' experiences to be explored and discussed. Two methods were considered to be of particular relevance for this purpose: individual in-depth interviews and focus groups.

Crabtree et al (1993) assert that both of these methods can be used effectively to explore responses to research questions. Individual interviews are a well-established and very popular method that can be used to discuss a range of issues as well as being relatively manageable to conduct. However, Breakwell (1995) highlights the potential for interviewer effects to influence the data collected using one-to-one interviews, partly due to the overt participation of the interviewer in the research process. She argues that the mere presence of the interviewer may influence individuals' responses inadvertently through body language and other non-verbal behaviour, particularly if the individual knows her background. This concern could have been applicable here. In view of my professional background and interests, it was feasible that my personal views and beliefs about the provision of HD care in children's wards could influence participants' responses. Alternatively, it could be argued that being an 'insider' could be an advantage in terms of gaining access to and 'recruiting' participants. As it was the practitioners' views and experiences – shared as well as individual – that were to be explored initially, however, this drawback of individual interviews could have been pertinent in the Preparatory Work and the problem could be overcome by using focus groups.

There are other advantages to this research method. Krueger (1994) believes that the presence of others in a group produces a more natural environment than individual interviews. The focus group interview is a more dynamic and social process than an individual interview, as it can facilitate and stimulate discussion, leading to greater spontaneity of responses. There is also the opportunity to collect, probe and clarify a range of views which may not emerge from individual interviews (Krueger, 1994; Roberts, 1997; Robinson, 1999).

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3.2 Focus groups

Focus groups are a form of interview technique used in qualitative research. They consist of small numbers of people brought together by the researcher to discuss a specific topic. The interview is guided by a 'moderator' (usually the researcher) who 'focuses' the group discussion. The interview is normally tape-recorded and forms the main source of data, but the interactions within the group should also be captured, as the group behaviours and views are also important (Morgan, 1993; Kitzinger, 1994; Krueger, 1994; Denscombe, 1998; Jackson, 1998; Barbour, 2005; Freeman, 2006).

Focus groups were used as a research method in social science in the 1940s and 50s, but their popularity in this field diminished and instead they became associated with marketing research and advertising (Morgan, 1988; Denscombe, 1998). More recently, this method has again become popular, particularly in qualitative social science and health-related research (Kitzinger & Barbour, 1999; Barbour, 2005), such as psychology, education and nursing.

In nursing, focus groups have been used to explore a range of issues from clinical practice (e.g. Idvall & Rooke, 1998; McCutcheon & Pincombe, 2001; Aveyard, 2002; Jones, 2003), educational (e.g. Lankshear, 1993; Forrest et al, 1996; Cahill, 1997; Gillespie, 2002) and managerial or professional perspectives (e.g. Reed & Payton, 1997; Tom & McNichol, 1998; Williamson & Webb, 2001). They can also be used successfully to provide opportunities for the views of patients, carers or lay people to be investigated (e.g. Millar et al, 1996; Carter et al, 2002; Chumbley et al, 2002).

There are a number of advantages to the use of focus groups in research. These include: their compatibility with other research methods; the opportunity to observe and record interactions between participants; more 'security' than individual interviews; a more natural environment than other methods, thus encouraging more spontaneity of expression and a wider range of views; and practical advantages such as economy in terms of time, cost and numbers of participants (Morgan, 1988; Krueger, 1994; Sim, 1998; Freeman, 2006). Each of these points will now be discussed in more detail.

Focus groups can be used alone or in combination with other methods such as surveys, participant observation or individual interviews (Morgan, 1993), thus increasing their value. Indeed, Morgan (1988) recommends that focus groups are used to develop questionnaires or interview schedules, as they can assist in ensuring that the language and experiences of participants are represented rather than those of the researcher and issues and views can be better clarified. Krueger (1994) considers that focus groups are an effective qualitative method, as the data collected can provide insight into the perceptions, attitudes and opinions of participants.

The potential for 'democratising' the research process by giving more control of the proceedings to the participants through the use of focus groups is highlighted by Kevern & Webb (2001). Citing work by Wilkinson (1998) and others, they discuss how group discussions can empower participants, using this argument to help underpin their rationale for the use of focus groups with mature nursing students. Although I endeavoured to ensure that no power relationships between myself and participants existed by excluding current

students, some did know me and were aware of my role and so there was some potential for this problem to arise.

By using focus groups, therefore, more control of the process could be given to the participants, with interaction between interviewer and interviewee being replaced by interaction between participants (Morgan, 1988). Indeed, this is one of the principal reasons for selecting focus groups as a method and Kitzinger (1994) and Webb & Kevern (2001) recommend that data relating to group processes and procedures should be analysed and reported, as well as responses from individual participants. The advantages of analysing interactions and, in particular, 'sequences of discussion', are asserted by Reed & Payton (1997) and are illustrated clearly in the extracts and discussion in their paper. Interactions between participants were included in the present study, and were of particular relevance in the second interview, as discussed later.

Breakwell (1995) also highlights the potential for inaccurate or incomplete responses from participants in individual interviews, due to embarrassment, dislike or distrust of the interviewer, lack of understanding or inability to remember details. Providing HD care can be very stressful, often requiring a repertoire of skills and an ability to recognise changes and respond quickly and appropriately. Admitting to experiences that may not have been managed as well as they could have been may be very painful or difficult for individuals, particularly if perceived as a deficiency in their practice or abilities. Nyamathi & Schuler (1990) and Morgan & Krueger (1993) consider that involvement in a group interview can provide security for participants and thus encourage interaction and self-disclosure, especially if these experiences are familiar to or

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shared by other group members. Jackson (1998) discusses similar views and also highlights the potential for participants to challenge one another's opinions in a group interview. In this stage of the study, it was essential that participants were willing to share their experiences and feelings, and problems would have occurred if there were discomfort or conflict within the group, as Carey (1994) and Macleod Clark et al (1996) warn. My role as moderator and my skill in the facilitation of group processes were potentially crucial, therefore, and I hoped that my professional background and familiarity with some of the participants' experiences would be valuable in dealing with difficulties.

It has also been argued that focus groups have the advantages of being relatively low-cost, able to produce speedier results with larger sample sizes and easier to conduct than individual interviews (Morgan, 1988; Krueger, 1994; Roberts, 1997). In order to allow for diversity of responses without fragmentation of the group, Krueger (1994) advocates the use of fairly small homogeneous groups of six to ten people who, whilst not necessarily being strangers to one another, do not interact on a regular basis. All participants in this study were Registered Children's Nurses (RN Child) working on children's wards within a defined geographical location (SW England), but from different hospital settings; thus meeting Krueger's criteria.

A number of advantages to the use of focus groups have been identified, but there are also drawbacks or limitations to this method, especially in relation to the role of the moderator. This is fundamental to the effectiveness of the focus group (Millward, 1995; Macleod Clark et al, 1996; Greenbaum, 2000), as discussed later.

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Krueger (1994) warns that the decreased amount of control of the course of discussion in focus groups can be seen as a disadvantage, but as previously stated, the purpose of this study was to identify and explore the experiences of the participants with limited control of content by the moderator. As a result, this was considered to be a strength of the method and may also have increased face validity and the credibility of the results, which were used as the basis for the Main Study.

Similarly, Krueger (1994) argues that there are inevitably variations between groups, which arise due to the differing interactions between individual participants in each group as well as the group processes and that consensus of views is, therefore, not possible. Although Millar et al (1996) attempted to achieve this, Sim (1998) argues that, even if divergent views do not arise within a focus group interview, this may be due to group dynamics rather than actual consensus. Consensus was not being sought, however, and so this point could also be seen as an advantage in terms of the range of views which could be elicited, discussed and clarified using this method.

Another limitation highlighted by Krueger (1994) is that of difficulty in assembling groups and finding a suitable venue for discussions to take place. This is acknowledged to be more problematic for groups than individual interviews, where the needs of only one participant have to be accommodated at any particular time.

In view of the considerable advantages of focus groups in terms of the exploration of nurses' experiences of HD care, this method was considered to

be the most appropriate for the Preparatory Work. The organisation of the interviews will be discussed later in the chapter. The recruitment of participants and attempts to overcome the problems identified by Krueger (1994) in assembling groups for interview will be outlined in the next section.

3.3 Recruiting participants/purposive sampling

Purposive sampling was employed for this phase of the study in an attempt to identify what Patton (1990) and Sandelowski (1995a) refer to as 'information-rich cases'. Sandelowski (1995a) argues that it is possible for lone researchers with 'limited resources' to produce credible findings with smaller samples by undertaking 'purposeful sampling for demographic homogeneity and selected phenomenal variation' (p182). In this study, 'demographic homogeneity' and 'selected phenomenal variation' were achieved by setting inclusion criteria of participants who shared the experiences of working in a children's ward/unit in the SW region of England and an interest or involvement in the provision of HD care for children.

Initially, nurses were invited to participate in the group interviews by 'flyers' sent to a range of children's wards and units in the SW region, requesting volunteers. These were accompanied by letters to ward managers asking them to display the flyers (see Appendix 1A). Information was also sent directly to local SW audit nurses, former students from the HD module for which I was responsible and other clinical colleagues who had expressed interest in the study or who I knew were involved or interested in HD care. In order to eliminate any possibility of a 'power relationship', no students for whom I had

any current responsibility were invited and those who expressed interest were excluded from this stage of the study.

Prospective participants were asked to contact me directly so that an information sheet (see Appendix 1B) could be sent to them. This included an overview of the purpose of the study and details such as tape-recording of the interviews, a consent form (see Appendix 1C) and a stamped addressed envelope for its return. Once the consent form had been returned, the nurse was invited to participate in a focus group in their area; if able to attend, they were sent a letter confirming the dates, times and arrangements for the day, including directions and a map of the venue.

3.4 Conducting the focus groups

Three focus groups were conducted with RNs involved in the provision of HD care for children in various hospital settings in the SW Region of England during 2001/2. Ethics approval for the study was granted by the University of Plymouth, Faculty of Human Sciences Human Ethics Sub-Committee, as was the requirement at the time.

A total of 27 nurses working on children's wards from a range of hospital settings (a Lead Centre, Major Acute General Hospitals, DGHs and a specialised hospital (DH, 1997a)) consented to participate in the group interviews. It was planned that each focus group would be conducted with six to eight nurses, but as Krueger (1994) warned, difficulties were experienced in finding dates and times suitable for all. Interviews were arranged for between five and seven participants at each, but despite careful planning on both sides,

including telephone calls the day before the interview, last minute difficulties arose such as child care problems or sickness. As a result, a total of 12 nurses participated in the interviews, Group 1 comprising five participants, Group 2, four and Group 3, only three (see Table 3.1 for details).

Two focus groups were held in hotel rooms and the third in a room at my work base during the university vacation time. As the participants arrived at the venue, they were welcomed and offered coffee and biscuits. I then gave them a biographical data sheet (see Appendix 1D) and asked them to complete it. This provided background information such as grade (see Table 3.1), helped to reduce the overall length of the focus group interview and allowed for participants to remain anonymous to each other if they wished.

Instead, this worked as an 'icebreaker', with participants starting to talk to each other and introduce themselves before the interview began. Carey (1994) discusses the importance of 'logistics', highlighting the 'surprising importance' of food (p230). She argues that this can encourage conversation, as well as giving participants 'something to do' before the interview. I am unsure whether it was the effect of food, a comfortable seating area, the biographical data sheet or the participants themselves that facilitated conversation, but their interactions before the interview appeared to assist the group dynamics. In addition, I was able to observe individuals and identify those likely to be particularly outspoken or quiet and arrange the seating accordingly. Carey (1994) recommended that more extrovert participants should be placed next to the moderator, whereas a shy or quiet person can be seated across the table to provide encouragement by eye contact or other non-verbal behaviours; her suggestions were followed.

Table 3.1: Details of focus group participants

(to prevent identification of individuals due to small numbers, the hospital settings have been combined to form two categories)

Participant number	Focus group	Type of hospital	Grade of post	Full/part time	Length of time qualified
11	1	Major Acute/District General Hospital	E	FT	6 years
12	1	Major Acute/District General Hospital	F	FT	7 years
13	1	Major Acute/District General Hospital	G	FT	19 years
14	1	Major Acute/District General Hospital	E	FT	12 years
15	1	Major Acute/District General Hospital	D	FT	2 years
21	2	Lead Centre/ Specialist Hospital	E	PT	33 years
22	2	Lead Centre/ Specialist Hospital	F	FT	23 years
23	2	Major Acute/District General Hospital	E	PT	22 years
24	2	Lead Centre/ Specialist Hospital	E	PT	23 years
31	3	Major Acute/District General Hospital	G	FT	18 years
32	3	Major Acute/District General Hospital	F	PT	19 years
33	3	Major Acute/District General Hospital	G	FT	16 years

The rooms were arranged with a table in the centre, around which we sat, so that we could all see each other. The introduction to the focus groups included the setting of 'ground rules' (Krueger, 1998b; Kitzinger & Barbour, 1999) in an

attempt to prevent any difficulties from arising during the discussion and to assist in 'control' of the group (see Appendix 1E). Additionally, in view of the potentially sensitive nature of the discussion, reminders of the confidentiality and anonymity of responses were included and these assurances were repeated at the end of the interview. I also asked them to maintain the confidentiality of fellow participants and their responses, as this is outside the control of the researcher (Kitzinger & Barbour, 1999).

Millward (1995) warns that emotional fatigue can manifest itself quickly in a group engaging in the discussion of sensitive topics. It was therefore important to ensure that the plan of questions was able to elicit positive as well as difficult experiences (Krueger, 1998a), in order to prevent distress or weariness in participants. With these recommendations in mind, a plan of topics and open questions was devised with which I attempted to elicit discussion and clarification of various factors relating to nursing children requiring HD care in hospital wards (see Appendix 1F). As the moderator, I facilitated the group discussion using this to guide me. Minor additions were made to the topic guide after focus group (FG) 1 and 2 to follow up issues that emerged during analysis of these interviews. These were a question relating to the potential impact of having an HDU after FG1 and differences working with surgeons compared with paediatricians after FG2. No new issues emerged from FG3.

The first question, 'What does high dependency care mean to you?' was intended to provide participants with an opportunity to express an opinion about HD care, based on their individual experiences, before moving on to more focused topics, as recommended by Morgan (1988). In FG1 and 3 this

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happened quickly, with a further probe leading to a range of responses including diagnoses and interventions. By contrast, the question was initially met with a long silence in FG2. This was eventually broken by Participant 22 and the others soon followed her lead. Price (2002) recommended the use of 'laddered questions' in interviews, by organising questions in three levels, from least invasive, such as questions relating to action, eliciting descriptive responses, to more invasive questions pertaining to knowledge and finally to questions concerned with personal philosophy, i.e. beliefs, values and feelings. Although he referred to individual not group interviews, these recommendations could still be pertinent to this study. After reading the paper, I reflected again on FG2 and realised that it was possible that, rather than being a relatively simple question requiring descriptive responses, this first question could have been perceived as one requiring participants to reveal their beliefs and feelings from the outset, albeit in relation to work rather than a 'personal philosophy'. This could help to explain the long silence at the start.

Krueger (1994, 1998a) recommends that the final question should involve asking participants whether anything had been missed to ensure that nothing crucial had been overlooked. This recommendation was followed and further issues were raised and discussed as a result in all of the interviews.

An 'attendance allowance for out of pocket expenses' (Bloor et al, 2001, p54) including travel costs and time was provided for each participant when the interview had finished. This allowance, all refreshments and the hire of rooms were funded through a small personal scholarship awarded by the Association of British Paediatric Nurses and SIMS Portex[©].

3.5 Role of the moderator

The role of moderator in focus groups differs considerably from that of interviewer, as the emphasis is on facilitation of interactions between participants and the discussions resulting from the suggested topics and/or questions. This is also dependent upon the degree to which the format of the group discussion is controlled and, if very structured with high moderator involvement, can lead to problems similar to those for individual interviews. Millward (1995) describes four types of moderator style, each of which exert a varying amount of influence on the control of the process and content and thus the data derived from the discussions. She argues that low content control/high process control is most appropriate for the facilitation of focus groups. This was the style adopted.

Prior to undertaking the role of moderator, I had assisted two colleagues who were using focus groups for their research by acting as a second, or co-moderator. I also had several years' experience in clinical practice and nurse education, had good communication skills and was familiar with group processes. Furthermore, I was acquainted with many of the ward settings in which the participants worked and, as a children's nurse, had some understanding of their day to day routines and experiences. Consequently, as both moderator and researcher in this study, I had considerable interest in the subject area. Morgan & Krueger (1993) argue that it may be preferable to use a moderator who is involved with the project, either as a member of the research team or through familiarity with participants' views, in contrast to Macleod Clark et al (1996), who advocate that the moderator should be seen as impartial and objective with no interest in participants' responses. However, Morgan &

Krueger (1993) and Millward (1995) also assert that the skills of the moderator in relation to the management of the group processes and the ability to empower participants and maximise discussion are important, but take second place to the need for sensitivity to the research issues and methodological rigour.

The low content control/high process control style (Millward, 1995) was used for focus group facilitation, which required a certain amount of impartiality, as recommended by Macleod Clark et al (1996). However, I could not be certain of being objective. This can be partially overcome by the use of a second, or co-moderator who, Jackson (1998) and Krueger (1998b) suggest, can assist in the recording of information such as non-verbal behaviours and group dynamics, as well as checking the moderator's interpretations during the analysis of data. Such involvement can, however, add to the overall costs of the focus group.

Despite asking colleagues for assistance, no one was available to co-moderate the first focus group on the date arranged with participants. As a result, I moderated FG1 alone, making field notes during the interview and reflecting on my experiences on the train journey home. The interview procedure, content, field notes and reflections were discussed with my supervisors following transcription and it was agreed that a co-moderator would assist next time. In FG2, a colleague who had experience of conducting focus groups acted as co-moderator and was able to undertake all the activities described by Jackson (1998) and Krueger (1998b). His presence was explained to the participants and he sat to the side of the group where he could take notes and observe

interactions unobtrusively. From a quality assurance aspect, this was extremely helpful, as he could record field notes throughout, which included comments on non-verbal behaviours and group interactions. I was also able to reflect on and discuss my initial impressions of the process and interpretations of the content of the interview with him shortly after this had finished. This reassured me that relevant data had been captured and that my field notes from FG1 were adequate, as they had highlighted similar behaviours and interactions to his, but the advantages of having a co-moderator were clear. Therefore, I attempted to elicit assistance with FG3, but was unsuccessful and so I undertook the moderation alone.

3.6 Analysis and interpretation of data

The interviews were tape-recorded and transcribed as soon after they had been conducted as possible to ensure the discussions were still 'fresh' in my mind. I also reflected on each of the interviews in my journal and added field notes to provide more contextual information. The co-moderator's field notes from FG2 were combined with my own notes and data. Interestingly, because this colleague was not a children's nurse, in our discussion/reflections on the interview, he also highlighted points which, although recognised, tend to be taken for granted by children's nurses, including myself. For example, he noted issues such as the role and needs of parents/families and the implications of adult doctors (especially surgeons) treating children. Flick (1998) warns that qualitative researchers risk overlooking or ignoring individuals' experiences, or material that is present 'in the field', because of their own assumptions or expectations, thus potentially losing 'the discovery of the actual 'new'' (p42). This could have happened to me, but my colleague's comments helped to

emphasise the importance of including contextual data and not overlooking ideas that might seem common sense or obvious, as they might be more complex than they appear.

I also commenced a 'reflective journal' after undertaking FG1. Although I had been writing comments about articles or books I had read and reflecting on discussions with colleagues or in supervision sessions, this had not been systematic or analytical. Several authors recommend writing a research diary or reflective journal in qualitative research (e.g. Flick, 1998; Silverman, 2000; Morse & Richards, 2002; Murray, 2002) as this can enhance the rigour or credibility of the process by contributing to the 'audit trail' (Rodgers & Cowles, 1993). This is also important for 'reflexivity', whereby the role of the researcher can be made explicit within the research process (Hammersley & Atkinson, 1995). Initially, my journal was fairly descriptive, consisting of ideas and thoughts in the form of jottings and notes. As I became more used to writing this, however, the style developed and 'flowed' better, becoming more analytical. Eventually this was to become invaluable, as I realised that, by reflecting on and analysing my thoughts, impressions, ideas, etc. about the data I was collecting, I was starting the process of 'memoing', as recommended by Burgess (1982) and Strauss & Corbin (1998). Therefore, extracts from my reflective journal have been included, where appropriate, to illustrate how the analysis developed.

Interviews lasted from 55 minutes in length (FG3) to more than 1½ hours (FG1), resulting in transcripts of between 24 and 48 pages. Following transcription and the inclusion of field notes, I read through the transcripts two or three times and

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analysed them 'line-by-line' to commence the coding process. Initially I identified a large number of codes and eventually attempted to make links between these by depicting them in 'spider plans'. However, I realised that there were many overlaps between codes and that I was becoming 'bogged down' in the minutiae of detail and experiencing difficulty in recognising the 'bigger picture'.

At this stage I considered the use of a computer software package to assist in the coding and, in particular, the management of data. I also read several articles on this subject, including one by Morison & Moir (1998), who consider the advantages and disadvantages of using computer software for data analysis, with specific reference to the use of NUD*IST©. As this software was available to me, the limitations the authors highlighted in relation to the analysis process were particularly pertinent. There was also the potential for missing the development of participants' views resulting from interactions within the groups, as Reed & Payton (1997) experienced by using a computerised data analysis package. By contrast, Hewitt-Taylor (2001) discussed the practicalities of constant comparative analysis and the use of computer files for storage and retrieval of data and codes, which she found beneficial. Of most interest and relevance to my study was an article by Webb (1999), in which she reviewed and compared computerised and manual approaches to data analysis, with reference to the experiences of former PhD students. She concluded that manual techniques are better suited to the relatively small-scale studies likely to be carried out by PhD students and I felt more comfortable with what she described as the 'osmosis method'.

Therefore, I returned to the transcripts and re-coded and analysed them 'manually', generating more significant concepts based on my initial codes from larger 'units of meaning'. The coding process was facilitated further by subsequently numbering each line and printing each transcript on different coloured paper to ease identification. These were then cut up and tentatively sorted into categories by hand. The initial findings are discussed in the next section and were used as a basis for further exploration in the Main Study.

3.7 Focus group findings

As outlined above, I carried out a line-by-line analysis of each interview transcript, generating initial codes and categories, which evolved as new data from each successive focus group were compared. Similar issues were identified from all three of the interviews, but the focus altered, with slightly more emphasis being placed on different aspects of HD care in each. Tentative links were then made between codes, and six categories emerged: 'Definitions and perceptions of HD care', 'Having an HDU', 'Problems in DGHs', 'Skills needed for HD care', 'Teamworking' and 'Staffing for HD care'.

The findings are illustrated by incorporating extracts from the focus group transcripts, including 'sequences of discussion' (Reed & Payton, 1997). The presentation of these extracts has followed suggestions by Morse & Field (1996, p144), whereby a pause is indicated by a long dash; editing to exclude irrelevant words (e.g. 'you know') or sentences is indicated by (....); and emotional reactions or explanations of omitted names, locations etc. are inserted in square brackets. Additionally, equal signs (=) are used to identify sequences of discussion where there is no gap between lines, as

recommended by Silverman (2000, 2001). Participants are denoted by numbers representing the focus group and position in the group, e.g. 13 = FG1, Participant 3.

3.7.1 Definitions and perceptions of high dependency care

This included responses to the first question in the interview, 'What does high dependency care mean to you?' Various examples of situations and conditions were offered, some of which fitted with the criteria being used in the SW audit, but many of which did not. The suggestion that HD care was a 'step up' from that generally given to children on a ward or a 'step down' from intensive care was also made. In addition, two separate groupings of children emerged: those who required 'HD care', i.e. who were seriously or critically ill, needed immediate intervention or constant monitoring; and 'highly dependent children' who were not necessarily acutely ill, but required a high level of nursing care. The latter group included children with special/complex needs or psychological difficulties, such as young people who self-harm. Although they may also have required one-to-one care at times, they would not normally be included in the high dependency criteria, which seek to identify critically ill children:

> 'There is obviously high dependency acute care but there is also sort of high dependency chronic care... like a lot of places we have some children who are very psychiatrically disturbed, and – they need a very close watch on them and often they need to be specialled because they're self-harming... There's a place for them within the high dependency criteria because they need the one to one nurse contact.' (Participant 23)

> 'This question about, what is high dependency... I think – it devalues – other areas... And I think the group that's really, really missing out on all of this... are special needs children. I think they're getting a real bum deal out of this because they don't fall into high dependency but their care needs – are extensive' (Participant 13)

These different perceptions of HD care were highlighted by participants in all three groups, one calling for a national definition and guidelines for HD care, as the DH (1997a) recommendations are somewhat vague:

> 'I think paediatricians they each do their own thing really. If we had a – more national or – a definition of what a high dependency child is, then you could start going into guidelines and things like that... I know in intensive care they've got strict criteria – and dependency scoring for children. (Participant 23)

Attitudes to HD care also tended to vary between nurses, with the majority of participants admitting they enjoyed it, despite the associated problems and stresses. 'Fear' of HD care was highlighted, however, particularly in relation to the opening of an HDU:

> 'Even though it's positive [opening of the HDU] – you'll always get people who find it frightening. It attaches a label to children to some extent, and people become afraid of ever looking after them then, because they've been in a – high dependency area' (Participant 33)

This was expressed strongly in FG2:

> 'Whether you want to go in there or not, if you're the E grade on duty you go into high dependency and work, without any choice – sorry, (looking at other participants) this is my particular thing=   (Participant 21)
> =That's all right if you enjoy it, that, as you say, there's the choice=
>   (Participant 22)
> =But there are people like me who absolutely hate it, and live in fear and trepidation each time you go on duty that you're going to be put in high dependency=   (21)
> =And yet some of these children, before [rebuilding] we were looking after some of them on the wards, with minimal monitoring, but you could see – we were on a nightingale ward and you could see these children. We hadn't got as many staff but I don't feel we had many problems' (22)

The other participants in the group looked surprised but were very supportive towards the one who expressed 'conflicting' views, despite all acknowledging they enjoyed providing this level of care. Although only one participant admitted to disliking HD care, it was evident, as highlighted above, that this was not an isolated view.

3.7.2 Having an HDU

Many advantages of HDUs were mentioned in all three interviews, e.g. having everything ready, having time, equipment and space to care for the child, a supportive environment for parents and this being a safer place to care for children. Several participants highlighted the need for an HDU, stressing the importance of having a special area fully staffed and the need for appropriate equipment, people and training. Participants also emphasised the need for dedicated funding and the importance of 'doing it seriously', one commenting that 'a CPAP [continuous positive airway pressure] machine and nurse doesn't make a high dependency area' (Participant 23).

More HDUs were being planned and opened in the SW, but several disadvantages of an HDU were also identified, although participants who had them did not want to lose them. The main problems identified related to a) if the unit was on a ward and there was not a designated team of staff; or b) if there was only space for two children, which, according to the DH (1997b, 2002) recommendations, requires only one nurse to care for them. As a result, despite having an HDU, the children's ward(s) still had to help out, thus potentially leaving a ward understaffed and compromising the care of children there:

> 'The doctors say, "Right [the child] needs high dependency", but that child is getting perfectly adequate – care within the ward area. And often we feel that its safer within that ward area than moving the child to the high dependency unit, and then having to remove a member of staff as well, which then leaves the rest of the ward vulnerable' (Participant 24)

Even the wards/units with a designated HDU experienced difficulties if the unit was full. A child who would normally fit the criteria for admission to the HDU

could instead be nursed on the ward, one participant stating that 'they move the goalposts' when it suited managers or doctors.

Other disadvantages included: the risk of de-skilling nurses on the wards; resentment and potential isolation of the HDU and its staff; labelling of the child leading to reluctance to accept them back on the ward; and higher expectations of HDU staff in terms of knowledge and skills, even when nurses rotated between the wards and HDU:

'You do hear comments about HDU=   (Participant 11)
=They're only good enough now to go to HDU and before we looked after them on the wards, and why can't we keep them on the wards now? And why are we having to move them into somewhere else?' (Participant 12)

'Labelled as high dependency children that can't be looked after anywhere except in high dependency=   (Participant 33)
=The staff nurses feel deskilled because obviously they must have looked after them before... when they used to go to the general wards=
                                                                        (Participant 32)
=I don't know whether it's deskilling or the fact that people have this idea that – high dependency nurses are somebody special, but they're not, they're the same... They'll say things like – you're a high dependency nurse you should know that. They're people who were working on the wards last week – people are rotating.'   (Participant 33)

Caring for parents/families of children requiring HD care, particularly in an HDU, was seen as important but participants acknowledged that parental expectations were high and the relationship could be physically and emotionally draining for the nurse. They described how parents can be constantly watching monitors and of the pressures in HDU because 'you're on your own':

'They hear a bleep and an alarm go off=   (Participant 12)
=And they panic=   (Participant 11)
=And it might be that the saturation probe's come off or something like that and they're jumping, they're going "Oh my God, the line's gone flat"=
                                                                        (12)
=And you say don't worry about that, it's just there to help us, look at the child=   (Participant 14)
=But they do get hooked up on all of it=   (Participant 15)

=Yeah, the parents, they sit there and watch those monitors and I have known a parent sit there all night. I've been on a night shift and they've sat there as much as I have and watched that monitor all night – their eyes haven't deviated... In a high dependency unit it is – different because you've got so much more monitoring equipment= (12)
=You've got extra pressure on you as well, because on a ward you might be looking after five patients on a shift so you've got five sets of parents, you don't spend that much time with them. Whereas... if you're the only one on a shift on HDU – you've got so much pressure from the parents because it's just you – they're going to ask you everything' (11)

3.7.3 Problems in DGHs

This was identified as a particular issue by all three groups. The vast majority of hospitals in the SW Region are DGHs, although some are classified as Major Acute General Hospitals or Specialist Centres, able to provide level 2 (intensive care) to children in the adult ICU or level 2/3 for specialist (tertiary level) services (DH, 1997a). The geography of the region, i.e. the long distances between hospitals and particularly from the Lead Centres caused some difficulties. The size of children's services in each also varied considerably, some hospitals having only one children's ward and others having two or three wards and an HDU. Whatever the size of their ward/unit, however, participants highlighted the potential isolation felt in a DGH due to being surrounded by adult wards and people they perceived to lack understanding about the care of sick children. Comments such as 'the children's ward's forgotten' (Participant 15), 'you're a unit by yourself, nothing to call on' (Participant 32) or 'nobody really wants to know us' (Participant 31) were expressed.

In addition, it was felt that even staff in a 'big centre' (such as a children's hospital) did not understand what it was like for them, leading to difficulties with transfers or for children with specialised care needs:

'It's not appreciated... you don't realise when you work in a big centre. I mean I've worked in a big centre... now I work in a DGH I can see the other side of things – how stressful it is too.' (Participant 33)

Associated with the problems of DGHs was the issue of providing HD care on general children's wards. This is acknowledged to be happening by the DH (1997a) but their definition suggests that there are 'higher staffing levels than usual' (p7). It was evident that this was not the case for participants, several of whom highlighted difficulties in locating a suitable area and equipment as well as a nurse for children requiring HD care on the ward. Examples of situations were given where other children had had to be moved around to accommodate the sick child, or the nurse felt that, whilst this child received the care they required, it was at the expense of the rest of the patients on the ward. These problems were exacerbated by the fact that, when working in a DGH serving a wide geographical area, there was often 'nowhere else for them to go' and that a child could sometimes arrive on the ward without warning:

'District hospitals are really experts because you do not know who's going to come through the door and you have to be ready for the ill child... Sometimes parents, they panic, they bring the child straight onto the ward without going through the GP and you have to be there ready for them.' (Participant 31)

3.7.4 Skills needed for high dependency care

A range of skills was identified as necessary for HD care in all groups. For example, skills in basic nursing care such as nutrition, hygiene, fluid management and caring for parents/families, which participants believed could be forgotten in favour of more technical aspects of care (e.g. cannulation, venepuncture and use of specialised equipment for ventilation or monitoring). Good assessment or observational skills, such as the recognition of the sick child and basic life support (BLS) were also seen as essential. In addition,

leadership and management, decision-making, communication and assertiveness, especially in dealings with medical staff, were highlighted. The value of experience was also seen as significant, but several participants expressed regret that, despite the development of a range of skills, these were seldom rewarded (e.g. through grading and salary) or valued academically.

Recognising the sick child was seen as a crucial skill for any nurse caring for sick children, yet several participants expressed concerns that some nurses, not necessarily newly-qualified, appeared unable to identify deterioration or critical illness in children and act accordingly:

> 'I think they [ward staff] forget what they're looking for... If you're working on a ward and you see – an infant that's head bobbing they should be wondering why and they shouldn't be feeding it, and it's things like, just those basics – that's what you're really looking for, it's not "Oh gosh it's in this much percentage of oxygen"' (Participant 14)

The existence of HDUs, the potential risk of deskilling and the prevalence of monitoring equipment were seen as influencing factors for some participants:

> 'We've got monitors everywhere and that's what frightens everybody [laughs]. It's so high tech, everything's monitored and you forget to look at the child and see the signs the child is changing and you're just focusing on that monitor that is blipping and what's changing there, whereas before you were actually looking at the child and you could notice the changes that were going on, with minimal monitoring' (Participant 24)

Participants spoke about 'instinct' or 'gut feelings' and the value of experience in recognising trends and deterioration, following up when they realised that 'he doesn't look that good'. One highlighted the importance of 'marrying the two', i.e. the need for observational skills **and** knowledge of equipment.

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The value of experience was not only seen as important in recognising the sick child, but also in communicating nurses' concerns to doctors and being assertive:

> 'One has to be able to stand up and say to the doctors, "You have had so many attempts at cannulation now, I think we need to move on to intra-osseous"... so one must have the confidence... unless you have got the skills and experience it's very difficult for junior staff to be able to tell doctors.' (Participant 31)

In order to address the identified skills, participants highlighted the need for education and skills training, especially if nurses were expected to deliver HD care. Some highlighted the lack of preparation for HD care, despite assurances that this would be provided. Instead, they stated that 'you pick it up as you go along', and that, even with experience, nurses needed support and training to keep their knowledge and skills up to date.

Again, a range of practical skills to be developed or taught were perceived as important, e.g. awareness of the implications of differences in age range, fluid management, bereavement care and training on the use of specific equipment. In particular, the significance of BLS as well as more advanced paediatric life support training and skills were emphasised. Participants believed that all staff needed this so that they would be ready for any sick child on the ward. They stressed that such training increased nurses' confidence, as potentially any of them may be the first to receive or recognise the sick child.

Alongside this, however, they stated that some nurses were reluctant to get further training, possibly because they believed (erroneously) that if they did not know, they would not be put on the front line, or would not be 'capable' of resuscitation. This was partially linked to fear of HD care, but participants

highlighted the potential consequences of not undertaking a course or specific training, arguing that this would not prevent them from being involved with a sick child, especially in a DGH ward:

> '[resus training] is a priority... at the end of the day, if you can keep a child alive with the basic... I'm not saying about advanced – I'm just talking about... bagging and CPR, basic life support, you're going to give that child a chance of life. If you're not skilled in basic life support, that is a real gap... it's quite frightening.' (Participant 12)

One participant emphasised the importance of these skills for all ward staff, not just Registered Nurses:

> 'Even our health care support workers – are trained in basic life support on a regular basis, because they are likely to be the person that is feeding a baby, and – it stops breathing right down the far end of the ward. (Participant 13)

Other forms of staff development and education, both formal and informal, were also suggested. One participant argued that there was a need for a national, recognised course in children's high dependency care, to include recognising the sick child, practical skills and the knowledge base to underpin these. Paediatric intensive care and HD modules or courses were acknowledged to be helpful, but some participants stated that they did not necessarily want the 'academic side'. Various forms of 'informal training', i.e. 'on the job', were also suggested, including rotation schemes, experience in other areas (e.g. ICU) with supernumerary status and junior staff 'shadowing' experienced nurses.

3.7.5 Teamworking

Most of the participants commented favourably about their working relationships with experienced paediatricians who, they felt, would listen to what they said and act accordingly. This was not always the case, however, with more junior doctors, who lacked experience with children. Several participants expressed

frustration, stating that, despite their often extensive children's nursing experience, junior doctors would not always trust their judgement:

> 'It depends, I think, who the paediatricians are [seniority-wise] and who else is around and how much they are willing to listen. Some are very good and listen to your concerns; others, you tell them but, nothing seems to happen and then suddenly the child has gone off and it's panic.' (Participant 22)

Others explained how they would try to work with the junior doctors who, they recognised, were not always as well supported as they should have been:

> 'Sometimes I think you forget that the SHOs aren't as experienced as you think they are, and sometimes you've got to act, and say, "Well, what about you doing this?", try and guide them through – which way to go if they're not sure.' (Participant 22)

Problems were identified when working with 'adult' surgeons or anaesthetists in DGHs, some of whom had limited experience with children, yet seemed reluctant to ask their paediatric colleagues for advice. In some hospitals there were paediatric surgeons, or children admitted for surgery would also have their care overseen by a paediatrician, but this was not always the case. Participants shared examples of incidents where a child's care was not managed as well as it could have been because medical staff lacked knowledge of children or would not listen to the concerns of experienced nursing staff:

> 'At our unit... we don't do major surgery but we have had some children become quite ill, or have been really wrongly assessed and... they're still under the surgeons and they haven't really got much idea of a very sick child... In a paediatric unit... this child should just be referred straight to the paediatricians – and the surgeons sort of play a secondary part, because my feeling is that, once they become sick, the surgeons have no experience with sick children and it can be quite a dangerous situation.' (Participant 23)

In addition, conflicting opinions, reluctance of medical staff in different specialities to work together or unwillingness to seek advice from colleagues – in contrast to nurses – was highlighted. This was not only confined to surgeons,

however. Participants explained how this could then have an impact on the nurses caring for a sick child:

'And you get conflicting – the surgeon – in overall charge of the child will come in in the morning and say, "Yes they're all right", then the anaesthetist will come in and say, "No, I want them to stay", then the paediatrician will come and say something else, and you're there and you're thinking, "Right, where do we go from here?"' (Participant 24)

'They don't always ask for [help] – some of the paediatricians are reluctant to ask ITU for help, and when it comes to things like non-invasive ventilation and – some of the fluid management – I think ITU are very useful... But egos, I think, get in the way of people asking for help, when people can quite easily work together – because we [nurses] work together. If I didn't know how to do something I'd call somebody from ITU or somebody from a surgical ward, you do, don't you? (looking at other participants) You ask each other, we'll ask each other for help.' (Participant 33)

Communication was identified as an important skill in HD care, but this was also discussed in terms of working with other departments, such as the ward/HDU and ITU or ED, between nurses and doctors and liaison with the Lead Centre for advice regarding a sick child.

3.7.6 Staffing for high dependency care

Staffing difficulties were identified by all three groups and participants reported several implications for nurses arising from this, such as low morale, high sickness levels and stress. Problems were experienced in ensuring adequate numbers on each shift on the ward and these were exacerbated if a child requiring HD care was admitted. Several described how they would try to get extra staff to come in at short notice to cover, but this was not always possible, especially at night. Difficulties were also experienced if the HDU was full, as this could lead to 'juggling around' or 'shuffling of staff':

'We haven't always got someone readily available for HDU. If a child comes in in the middle of a shift, and it's a very busy shift, and you've got to draw that person out of the ward numbers.' (Participant 21)

Partly as a result of the staffing levels, concerns were also expressed about how nurses were allocated to care for a child requiring HD care. In some wards/units, this responsibility fell to more experienced nurses (E grade or above) or there were 'dedicated staff' including a G grade sister or a designated F grade, but in some circumstances this person was also the nurse in charge of the shift. Alternatively, some participants complained that E grade nurses were expected to provide HD care with little or no preparation, whereas D grade nurses were being sent on courses but not working in HDU.

Linked to staffing were a number of managerial issues, which had direct and indirect effects on the nurses. These included the ability (or otherwise) of managers to obtain sufficient money for facilities to ensure that HD care could be delivered safely and to support nurses at ward level. Concerns were expressed about 'close shaves' and the need for adequate resources:

'They've got to be putting in the money and the training and the resources in those areas... and to be doing it seriously as opposed to just – pulling the nurses from the paediatric ward into the high dependency area. They've got to have their own staff who are trained and rotated.' (Participant 23)

Again, difficulties were experienced in DGHs in particular, especially those with only one children's ward in the hospital. Participants reported that, in some cases, the most senior children's nurse in the hospital was the manager of the ward. As a result, ward staff found it difficult to get business or 'adult' nurse managers to understand and respond to their needs:

'When you're the only unit, I mean we don't even have a separate directorate... When you're trying to get more facilities and things like that,

they don't really understand because there's nobody coming from your viewpoint... you're the only children's... It's really quite difficult sometimes – to get the hierarchy to realise where you're coming from and what you want.' (Participant 32)

The key issues identified from the focus groups will now be discussed in more detail, with reference to literature.

3.8 Discussion of findings, reflections and implications for Main Study

3.8.1 Definitions and perceptions of high dependency care

Participants had described a range of situations or diagnoses, which they considered to be 'HD care'. Some disagreements or confusion arose, however, mainly due to the vague definition provided by the DH (1997a, 1997b). All the participants were aware that data were being collected for the SW audit and some were even involved in collecting data for their unit, but not all were happy with the criteria. As highlighted in the previous section, several felt that children with extensive care needs, who required a nurse: patient ratio of 1:2 or even 1:1, were 'missed' because they were not critically ill.

New recommendations for HD care were published by the DH in 2001, but were not available until 2002, so would not have influenced these findings. Despite acknowledging that 'there has been a lack of clarity on what constitutes high dependency care in children' (DH, 2002, p2 para 5), no attempt was made to re-define this term, although attempts were made 'to agree what formed high dependency care for children wherever it was to be provided' (p2 para 6). Instead, the report 'provides a core set of high dependency categories' (p2 para 6), which are diagnostic or intervention criteria very similar to the SW audit and 'guidelines for the provision of high dependency care' (p2 para 7). These

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include iteration of the 'nursing standard' of 1 nurse:2 patients and details of equipment and drugs that should be available in all areas providing HD care.

Difficulties in defining a level of care precisely are acknowledged and the addition of the categories and guidelines was extremely helpful. In view of the concerns expressed by the participants, however, this was still a significant issue and it is important to distinguish between the two sets of children, i.e. children requiring 'HD care' and what could be termed 'highly dependent children'.

Children requiring 'HD care' are acutely ill, usually as a result of disease or injury, or may require interventions to restore normal function to a compromised organ or body system. Therefore, they need to be closely observed or monitored for signs of improvement or deterioration so that adjustments can be made to treatment or interventions accordingly. As a result, a nurse providing HD care should normally only be responsible for a maximum of two children at any one time (i.e. a ratio of 1:2) (DH, 1997b, 2002) or, according to the NW guidelines (PHDCSGNW, 2000), only one child in a DGH (i.e. 1:1 care).

By contrast, a 'highly dependent child' may have a range of care needs due to a pre-existing condition or syndrome, but these tend to be long-term health or psychological problems. There may be times when their condition becomes acute or life-threatening, when they may require HD care or close observation, but for most, this will not be the case. Often, however, they have complex needs with complicated care and/or drug regimes, which may necessitate considerable input from nursing and medical staff (and their family) to ensure

that they receive the care and treatment required to meet their needs. As a result, they too may merit 1:2 or 1:1 care but, because their needs are not acute, this staffing ratio may not always be available, especially on a general children's ward. This may help to explain why some participants felt that these children were disadvantaged in comparison to those requiring HD care.

This demonstrates the importance of ensuring that 'new' terminology is understood and used appropriately. The concept of 'HD care' is a relatively new phenomenon, but children have required this level of care, resulting from acute or critical illness, for years, long before this term was coined. The two terms have been used interchangeably, as demonstrated in correspondence regarding children's nursing education (McDonagh, 1996) and the development of a new module in children's HD care, entitled 'Care of the Highly Dependent Child' (Doman & Browning, 2001). Previous usage of the terms may therefore help to explain participants' concern and confusion.

It is also possible that the confusion arose from the staffing ratios suggested, with the participants equating the need for 1:2 or 1:1 care to 'HD care', rather than considering the severity of illness. This is not to suggest that 'highly dependent children' should not receive this level of input, but that the staffing ratio has clouded the issue. The vague definition of HD care has added to this confusion.

The issue of 'fear' of HD care was another significant point. Although only one participant admitted to this, it was evident that she was not alone in feeling this way because similar words, e.g. 'scary', 'afraid' were used in all three focus

groups. Nurses were therefore aware that colleagues may experience this, but I could find nothing published about it. The most relevant evidence appeared to relate to confidence (or lack of) (e.g. Endacott, 1999), competence, and the importance of acknowledging one's limitations in aspects of care, as required by the Code of Professional Conduct (Nursing & Midwifery Council, 2008).

It is understandable for a nurse to be fearful of caring for a very sick child, whose condition could deteriorate at any time and who may need emergency interventions, especially if they have no choice or do not feel prepared to provide this care. They may also be reluctant to admit to lack of confidence or fear, as all children's nurses are expected to be able to recognise a sick child and act accordingly. It was, therefore, potentially risky for the participant to admit to her feelings of 'fear' in association with HD care, as this could have been construed as lack of competence. Kitzinger & Farquar (1999) discuss 'sensitive moments' in focus groups and this could have qualified as one. As moderator, this could have been a difficult situation for me to deal with, but, as the extract from the transcript illustrated, the group expressed understanding and support, even though they did not share their colleague's perceptions. It is, perhaps, inevitable that HD care will not be popular with all staff, yet, if they work on a general children's ward, especially where there is no HDU, they may be expected to do so.

Although research question 2 had been partially addressed here, the emergence of the differing definitions and perceptions of HD care required further exploration and so these issues were carried forward to the Main Study.

3.8.2 Having an HDU

The original topic guide did not mention HDUs, because only a few hospitals had these at the time. Both advantages and disadvantages of having an HDU were discussed in FG1, however, and so a question relating to the impact of an HDU was added for FG2 and 3. Participants in both of these groups had varying views on this issue, whether they had one or not. I found it particularly interesting that, although places without an HDU wanted one and hospitals with one did not want to lose it, more disadvantages were highlighted than advantages. 'Having an HDU' had an impact in three ways: effects on nursing staff, effects on the rest of the ward including the other children and effects on parents or families.

For nurses, the problems mainly related to the staffing ratios discussed above or whether or not there were designated staff for the unit. The majority of HDUs had only two beds, so, according to the DH (1997b) standard, only one nurse was required to care for them. Some aspects of care and most drug administration demand more than one nurse, however, so this could create difficulties for both the individual in HDU and other nurses on the ward. Although the NW guidelines (PHDCSGNW, 2000) suggested that an HDU in a DGH should be staffed on a basis of 1:1, especially if a child is nursed in a cubicle, this was not recommended nationally or implemented locally.

The issue of having a designated team of staff to care for children needing HD care was more complicated. Although it was seen as a disadvantage because, if there were children who required this level of care nurses had to be taken from the ward, this could also be seen as an advantage in terms of retaining

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skills. Some participants expressed concerns that, as a result of the HDU and dedicated staff, ward nurses were becoming 'de-skilled' and forgetting basic aspects of observation and care, which were also problems identified by the Audit Commission (1999). With the potential for 'any' nurse to be allocated to care for these children, there would be less likelihood of de-skilling. However, as indicated above, this could also result in fear or lack of confidence/competence in those expected to provide HD care, often at short notice. Attempts had been made in some hospitals to address these problems by introducing rotation schemes, but even these were not always successful.

Participants also highlighted the impact of an HDU on parents or families and how they needed support and reassurance when their child was in HDU. As HD care is still a relatively new concept, there is a paucity of research considering the needs of parents of a child requiring such care. Numerous studies have been conducted in the past couple of decades to identify stressors and recommend strategies to help parents cope with the admission of their child to a PICU (e.g. Carnevale, 1990; LaMontagne & Pawlak, 1990; Heuer, 1993; LaMontagne et al, 1995; Hill, 1996). These may also be applicable to the parents of children admitted to HDU.

Although participants identified the impact of an HDU on parents and the 'knock-on' effects of HD care on other children in the ward, they did not mention the potential impact on the parents, families or visitors of the children in the ward. The philosophy of family-centred care is fundamental in children's nursing and has led to many changes, such as open visiting, accommodation for parents, the encouragement of parental participation in their child's care and

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'partnership' in care (e.g. Darbyshire, 1994; Coyne, 1995). Whilst these changes are to be welcomed, they can also create problems for parents who may be expected to carry out aspects of their child's care without negotiation, especially if the ward is busy or short of staff. This may occur as a result of the above problems, putting parents in an awkward position, as they may see that the nurses are busy and not want to 'bother' them, yet have needs of their own (Darbyshire, 1994; Callery, 1997).

It became apparent, therefore, that both the existence and the absence of an HDU could have an impact on the children's ward(s), patients, families and staff and would require further exploration in the Main Study.

3.8.3 Problems in DGHs

Although some of the problems in DGHs related to 'Having an HDU' or not, some distinct issues also arose. By its very nature, a children's ward in a DGH differs from a ward in a larger or more specialised hospital, because of the size and the reasons for which children will be admitted. The difficulties that participants experienced in providing HD care for children in a DGH, especially with a wide catchment area, were keenly felt and also linked to some of the other categories such as staffing, but no research was found on this topic.

Although the DH (2002) published more recommendations for HD care, which acknowledged that not all wards had designated beds or units, the environment and culture of a DGH children's ward, especially when it is the only one in a hospital, is very different from that in a more specialised hospital. The guidelines in the 2002 report appear reasonable, but do not take account of the

difficulties experienced by nurses and highlighted in the focus groups. For example, they state 'The numbers of highly dependent children a nursing team is able to manage will depend on both the availability of appropriately trained staff and dependency of other patients within the care area' (DH, 2002, p10, para 28). Focus group participants were expected to provide this care whatever the circumstances, simply because 'there was nowhere else for them [sick children] to go'.

I realised, therefore, that the diversity of contexts or settings within which HD care may be provided needed to be explored in more depth, preferably through observation and fieldwork. This would allow for more description and comparison of different hospital and ward settings and consideration of the environment and culture of these units. As a result, when selecting the ward settings for fieldwork in the Main Study, these considerations were taken into account.

3.8.4 Skills needed for high dependency care

Although a range of skills were identified as significant in order to deliver good quality HD care, the importance of 'recognising the sick child' was an issue emphasised in all three focus groups. Alongside this, however, participants also raised concerns about the apparent inability of some nurses to do this.

Parallels can be drawn here with the survey carried out by Smith & Poplett (2002) into junior doctors' knowledge of basic aspects of acute care in hospitalised adults. They found considerable deficiencies in doctors' knowledge, which, the authors assert, have the potential to influence treatment

and outcomes of acutely ill patients, possibly leading to cardiac arrest, admission to ICU or even death. As the questionnaire was administered in an 'examination-style setting' as part of a hospital orientation programme, this may have influenced their results. Additionally, the questions did not necessarily relate directly to practice. Nevertheless, the results of this survey and the responses of participants in my focus groups were worrying for a number of reasons, not least the potential consequences of failure to recognise deterioration in a child and act accordingly. I commented on this in my reflective journal:

> 'Another key issue that came out of FG3 related to **recognising** a sick child. This links to definitions of HD care loosely but is perhaps **more** important... The main point is to identify 'critically ill' children – whether they require level 1, 2 or 3 care is a secondary issue. Once a sick child is identified... what really matters is **what happens** in terms of interventions, i.e. is the 'correct' treatment given so the child improves, whether this be fluid bolus, oxygen therapy or IV aminophylline **and** the continued monitoring... This issue of 'recognising a sick child' was very clearly articulated in FG2 as well. In some ways this should be second nature for children's nurses – observation/assessment are **vital** but it seems they are not as prepared as they should be.'

The literature was searched for studies of observation and assessment and also the associated issue of clinical decision-making related to children. Some of the examples or vignettes presented by Benner (1984) and Benner et al (1999) were from paediatric settings, but the majority of studies (e.g. Greenwood & King, 1995; Buckingham & Adams, 2000a, 2000b; King & Macleod Clark, 2002) related to adults. No research was found that explored clinical decision-making with child patients, children's nurses or in children's wards.

Assertiveness, especially in dealings with medical staff, was also linked to experience by participants. Again, this may be associated with confidence, which, Endacott (1999) claims, is related to experience and the views of the

participants quoted in the previous section appear to support this. In turn, confidence can also influence nurses' decision-making abilities (Endacott, 1999), thus increasing the potential value of experience.

Participants were asked how they thought the skills they had identified should be taught or developed. Various suggestions were offered, ranging from formal courses to 'on the job' experience. Several thought that undertaking courses in paediatric intensive care or HD were useful, as evidenced by the fact that some participants had completed or were applying for places on these modules in their local areas. Others agreed that courses or study days could be helpful, but also expressed doubts, for three main reasons: a) some nurses did not want to have to undertake the academic study associated with university-run modules, b) difficulties experienced in releasing nurses from practice to attend courses and c) some thought that skills should be learned and developed through experience in practice. Examples of schemes that had been proposed or operationalised were offered, but participants acknowledged that these had also met with variable degrees of success.

BLS training was seen as essential for all nurses and indeed is a mandatory requirement, with annual updates being provided within hospitals. More advanced PLS training was also emphasised, yet, despite managers putting staff forward for these courses, participants highlighted reluctance on the part of some nurses to undertake this training. The DH report (2002) also recommended that [within a high dependency area] 'a registered children's nurse, who has completed an advanced life support course e.g. PLS/APLS/ PALS, should be present at all times throughout every 24 hour period' (p10,

para 26). This recommendation would therefore be applicable to any DGH children's ward.

Resentment was also expressed that, because of the grade of their post or time in the job, it was assumed that some participants already had the skills required and therefore did not need any further preparation for HD care. This was clearly not the case, however, in view of the 'fear' expressed by one experienced nurse, the need for support to keep their skills up to date and the concerns raised about some nurses being unable to recognise a sick child.

As a result, I identified that strategies for developing skills and preparing nurses to provide HD care required further exploration in the Main Study.

3.8.5 Teamworking

This category was named 'teamworking' in order to reflect nurses' experiences of working with other professionals, particularly medical staff. Participants described examples of good teamwork, such as with paediatricians and problems, particularly with inexperienced doctors and surgeons.

Problems when working with inexperienced medical staff related in part to junior doctors' limited knowledge about sick children and their perceived lack of support in practice and also their reluctance to trust nurses' judgement. Despite its limitations, Smith & Poplett's (2002) study has further relevance here, as the authors found that nurses often recognised signs of deterioration in patients and called doctors to see them, but the latter did not always identify these signs. As the participants in my focus groups described, this could lead to emergency

situations, whereas if doctors had listened to and worked with the nurses, such problems might have been averted. In a small quantitative study, 'working with inexperienced medical staff' was identified as one of the highest scoring (3.63 on a scale of 1 to 5) sources of stress for nurses caring for children (Doman, 1997). Although the results of this study should be viewed with caution due to the small numbers and use of convenience samples, as a potential stressor for nurses, this issue should be considered further.

The problems associated with working with 'adult' surgeons were similar, particularly as regards seeking advice from medical colleagues or nurses and recognising signs of deterioration in a child. In 2000, the Paediatric Forum of the Royal College of Surgeons of England (RCSEPF, 2000) published a report on children's surgery, detailing a number of recommendations aimed at improving the provision of surgical care for children. The report includes recommendations relating to education, training and assessment of surgeons who operate on children. They also stated:

> 'The provision of an integrated, high-quality surgical service is increasingly dependent upon collaboration among an extended team of healthcare professionals. In addition to surgeons, those contributing most directly to surgical services for children are anaesthetists, children's nurses and paediatricians.'   (RSCEPF, 2000, p7)

The report provided 'suggested minimum requirements for DGHs providing in-patient surgery for children' (p21), which included on-site paediatric medical cover, thus acknowledging a role for paediatricians in surgical services for children. In addition, the report recommended that, in DGHs, 'all surgeons appointed to posts with responsibility for treating children should, in future, hold the Advanced Paediatric Life Support certificate' (p27). In some hospitals this was already happening, as it was for nurses, but these recommendations may

give added weight to existing calls for surgeons to have more training and experience in the care of sick children and may help to overcome the difficulties experienced by the focus group participants.

Communication was one of the 'skills for HD care', but also related to teamworking, particularly with other departments. This linked to discussions between nurses and doctors as well, particularly in the situations already outlined in this section. Communication and interactions between nurses, doctors and various departments were therefore additional issues to explore in more depth in the Main Study.

3.8.6 Staffing for high dependency care

Participants identified a number of staffing difficulties for HD care, asserting that these could lead to low morale, sickness and stress. The problems they described in relation to staffing levels and skillmix are not new, nor are they confined to HD care. Both 'inadequate staffing levels' and 'lack of appropriately qualified/ experienced staff' have been identified as high scoring sources of stress (4.06 and 3.55 respectively) for nurses working on children's wards (Doman, 1997). This could be exacerbated for nurses providing HD care, as stress associated with working in intensive care environments has been identified in a number of studies (e.g. Keane et al, 1985; Crickmore, 1987; Rosenthal et al, 1989; Jolley, 1995).

Allocation of staff to HD care was another issue about which participants had concerns. Although some wards/units were able to identify 'dedicated', experienced nurses, for some, the fact that they were the only E grade nurse on

duty meant that they were expected to take on this role, whether or not they were willing or able to do so. In other cases, the most appropriate person to provide HD care in terms of expertise (e.g. the only nurse on duty who had undertaken PLS/APLS training) was the nurse in charge of the shift. In her study exploring the needs of critically ill children, Endacott (1999) described how the roles of 'allocated nurse' and 'shift leader' differ in ICU. These differences may be even greater in a DGH children's ward, where the nurse in charge of the shift may have a range of managerial and clinical roles to fulfil. Attempting to combine these with providing HD care could lead to role conflict, with potentially damaging effects on the individual nurse, the sick child's quality of care and/or the management of the ward.

Managerial support, particularly above ward level, was seen as crucial in guaranteeing support for nurses on the wards in terms of staffing levels and resources to provide care safely. This was variable, however, particularly in smaller DGHs, some of which had only one children's ward in the hospital.

Despite recommendations following the Allitt Inquiry (Clothier et al, 1994) for a children's nurse manager **above** ward level in all DGHs, it was evident that there were still areas where the most senior children's nurse in the hospital was the ward manager. This was identified as one of the factors that may have contributed to the problems on the children's ward at Grantham, which in turn led to opportunities for Beverley Allitt to carry out her harmful activities without being detected for some time (Clothier et al, 1994). In the absence of support at a senior level, it is not surprising that some participants experienced difficulties in convincing managers of the needs of the ward and their child

patients, who are very much in the minority in a DGH. Staffing and managerial support were also, therefore, issues that I deemed important to explore further in the Main Study.

3.9 Conclusion and preparation for the Main Study

A plethora of codes and categories were identified from the focus groups and in the previous section these were discussed. It became evident, however, that in order to clarify and gain greater understanding of HD care for children, I needed to follow up a number of issues and explore them in more depth. These were identified in the previous section and are summarised below:

- Differing definitions and perceptions of HD care

- The impact of having an HDU on nursing staff, the ward, patients and families

- Differences between hospital settings, including different DGHs and a children's or specialised hospital, in terms of environment and culture

- Knowledge and skills required for HD care, especially how nurses recognise the sick child

- The value of nurses' experience, e.g. in recognising the sick child, assertiveness, confidence, intuition and decision-making

- The preparation for HD care that nurses receive, e.g. skills training, courses undertaken

- Working with inexperienced doctors and 'adult' surgeons

- Communication and interactions between nurses, medical staff and other departments

- Staffing and managerial support of children's wards and units

The focus groups had achieved the purpose of exploring the experiences of nurses directly involved in HD care and eliciting a wide range of views. I did not regard this method as appropriate for more in-depth exploration of HD care provision, however. Instead, I considered that further investigation should be conducted in children's wards to observe what actually happened, rather than relying only on what nurses told me. Sim (1998) warns that focus groups are 'situated', i.e. they are context-specific, and so they cannot predict behaviours or opinions outside the group setting. It was therefore necessary to conduct the next stage of the study in children's wards where I could observe the provision of HD care 'in the natural setting'.

I decided that the best approach for the Main Study would be ethnographic, conducting fieldwork in three children's wards in the SW region. This would enable me to compare different children's ward settings and explore the provision of HD care and the issues identified in the Preparatory Work further, using participant observation, interviews with nurses and analysis of documents such as SW audit data. As a result, I selected three very different settings for study: a DGH ward with an HDU, a DGH ward without an HDU (also the only acute children's ward in the hospital) and a surgical ward in a Lead Centre. Nurses from these wards had been invited to participate in the focus groups and some had volunteered to do so. There was, therefore, the potential for participants to be involved in both parts of the study.

The framework for further exploration of HD care carried out in the Main Study was based on the findings from the Preparatory Work. To achieve this, the data collection methods in the Main Study (i.e. participant observation, interviews

and documentary analysis) were selected and planned to address research questions 2 – 5 and the issues identified in the Preparatory Work as requiring further study. The links between these stages are presented in Table 3.2.

As can be seen in the chart, all of these supplementary issues were to be addressed through observation and interviews. In addition, two were to be explored further by consulting documents such as SW audit forms and nursing care plans.

Ethnography, data collection methods and my experiences of fieldwork are described and discussed in the next two chapters.

Table 3.2: Research questions, issues identified from Preparatory Work and corresponding methods of data collection in Main Study

Research questions	Issues from Preparatory Work	Data collection methods Main Study		
		Participant observation	Individual interviews	Document analysis
2	Definitions and perceptions of HD care	✓	✓✓	✓
4, 5	The impact of having an HDU	✓✓	✓	
5	Differences between hospital settings	✓✓	✓	
2, 3	Knowledge and skills required for HD care	✓	✓✓	
3, 4	The value of nurses' experience	✓✓	✓✓	
4	Preparation received by nurses for HD care		✓✓	
3, 5	Working with inexperienced doctors and 'adult' surgeons	✓✓	✓	
3, 5	Communication and interactions between nurses and others	✓✓	✓	✓
4, 5	Staffing and managerial support of children's wards and units	✓✓	✓	

Legend:

✓✓ = main data collection method

✓ = supplementary data collection method

CHAPTER 4:   MAIN STUDY: ETHNOGRAPHY

4.0 Introduction

In the Preparatory Work, the exploration of nurses' experiences of HD care identified a range of issues that linked to research questions 2 - 5. In particular, the need to gain a better understanding of HD care in children's wards and nurses' behaviours within that context was recognised. I decided, therefore, that it would be more appropriate to explore these in the 'natural setting' by undertaking fieldwork, as this would enable me to find out what nurses actually did, rather than what they said they did. The issues identified in the Preparatory Work as requiring further exploration provided a framework for the selection of data collection methods in the Main Study (see Table 3.2).

In this chapter, I discuss the methodology, methods and preparation for undertaking the Main Study and my experiences and findings are presented and discussed in subsequent chapters.

4.1 Rationale for choice of approach and methods

Although focus groups were the method chosen for the Preparatory Work, the principles of constant comparative analysis (Strauss & Corbin, 1998) had been contemplated for the process of data collection, analysis and interpretation. Constant comparative analysis is a fundamental aspect of grounded theory, and so this approach was considered for the Main Study. The overall aim of grounded theory, as the term suggests, is to generate a theory that is 'grounded' in the data. Although I sought greater understanding of HD care

provision, the generation of a theory was not necessarily my aim. Therefore, I rejected grounded theory as the overall approach for the Main Study.

Phenomenology was another potential option, but, due to the dynamic and evolving nature of HD care, I was concerned that it would not be possible to capture the essence of this phenomenon and represent participants' experiences adequately using this approach. In addition, by undertaking fieldwork, my presence as a researcher would be overt, and so this role needed to be acknowledged and accounted for within the study. Holloway & Wheeler (1996) and Creswell (1998) discuss the 'emic' (participant or insider) and 'etic' (researcher or outsider) perspectives in qualitative research, highlighting the differences between them. Porter & Ryan (1996) argued that phenomenology focuses on the 'emic' or participant perspective, excluding the 'etic' perspective of the researcher. Whilst this may be true of Husserlian phenomenology, the Heideggerian approach, which is based on hermeneutics, is more pragmatic, involving shared understandings of a phenomenon. However, the focus of phenomenology is still the lived experiences of participants, with the researcher's role and views being subordinate. I considered that this would be difficult to achieve in practice, as I intended to be involved in aspects of care in each of the settings.

Furthermore, Porter & Ryan (1996) contended that, by focusing on individuals' experiences as 'reality', phenomenology does not consider the wider social influences of a phenomenon, or the effects of social and institutional structures on individuals' behaviours and actions. In the Preparatory Work I had identified that HD care was influenced by a range of factors, several of which are outside

the control of individual nurses. I decided, therefore, that phenomenology would not be appropriate for the study.

Instead, an ethnographic approach was chosen as the basis for spending time in the 'natural setting' of children's wards, observing and participating in care as appropriate, to acquire deeper understanding of the provision of HD care in a children's ward. Undertaking fieldwork would enable me to explore HD care in context, as well as observing interactions between staff, care provision in the ward (and HDU if present), staffing levels, geography of the ward, etc. It would also offer opportunities to compare the settings, which in turn would help to identify the key features and gain a better understanding of the culture of each ward/unit. The issues that had been identified in the Preparatory Work as requiring further exploration could then also be addressed.

In addition, as a participant observer having some involvement in care (albeit supervised), my presence as a researcher would be overt, and so this role needed to be acknowledged and accounted for. In ethnography, reflexivity requires the researcher to be aware of their own role, responses and thoughts within the research setting, thus allowing for the identification of potential bias or influence on the data and interpretations (Hammersley & Atkinson, 1995). Therefore, I decided that ethnography was the most appropriate approach for the Main Study.

4.2 Ethnography

Ethnography is a very early form of qualitative research, originally used by anthropologists. In the early part of the 20th century, several anthropologists

(e.g. Malinowski, Mead) explored 'primitive' cultures by living with them and writing about their way of life. More recently, sociologists have adopted ethnography to research cultures or subcultures in western society, providing new perspectives on apparently 'familiar' social groups (e.g. Whyte, 1993). According to Hammersley & Atkinson (1995) there are two key features of ethnography: understanding the perspective of the people being studied, and observing their activities in their 'natural setting'. They state that ethnography involves 'participating ...in people's daily lives for an extended period of time, watching what happens, listening to what is said, asking questions – in fact, collecting whatever data are available to throw light on the issues that are the focus of the research' (p1). They discuss the development of ethnography as a form of social research, with particular emphasis on reflexivity and the underlying philosophy of 'naturalism', as opposed to the 'positivist' approach using quantitative methods. Their approach is flexible, viewing ethnography as a method or set of methods, but the primary goal is the description of cultures.

Hammersley & Atkinson (1995) do not give a definition of culture, and they are not alone. This may help to explain Savage's (2000) claim that the concept lacks rigour and has therefore been 'manipulated' to suggest congruity of meaning whilst being used in different ways by managers and workforce in the NHS. Creswell (1998) asserts that 'culture is an amorphous term...which is inferred from the words and actions of members of the group and is assigned...by the researcher' (p59). He claims that this includes searching for 'patterns' in a group's language, behaviours and artifacts [sic], and the potential for 'tension' or mismatch between these, citing Spradley (1980). Holloway & Wheeler (1996) provide a commonly accepted definition of culture, stating that:

'Individuals in a culture or subculture hold common values and ideas acquired through learning from other members of the group' (p83). For the purposes of this study, Boyle's (1994) succinct view that 'ethnography focuses on a group of people who have something in common' (p161) was particularly apt.

Brewer (2000) acknowledges the anthropological roots of ethnography, but also describes the emergence of 'participant observation or field research' in sociology. He differentiates between 'big' ethnography, which is qualitative research as a whole, and 'little' ethnography, which is fieldwork, i.e. a way of doing qualitative research. Ethnography is therefore seen as both a method and a methodology.

Four key features of ethnography are highlighted by Brewer (2000) which, he claims, distinguish this from what he terms the 'natural science' approach: the study of people in their natural setting, 'unstructured and flexible' data collection methods, active involvement of the researcher in the field, and the meanings ascribed to the behaviours of those being studied. He defines ethnography as:

> 'The study of people in naturally occurring settings or 'fields' by means of methods which capture their social meanings and ordinary activities, involving the researcher participating directly in the setting, if not also the activities, in order to collect data in a systematic manner but without meaning being imposed on them externally.' (Brewer, 2000, p10).

Ethnography has been widely used as a form of social research. Initially, researchers tended to be 'outsiders', studying unfamiliar or 'deviant' subgroups, such as street gangs, Polish immigrants or slum dwellers (Brewer, 2000). Others have used this approach to study cultures in more familiar settings such as hospitals (e.g. Atkinson, 1981, 1995) or schools (e.g. Burgess, 1985; Hammersley, 1990). In some cases, ethnography has been adopted by

'insiders', i.e. members of the professional group as researchers of their own culture (e.g. Ersser, 1997).

Ethnography has also been used in nursing to study particular groups, such as community nurses or nursing students (Field, 1983; MacKenzie, 1992) or wards/units (e.g. Ersser, 1997; Coombs, 2003). This is sometimes termed 'ethnonursing' (Leininger, 1985), and Holloway & Wheeler (1996) claim that it has different goals from the more traditional forms of ethnography, because nurses aim not only to produce knowledge, but also to influence practice as a result of their research.

In ethnographic research, the focus is on the culture of the group being studied, the aim being to develop an understanding of their rules and behaviours. 'Culture' in nursing may refer to the shared experiences, meanings, values and beliefs of a defined group of nurses or patients, or of a particular ward or unit. However, people do not necessarily share a common culture simply because they are together in a particular area (Laugharne, 1995).

Ethnographic research is normally conducted in the 'natural setting', through observation, interviews and possibly documentary analysis. Hammersley & Atkinson (1995) highlight the importance of observing people's activities in their everyday setting, rather than simply relying on individuals' descriptions of their behaviours and actions. They argue that the researcher should be 'sensitive' to the setting by describing faithfully what happens, thus remaining true to the people and the culture being studied. This usually involves the researcher becoming 'immersed' in the culture through participant observation, describing

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events and behaviours in the form of field notes as well as talking to 'key informants' and others. As a participant observer, Hammersley & Atkinson (1995) assert that the researcher can 'access...the meanings that guide that behaviour' (p8) thereby learning what the people in the selected group or setting do, and why.

The 'natural setting' for this study was children's wards, with or without access to an HDU. It was anticipated that data would be collected through observation, interviews and the examination of documents such as care plans and audit data. Some authors (e.g. Denzin, 1989; Hammersley & Atkinson, 1995; Brewer, 2000) discuss the use of multiple methods and triangulation, as discussed below.

4.2.1 Participant observation

As already outlined, participant observation is an integral part of ethnography and fieldwork, whereby the researcher spends time in the 'natural setting', observing the behaviour of members of the group, talking to them and thereby seeking to gain an understanding of their culture. Emerson et al (2001) define participant observation as: 'Establishing a place in some natural setting on a relatively long-term basis in order to investigate, experience and represent the social life and social processes that occur in that setting' (p352).

Denscombe (1998) lists several advantages to the selection of participant observation as a method. These include:

- the researcher is the main instrument for data collection, which minimises the need for other forms of support, although this can also be a

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disadvantage in terms of the potential for bias and subjectivity and the personal demands and commitment that fieldwork requires. The topic of the study is often selected on the basis of the researcher's own interests, skills or personal attributes (Denscombe, 1998; Brewer, 2000), which may help them cope with these demands. Burgess (1982) warns, however, that these characteristics will affect all aspects of the fieldwork process, and can impose constraints on the role undertaken and the data collected.

- the ability to observe participants in their natural setting without changing or disrupting that setting, which, Morse & Field (1996) claim, is essential. This can also lead to development of a more holistic understanding of individuals' behaviours in context and their relationships with others.

- the opportunity to experience and represent participants' point of view by studying and observing what is important to them, rather than imposing the researcher's views and interests, i.e. the 'emic' perspective.

- the opportunity to gain better insight into the culture by becoming an 'insider', as this can facilitate access to events, behaviours, etc that may remain 'hidden' if other methods such as interviews are used alone. This will, however, depend upon the role of the researcher and the extent to which they participate in the activities of the group. The importance of maintaining a balance between the 'insider' and 'outsider' perspectives is highlighted by Brewer (2000), to ensure the researcher is able to participate sufficiently to gain an understanding of the people and setting, without 'going native'. Denscombe (1998) also warns of the risks of over-identification, leading to researchers developing a 'blind spot' or overlooking 'the obvious'.

All of these points were relevant to my study, and are discussed further in the next chapter.

Burgess (1982) argued that participant observation is both a method and a role, with varying degrees of participation and observation inherent in each role. He discussed Gold's (1958) four 'master roles' of complete participant, participant-as-observer, observer-as-participant and complete observer. The 'complete participant' role usually requires the researcher to become a member of the group being studied and participate fully in their culture and activities. Participants are not informed of the research being undertaken, hence this is conducted covertly. Morse & Field (1996) caution that the 'complete participant' role is not ethical in nursing, as this involves deception. Indeed, such a role would not be possible now as, according to the requirements for research governance (e.g. DH, 2001b), no research ethics committee could approve a study of nursing care which did not include safeguards for participants such as informed consent.

The participant-as-observer is involved fully in the situation being studied, but their role as a researcher is overt and negotiated with the participants. For a nurse, this can potentially lead to role conflict, with competing demands of patient care and research, especially when the ward is busy, as Morse & Field (1996) and Baillie (1995) assert. There may also be the risk of bias arising from 'going native', by becoming too involved in the study setting or developing 'over-rapport' with participants (Hammersley & Atkinson, 1995, p110).

The role of observer-as-participant also entails an overt research role and involvement in the group but, according to Gold (1958), the relationship is brief, possibly only one visit (Jarvie, 1982), so little detailed data can be collected. Morse & Field (1996) consider that, by adopting this role, there is a risk that the researcher will not be able to obtain the 'insider perspective' because participants are more likely to view them as an 'outsider'. However, they continue that this role can 'establish the researcher's credibility in the setting' (p88).

As a complete observer, the researcher takes on an unobtrusive, passive role in the setting. They remain in the background, watching and listening to what participants do and say, and making notes on the context in which these occur. There is, therefore, no direct interaction, and so the researcher is unable to engage in conversation or interview participants to discuss or clarify observed behaviours.

Hammersley & Atkinson (1995), Morse & Field (1996) and Roper & Shapira (2000) outline the advantages and disadvantages of each level of participant observation. Several authors cite the selection of one role, but it is also important to recognise the potential for movement on a continuum according to circumstances. Hammersley & Atkinson (1995) and Roper & Shapira (2000) discuss how a researcher may move between these positions at different stages of the study, and this was my experience also. My role as a participant observer is discussed in more detail in the next chapter.

Spradley (1980) describes three phases of observation: descriptive, focused and selective. *Descriptive observation* is conducted at the start of fieldwork, when the researcher is becoming oriented to the setting. This involves the presentation of a general, 'holistic' overview of the field, thus providing contextual information. The researcher then moves on to *focused observation*, concentrating more on issues of relevance to the research question. Towards the end of the data collection period, *selective observation* is conducted. Here, the researcher focuses on specific aspects that may fill gaps or provide further evidence or examples of the culture or phenomenon being studied.

Alongside participant observation is the need to record field notes, which 'consist of relatively concrete descriptions of social processes and their contexts' (Hammersley & Atkinson, 1995, p175), yet, despite their importance, few researchers have shared their experiences of writing field notes, and so little guidance has been available to novice ethnographers on what, how and when to write (Burgess, 1982; Hammersley & Atkinson, 1995; Emerson et al, 2001). Several authors have attempted to offer more detail about this process, however, (e.g. Burgess, 1982; Atkinson, 1990; Lofland & Lofland, 1995; Emerson et al, 2001) and, despite their different approaches, all agree that field notes should be contemporaneous and descriptive and will inevitably be selective.

Burgess (1982) outlines three types of field notes: substantive, methodological and analytical. *Substantive field notes* include factual information such as date, time and location, and consist of descriptions of observations, events, conversations, informants and, where relevant, documents. Brewer (2000)

adds that records of conversations should also indicate whether these are noted word for word or are a summary. *Methodological field notes* include more personal aspects, such as the role undertaken by the researcher, selection of key informants and consideration of or reflection on their experiences and relationships in the field. These notes may be recorded in a diary or journal. *Analytical field notes* involve interpretations of data. As data collection and analysis are undertaken concurrently, Burgess (1982) states that preliminary analysis can assist with the development of themes, and can also be combined with 'memoing'. It is essential that these notes are recorded separately from the substantive field notes, however, to ensure that these do not become confused. I planned to organise my field notes into these three types.

Another reason for ensuring that field notes are recorded systematically and in detail is to allow for 'thick' description, a term initially used by Geertz (1993), an anthropologist. 'Thick' description is not merely a report based on the data collected through observation, interviews etc., but includes details about the context or setting and interpretations of behaviours, events and meanings. According to Holloway & Wheeler (1996), 'thick' description 'makes explicit the detailed patterns of cultural and social relationships and puts them in context' (p85). Therefore, this involves detailed accounts of experiences but is not only descriptive, but also theoretical and analytical (Holloway, 1997), whereas 'thin' description, Brewer (2000) argues, is 'mere gloss' (p39).

4.2.2 Individual interviews

Individual interviews are commonly used as a research method and have been discussed and defined extensively by numerous authors (e.g. Oppenheim,

1992; Silverman, 2000). Although participant observation is usually the main method used in ethnography, data are often collected through interviews with key informants in the setting, frequently alongside, but occasionally instead of, observation (Hammersley & Atkinson, 1995).

Interviews involve verbal questions and responses held in a face to face meeting between the researcher and participant (Brewer, 2000), but the format may vary considerably according to the purpose and theoretical underpinning of the study. This may be portrayed on a continuum from highly structured, formal interviews consisting of closed questions, used in quantitative or survey research, to unstructured, in-depth interviews associated with qualitative research, including ethnography (see Figure 4.1).

Figure 4.1: Continuum of interview formats

Highly structured	Semi-structured	Unstructured
Closed questions	Open & closed questions	In-depth Open questions
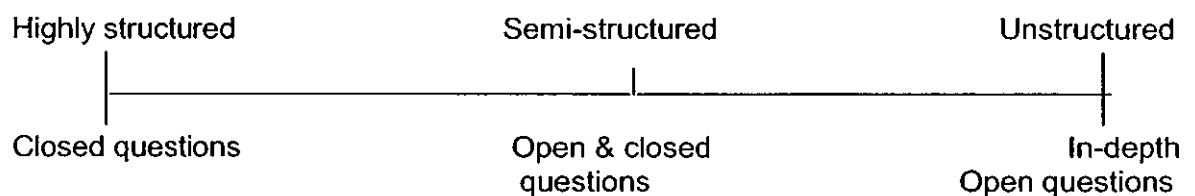
Ethnographic interviews may consist of informal 'conversations' in the field, which are therefore included in field notes, or more formal, in-depth interviews may be conducted, allowing for the collection of rich, detailed verbal data from participants. These can be complementary to the observational data, according to Wolcott (1995), who provided several practical suggestions about how to conduct and use interviews effectively in fieldwork, whether or not these are formal.

Despite their wide use in qualitative research, critics such as Silverman (2000) warn that interview data cannot be assumed to be reliable, as participants may not always be truthful or provide details about behaviours, attitudes or feelings. In addition, the organisational context may affect the encounter, particularly in terms of the 'territory' in which the interview is conducted and the relationship between the researcher and interviewee. Hammersley & Atkinson (1995) also caution that interview data may not necessarily elicit behaviours that are applicable to the natural setting. They add, however, that gaining an understanding of how people behave in different circumstances or contexts may help to shed light on aspects of behaviour in their normal setting.

Heyl (2001) considers that ethnographic interviews are different from other forms of interview, partly due to the ongoing contact and time factor, and the developing relationship between researcher and participant, which can help to overcome these criticisms. This is because the researcher has already developed some degree of rapport or established a relationship with interviewees through participant observation (Hammersley & Atkinson, 1995), as was the case in this study. Heyl's (2001) definition of 'ethnographic interviewing' was therefore pertinent here:

> 'those projects in which researchers have established respectful, on-going relationships with their interviewees, including enough rapport for there to be genuine exchange of views and enough time and openness in the interviews for the interviewees to explore purposefully with the researcher the meanings they place on events in their worlds'.
>
> (Heyl, 2001, p369).

This definition highlighted the importance of active listening on the part of the researcher, and of respecting and demonstrating interest in the information that participants offer, as Wolcott (1995) recommended. In addition, Heyl (2001)

argued that, as a result of the developing relationship between researcher and interviewee and the search for understanding in the language of the 'informants' (Sorrell & Redmond, 1995), they may become empowered within the process, again addressing some of the criticisms of individual interviews.

The role of the interviewer is, therefore, crucial and it is essential that the researcher remains aware of the effects of their own presence, conduct and appearance, as well as those of the context (Hammersley & Atkinson, 1995). Interviewers require well-developed skills which, according to Brewer (2000), include active listening, an ability to maintain a conversation, knowing when to probe or prompt, the appropriate use of silence and, Wolcott (1995) suggests, intuition or a 'sixth sense' with regard to questioning.

Preparation for interviews is also essential. Hammersley & Atkinson (1995) highlight the importance of 'establishing and maintaining the interview situation' (p141), which includes consideration of the setting, role of the researcher and format of the interview. My experiences of conducting interviews are discussed in the next chapter.

4.2.3 Documentary evidence

The importance of written records and statistics in contemporary society are well recognised yet, Hammersley & Atkinson (1995) claim, such evidence is not always included in ethnographic research, the focus often being on oral interactions alone. In the health service, medical notes and nursing care plans are vital sources of information regarding patient care and treatment, and so their inclusion as data sources in this study were considered. However, such

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records do not necessarily reflect the full picture and may be constructed in variable formats according to their purpose and perceived importance. Nursing care plans in particular may vary considerably between wards, specialities and hospitals, whilst medical notes tend to be written in a more standardised format. In this study, due to the variability of nursing documentation in each setting, care plans of the children whose care was being observed were consulted to provide a more holistic perspective. They were also used as a basis for informal discussions with nurses responsible for the care, but no patient details were recorded.

Statistical information can also provide useful evidence about a setting or culture, and numerous data are collected within the health service. In this study, data from the SW audit were considered to be of particular relevance. Further details about documentary evidence and how it was used in this study are discussed in the next chapter.

4.2.4 Triangulation

Triangulation is a term used in navigation and surveying, whereby a position can be found on a map by taking bearings from two separate points and finding where these intersect (Hammersley & Atkinson, 1995). This analogy has been used in qualitative research in an attempt to increase rigour. Denzin (1989) in particular has written of the importance of triangulation for 'confirmation', a form of convergent validity. Some researchers contend that this may not be appropriate in qualitative studies, as it suggests one 'reality' (Fielding & Fielding, 1986; Knafl & Breitmayer, 1989; Sandelowski, 1995b; Shih, 1998; Mason, 2002). Instead, Sandelowski (1995b) and Shih (1998) discuss

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triangulation for 'completeness' as a way of achieving a more 'holistic' picture of the phenomenon being studied.

Denzin (1989) described four different types of triangulation: data, investigator, theory and methodological triangulation. The last of these has been further divided into 'within-method triangulation', whereby similar data collection techniques are combined to study the same phenomenon, and 'between-method triangulation', where methods from different research approaches, such as qualitative and quantitative, are combined. Hammersley & Atkinson (1995) call for 'data-source triangulation' (p230) in social research, where data relating to the same phenomenon, but derived from different participants, stages or locations in fieldwork, are compared. This corresponds to Denzin's (1989) 'within-method triangulation'. Hammersley & Atkinson (1995) consider that, if the same conclusions can be drawn from these differing data sources, then a researcher can be more confident in their inferences. They warn, however, that the aim of triangulation is not to check the validity of the data *per se*, but whether interpretations are valid.

Ethnographers routinely use multiple methods (i.e. participant observation, interviews and documentary evidence), which, according to Brewer (2000), is triangulation. Begley (1996) contradicts this, citing Morse (1991), and arguing that this use of multiple methods is inherent in ethnographic research and therefore is not triangulation. However, Brewer (2000) considers that other types of triangulation may be practicable in ethnography, and Hammersley & Atkinson (1995) also discuss the use of different researchers or techniques to achieve triangulation.

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The use of multiple methods may be problematic, however, because social reality is constructed in different ways in different contexts. Whilst multiple methods may overcome the potential errors associated with relying on a single data source, such combinations may not necessarily be appropriate theoretically or analytically, so cannot reveal the 'truth' (Silverman, 2000). Additionally, Hammersley & Atkinson (1995) advised that 'one should not... adopt a naively 'optimistic' view that the aggregation of data from different sources will unproblematically add up to produce a more complete picture' (p232), arguing that triangulation should relate to the validity of analysis and results, not data. In this study, the data obtained from participant observation and interviews may have provided different perspectives on HD care provision and any variations discovered between these data sets could, therefore, be of considerable interest and importance.

Triangulation has also been discussed extensively and used in qualitative nursing research (e.g. Kimchi et al, 1991; Redfern & Norman, 1994; Bradley, 1995; Sandelowski, 1995b; Begley, 1996; Foster, 1997; Shih, 1998). Sim & Sharp (1998) highlight four potential problems with using triangulation in nursing research, which have been discussed above: the appropriateness of its use, issues of reliability and validity, combining qualitative and quantitative methods and incompatibility of theories. Although these issues were not problematic in this study, their advice to nurse researchers to be more critical in its utilisation is very pertinent.

There is a need to be cautious about the claims for triangulation in ethnographic research, therefore, but this is also a means of improving the rigour of a study, which is discussed in the next section.

4.2.5 Rigour

Rigour is essential in any research if error is to be prevented. Early qualitative research was criticised for its apparent lack of reliability and validity, particularly in comparison with quantitative research. Lincoln & Guba (1985) sought to address this criticism from a 'constructivist' paradigm, describing criteria by which qualitative research could be assessed for 'trustworthiness': credibility (or truth value), transferability, dependability and confirmability. These criteria were designed to be equivalent to aspects of reliability and validity in quantitative research, i.e. credibility equating to internal validity, transferability to external validity, and dependability to reliability. Confirmability is achieved when the other criteria have been addressed. Sandelowski (1986) was credited with highlighting the problems of rigour and applying Lincoln & Guba's (1985) criteria to qualitative nursing research and her work continues to be cited in this context.

Another vital aspect of rigour in qualitative research is the 'audit trail', also described by Lincoln & Guba (1985), whereby the researcher systematically records and organises data relating to decisions made, contextual information, the development of ideas, analysis and interpretations, including memoing, and their insights or responses to events. They consider the audit trail to be a crucial factor in establishing the confirmability of qualitative research findings.

Rodgers & Cowles (1993) clearly describe the development of the audit trail with examples from their own research. They outline four types of documentation that may be included: contextual, methodological, analytic and personal response documentation. *Contextual documentation* includes field notes and can assist in the generation of 'thick description', *methodological* comprises details of decisions regarding methodology, *analytic documentation* requires the researcher to keep consistent records of their analytical insights, speculations, questions and hypotheses, and *personal response documentation* includes self-awareness and reflexivity, and may be recorded in a reflective journal. Other writers have also provided useful insight into their audit or decision trail (Koch, 1994), yet Cutcliffe & McKenna (2004) argue that this may not be necessary to establish the credibility of expert qualitative researchers' findings. Koch (2004), from the perspective of an 'expert', challenges this opinion, criticising their outdated view of an audit trail and asserting that rigour should still be maintained. As a novice qualitative researcher, it was essential that I continued the audit trail commenced during the Preparatory Work; reflexivity would also be essential in the Main Study.

4.2.6 Reflexivity

Hammersley & Atkinson (1995) argue that a researcher cannot entirely separate themselves from the social world and their presence may therefore have an effect on the setting, participants and the data and resulting descriptions. Instead, Brewer (2000) believes that this 'reflexivity' should be recognised and acknowledged openly in all aspects of the research process. This requires the researcher to be aware of their own role, responses and thoughts at the same time as understanding the situation in which they are

involved. Roper & Shapira (2000) highlight this 'intentional use of self', arguing that reflexivity also allows for the identification of potential influence on the data and interpretations. Streubert & Carpenter (1999) add that reflexivity can lead to greater understanding of relationships and meanings within a culture. Brewer (2000) declares that 'realist' ethnographers reject reflexivity, ignoring the social processes that impact upon their data thus, he argues, 'undermining the reliability of ethnographic thick description' (p43).

In this study, it was important to set the data in context and acknowledge my presence and effect as a researcher in the ward settings. This may also have enabled the inclusion of both the 'emic' and 'etic' perspectives (Holloway & Wheeler, 1996) of the culture and context. Therefore, I considered that reflexivity would be essential in this phase of the study, and so my role as researcher required considerable thought and constant awareness. Although I was not directly involved in HD care for children, I knew many nurses in the region who were, either through my educational role (as module leader/teacher for child HD modules) or membership of the ABPN and SW regional paediatric HD working group. I was also familiar with many of the children's wards/units in the region, either because I had worked in them or through acquaintance with staff. Children's nursing is a small world. This could have been beneficial in terms of gaining access to units or individuals and in understanding what I saw and heard, but there might also have been difficulties. For example, my interest in HD care was already known and assumptions might have been made about the focus of my research or potential outcomes. Individual nurses might have felt threatened by my presence, refused consent or behaved differently when I was observing; or, as Hodgson (2001) warns, knowledge of my academic status

might have led to staff asking for educational guidance. In addition, it was vital that my own values and beliefs about HD care were acknowledged throughout to prevent distortion and subjectivity in sampling, observation, questioning, analysis and interpretation of data.

The reflective journal started during the Preparatory Work was, therefore, essential during the planning, fieldwork and analysis and interpretation stages of the Main Study as well. Throughout the period of fieldwork the journal encompassed methodological and analytical field notes (Burgess, 1982, 1984) and my thoughts and feelings about observations of care, interviews etc. were recorded. This also raised my awareness of any potential lack of objectivity in subsequent analysis and interpretation of events and helped me to keep track of decisions made during fieldwork and in the research process as a whole, other key factors in the 'audit trail'.

Although a number of advantages to ethnographic research have been discussed, there are disadvantages to this approach. These include the time involved and the volume of data that can be generated (Brewer, 2000) as well as potential problems associated with being a nurse and participant observer, such as ethical/professional dilemmas, role conflict and 'going native', possibly leading to stress (Baillie, 1995). My experiences of undertaking fieldwork and overcoming problems are discussed in the next chapter.

4.3 The study

4.3.1 Aim

The aim of the Main Study was to explore further, in practice settings, the provision of HD care for children in an attempt to address research questions 2 – 5 and the issues from the focus group findings. These included definitions and recognition of the need for HD care, preparation and training, and organisational issues relating to the provision of HD care.

4.4 Selection of settings and participants

In ethnography, as in other forms of qualitative research, sampling is selective and theoretically-based. In view of the small number of cases studied – sometimes as few as one – in ethnography, Hammersley & Atkinson (1995) contend that it is not possible to argue that a sample is representative of a population. Brewer (2000) agrees, but all assert that, by assessing the 'typicality' of cases and sampling across the dimensions of time, settings, events and people, representativeness and thereby transferability may be enhanced. Silverman (2000) suggests the term 'extrapolation' of findings as an alternative; the selection of 'cases' or fieldwork settings is therefore crucial.

4.4.1 Settings

Brewer (2000) discusses the selection of field sites with reference to five criteria based on work by Burgess (1984) and Spradley (1980): simplicity, accessibility, unobtrusiveness, permissibleness and participation. In addition, Hammersley & Atkinson (1995) recommend 'casing the joint' (p38) to ensure that potential settings can provide the information required to address the research questions.

The ward settings for the Main Study met these criteria and were selected on the basis of a form of typology (Silverman, 2000), the features (or parameters) including whether or not a ward had an HDU and the type of hospital and ward. In addition, as recommended by Endacott (1994), I ensured that I was familiar with, or known to a similar extent to, nursing staff in each setting, but excluded wards where students for whom I had responsibility were undertaking placements. Through contact with nurses from the regional paediatric HD working group, informal inquiry and SW audit data, I then 'cased the joints' (Hammersley & Atkinson, 1995). This was to establish whether I would be able to compare as well as describe the culture and provision of HD care in the different settings and address the research questions and issues identified from the Preparatory Work.

Following discussion and informal agreement from relevant nursing staff, three wards within the SW region of England were selected for fieldwork. These are referred to as DGH/HDU, DGHMix and LCSurg in the remainder of this thesis. DGH/HDU was an acute children's medical ward in a DGH, but in a separate building from the main part of the hospital. There was a two-bedded HDU attached to the ward and children undergoing treatment for cancer were also nursed in a separate area on the ward. DGHMix was an acute, mixed speciality children's ward in a DGH. This was the only children's ward in the hospital and did not have an HDU. LCSurg was an acute children's surgical ward in a Lead Centre. There were several other children's wards and a PICU on site, but no HDU or designated HD beds. More details of these settings are offered in Chapter 5.

4.4.2 Participants

Once the fieldwork settings have been selected, Hammersley & Atkinson (1995) recommend sampling 'within cases', still using a clear strategy for selection. They describe three dimensions: time, people and context (Hammersley & Atkinson, 1995). In this study, the most important dimension was people, with the times and contexts being selected according to the most appropriate opportunities to access, observe and interview 'key informants' regarding HD care.

All participants were Registered Nurses, although I recognised that observation of, and informal conversations with, other staff, especially consultants, parents and children would arise due to the settings. Their 'contribution', particularly in the *context* of HD care, would therefore need to be acknowledged as this could help to provide a more holistic approach to the understanding of the culture. Some key informants were identified in advance of the fieldwork, as contact had been made with gatekeepers to negotiate access and prepare the applications for ethics approval. The majority of participants were selected after fieldwork commenced, however, using theoretical sampling to decide who would best be able to reveal the information needed.

Having a strategy for time sampling ensures that data collection periods are systematic and capture a range of routine and 'extraordinary' events, but also allows 'time out' to write field notes and reflect on experiences (Hammersley & Atkinson, 1995). The fieldwork was planned for the autumn/winter season, as findings from the SW audit indicated that there tended to be more children requiring HD care during this period (Maskrey, 2001). Within each setting, shift

times were negotiated with participants to ensure that as much HD care as possible could be observed in the context of a wide range of 'routine' ward activities and emergency admissions.

Similarly, contexts were sampled to ensure that a range of behaviours could be observed (Hammersley & Atkinson, 1995). Although contexts are not necessarily synonymous with different physical locations within a setting, as they are socially constructed, different contexts may elicit different behaviours. Within the ward settings, therefore, I accessed various contexts in which HD care could be provided and/or discussed, such as a cubicle or bay on the ward, the nurses' station and HDU, taking note of the behaviours manifested in each.

Further details about the selection of participants, time and context sampling are given in the next chapter.

4.5 Gaining access and ethics approval

Gaining access to the field to carry out ethnographic research requires both formal and informal permission. In nursing research, particularly if conducted within an institution such as a hospital, there are bureaucratic structures to take account of and procedures to be followed in order to gain formal access to wards, staff and/or patients. These include application to Research Ethics Committees and local Research and Development departments for approval. In addition, it should be remembered that access and approval are part of a process, rather than a 'one-off' event, and that, even when permission has been granted, there may be a need to renegotiate roles or access. Hammersley & Atkinson (1995) also highlight the importance of being aware of other

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'gatekeepers', not necessarily in key positions or with an obvious role, who may facilitate or obstruct access to key informants or settings.

4.5.1 Ethics approval

Contact had already been made with nurses working in the selected settings to discuss the study and the possibility of observing care in their wards. Having given encouraging responses, their ward managers and/or senior nurses were then contacted for permission, and information about the study was given to them. Following discussion, they all agreed to me conducting fieldwork in their ward or unit, and so ethics approval for the study was then sought and gained from the appropriate Local Research Ethics Committees (see Appendices 2A – I for information sheets, consent forms and approval letters). The ward managers also arranged honorary contracts to enable me to participate in care.

4.6 Data collection

Before starting fieldwork, I set up meetings with the ward managers, visited each of the centres and met with staff from the wards to explain about the research. These meetings gave me the opportunity to arrange the first days of fieldwork in each ward to help me 'acclimatise' to the ward settings, meet more of the staff so that they would get used to me being around (Endacott, 1994), negotiate my role and commence 'descriptive observations' (Spradley, 1980).

In the Main Study, in view of my professional responsibility as a *nurse* researcher, it was also essential to prepare for potential dilemmas or 'difficult' situations, such as observing unsafe practice or a child 'going off'. These issues were discussed with my supervisors and a plan of action was decided for

each potential situation (see Table 4.1). In addition, an 'observation schedule' was prepared for use during fieldwork to assist with decisions about the identification of potential children and situations for observation or when this would not be appropriate (see Appendix 2J).

Whilst on fieldwork, I planned to carry out formal, tape-recorded interviews with key informants, but was aware that informal conversations would also arise during participant observation. The formal interviews were semi-structured, guided by an interview schedule that was submitted as part of my application for ethics approval (see Appendix 2K), and so had to be followed. This constrained the interview format to some extent, but, as the schedule consisted of open questions and suggested prompts, a degree of flexibility was possible. The interviews were transcribed verbatim as soon afterwards as possible.

Documentary evidence was also examined in the wards. Data for the SW audit were recorded in each of the settings and could, therefore, offer useful information about the definition and recognition of HD care within each ward. Care plans were also consulted to provide a basis for discussions with nurses about HD care delivery and rationales for interventions, and to increase understanding of the decision-making process, but no data relating to patients or their families were recorded.

In addition to field notes, interview transcripts and documentary evidence, my journal would also be used to record reflections on my experiences to assist with reflexivity and the audit trail (Rodgers & Cowles, 1993). My experiences of data collection are discussed further in the next chapter.

Table 4.1: Potential dilemmas in fieldwork and plan of action

Potential dilemmas	Plan of action
No children requiring HD care on the ward	So be it! Observe 'processes' and gain retrospective account from nurse/s involved
Need to give parents time to 'reflect' on consent/information sheet	Use 'observation schedule'. May need to have 'assent' confirmed formally, i.e. 'shadow' nurse anyway, consent later. If consent **not** given, do not use any data from the observed episode.
Parent 'discloses' information re a member of staff / 'bad' practice	Ask them what they want me to do with the information. Discuss with nurse concerned and/or ward manager.
I observe bad / unsafe practice	Report this: speak to the nurse concerned, inform nurse manager, complete incident form. Follow local trust policy and NMC Code of Professional Conduct.
Child 'goes off' while I am observing their care	Withdraw from the situation. ?assist if invited/able/competent to do so.
Negotiation of role and disclosure re 'level of expertise'	Reiterate to staff that I have considerable **interest** in HD care, but not expertise. I am there to observe care, not to 'lead'.
Importance of contextual issues, these may influence my role	Retain awareness of what else is going on, the actual setting, ratio of staff: children. Withdraw if inappropriate to stay.
Potential for taking on different roles in different settings	Role needs to be negotiated in each setting. This problem did not arise

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4.7 Data analysis

As is usual in qualitative research, data analysis in ethnography is a continuous process, undertaken concurrently with data collection (Brewer, 2000). Few details are given in ethnographic literature regarding the process of data analysis, but Brewer (2000) highlights the importance of this being 'systematic and rigorous' (p106). He describes a series of steps that should be taken and discusses the use of grounded theory in ethnography as a means of achieving a systematic approach to data analysis, but acknowledges that this is often only paid 'lip service' (p108).

Ethnographic research can generate large amounts of data from a range of sources, necessitating systematic data management as well as analysis. This will ensure that data are organised and sorted using codes, but can also be retrieved so that extracts relating to the emerging categories or themes can be located easily. The use of computer software programs to aid this process is advocated, albeit cautiously, by several authors (e.g. Brewer, 2000; Mason, 2002), but I decided to continue with manual methods, as in the Preparatory Work.

The first stage of data analysis is the examination of data, usually by reading notes and transcripts several times and then generating initial codes. Mason (2002) describes three ways of reading data – 'literally, interpretively and reflexively' (p149). *Literal reading* involves consideration of the actual content of interview transcripts, documents, etc. More usually, qualitative researchers will use *interpretive reading*, which involves making inferences about the data and perhaps *reflexive reading*, whereby their own role and perspective is

included in the process. Data from this phase of the study was in the form of three types of field notes (Burgess, 1982), interview transcripts and SW audit data, and so I anticipated reading data in all three ways.

According to Mason (2002), the coding (or indexing) of data may be cross-sectional, whereby a consistent system is used across the whole data set, or non-cross-sectional, with specific cases or settings from the data set being analysed separately. She adds, however, that both approaches may be used, with issues being explored across and within settings, thus allowing for comparisons to be made, and contextual aspects to be included. I planned to analyse data using both approaches.

Hammersley & Atkinson (1995) recommend allocating 'time out' during fieldwork for recording observations, reflecting on experiences and commencing the analysis process by writing analytical field notes and what they term 'research memoranda' (p191). They argue that such 'internal dialogue' is 'the essence of reflexive ethnography' (p192). This mirrors Burgess's (1982) analytical field notes, which, he suggests, can be combined with 'memoing'. The writing of 'memos' is fundamental in grounded theory and defined by Strauss & Corbin (1998, p110) as: 'the researcher's record of analysis, thoughts, interpretations, questions, and directions for further data collection'. Although grounded theory was rejected for the Main Study, I had commenced the process of memoing during the Preparatory Work. I therefore decided that, in view of its endorsement in ethnographic research by Burgess (1982), Hammersley & Atkinson (1995) and Brewer (2000), I would continue to write memos alongside analytical field notes in the Main Study.

Despite the existence of varying details regarding data analysis in ethnography, there is common ground concerning the main steps in the process. These involve the sorting or ordering of data, possibly into units of meaning or codes, termed 'data reduction' by Huberman & Miles (1998); organising these into categories and/or themes; and then seeking relationships between them. Data analysis in this phase followed these steps, with all data being read and examined systematically and coded, with new data being compared with existing material. Emerging categories were identified and relationships between them sought, with attempts being made to discover meanings and explanations. More details regarding data analysis and interpretation are given in the next chapter.

4.8 Conclusion

This chapter has offered an overview of the ethnographic approach adopted for the Main Study and the planning of fieldwork using a range of data collection techniques. My experiences of conducting fieldwork are discussed in the next chapter.

CHAPTER 5:   EXPERIENCES OF FIELDWORK

5.0 Introduction

In the previous chapter I discussed the planning of the Main Study and the ethnographic approach adopted. In this chapter, my experiences of undertaking fieldwork will be discussed, in order to provide an introduction to and context for the findings presented in Chapter 6. Additionally, sample demographics are provided in section 5.4 and strategies for establishing the rigour of the study are discussed in section 5.5.

5.1 Participant observation

5.1.1 'Acclimatisation'

A period of three months was available for fieldwork, due to other work commitments. Such a limited period of fieldwork time was far from ideal, particularly to allow for 'immersion in the culture'; however, I hoped that my previous extensive experience of working in children's wards would facilitate my understanding of the settings and acceptance by staff without 'going native' (Hammersley & Atkinson, 1995). I spent a whole day in each ward in the first week, and then arranged three 4-weekly cycles of time. These comprised three weeks of observation (one week in each setting), followed by a week spent on analysis and preparation for the next round of fieldwork; this included meetings with my research supervisors. The observation periods were organised on the basis of three days of fieldwork per week, one day in my normal teaching role, and one day for reflection, writing up field notes and transcribing interviews.

The first day spent in each ward enabled me to commence 'descriptive observations' (Spradley, 1980) and the writing of 'substantive field notes' (Burgess, 1982, 1984). Despite several years' experience of working in children's wards I still needed to become acclimatised to the unique culture of each setting, and to enable the staff to meet me or become used to my presence. These days offered opportunities to negotiate my role, set 'ground rules' and arrange with whom I would be working, on what days and shifts, in subsequent weeks. By getting to know the staff, I was also able to identify potential key informants and thus approach individuals directly about participation in the study.

The meetings with staff in the DGH wards prior to fieldwork facilitated my acclimatisation considerably. On the first day in each setting, nurses I had already met were on duty and, therefore, knew why I was there. I was made welcome and they had allocated an experienced nurse for me to 'shadow' for the day. I had to be very clear about my role as a researcher, however, as in DGHMix, the HD lead nurse had her own ideas:

> '[Name] was very keen that I 'shadow' her and asked if I would be allowed to hold things and generally assist her. I admitted that I had an honorary contract so I could participate as appropriate and she was delighted. She said that I could be with her when she nursed an HD child but would know she could leave me with the child while she went to get equipment or do other things... I had to explain that I could **not** do that. I would be happy to help her but the whole point of my presence there was to observe her/the nurses providing HD care. I could not 'observe' myself. She understood straight away but was clearly disappointed.' (Reflective journal)

By contrast, although I had arranged to spend my first day in LCSurg with the ward manager, this was not possible. Instead, I was welcomed by the F grade nurse in charge, who knew I was coming, but I had not met any of the staff on

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the 'early shift', and the majority did not know about the research or why I was there. However, an E grade nurse with an interest in HD care was allocated to 'look after' me, and when I had introduced myself to the staff, explained about the study and given out information sheets I felt I had been accepted. This became even more apparent when they discovered that I was a children's nurse, and during the course of the day several people approached me about the study and offered to participate. My role as a nurse *researcher* was also understood, with no one expecting me to be 'doing things' and the nurse in charge asking (jokingly), "Where's your notebook then? Aren't researchers supposed to take lots of notes?" This acceptance was crucial, and helped to establish my credibility as a researcher (Morse & Field, 1996) not only in LCSurg, but also on my return to DGH/HDU and DGHMix.

Information sheets about the study (see Appendix 2B) had been distributed prior to my first day in each setting, and I also ensured plenty were available on Day 1 and each subsequent period of fieldwork. After reading the information sheets and asking me questions, several nurses in each ward spontaneously signed consent forms (see Appendix 2E) on my first day agreeing to me observing their involvement in HD care and to a tape-recorded interview about their experiences. This was an encouraging start and helped to facilitate the involvement of others as the study progressed.

5.1.2 Descriptions of settings – high dependency care in the context of the ward

My substantive field notes contained detailed descriptions and a sketch of the settings to enable me to gain some understanding of where and how HD care

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was delivered in each ward. I also recorded information about staffing numbers, skillmix, the number of patients (and families) and nursing problems to help to provide more detail of the contextual issues involved. These field notes also contributed to the 'audit trail' and 'thick description' (Geertz, 1993).

There was a two-bedded HDU in DGH/HDU, with the doorway immediately opposite the nurses' station, which was in the middle of the ward. Including those in HDU, there were 19 beds on the ward: six in the open ward, one 2-bedded cubicle and nine single cubicles, four of these in a separate designated children's oncology unit behind the nurses' station. Monitoring equipment, infusion pumps and piped oxygen and suction were supplied to both of the bed spaces in HDU, there was a separate small locked drugs cupboard on the wall and a trolley at the end of each bed with drawers for syringes, dressings, infusion sets etc. If oxygen or suction were required for a child in the main ward, however, portable cylinders and equipment had to be used, and were moved by nursing staff to the appropriate bedspace. The 'resuscitation trolley' and defibrillator were situated just outside the HDU but other machines (e.g. CPAP driver) and supplies (e.g. infusion stands) were kept in a separate cupboard or in the treatment room, near the ward entrance. Resident parents slept beside their child's bed or in the schoolroom, but there was only enough space for one chair beside each bed in the HDU.

This ward was on the ground floor of an old building that was separate from the main hospital, but on the same site. Although there was another children's ward upstairs, normally used for 'ward attenders' or as an assessment/ observation unit, this was closed during fieldwork due to lack of staff. The

children's surgical ward, adult ICU, operating departments, emergency department and other facilities such as the pharmacy and X-ray department were all in the main hospital, at least five minutes walk away. The implications for DGH/HDU of being at such a distance if an emergency arose were obvious. The HDU was staffed from the ward numbers, and one RN was usually allocated to care for children in the oncology unit, which could leave only one nurse and a healthcare assistant for the rest of the ward.

DGHMix had 20 beds, with two 4-bedded bays and 12 cubicles, some of which were fairly close to the nurses' station and treatment room and so were normally used for infants requiring HD care, but none were in direct view. All bedspaces were equipped with piped oxygen and suction. Monitoring equipment was kept in the treatment room, the resuscitation trolley was next to the nurses' station and, if needed, a defibrillator would be brought into the ward from the corridor outside, where it was stored and shared with another ward. Resident parents were accommodated on beds in cubicles or in the schoolroom at the end of the ward.

The ward was on the 4th floor of the hospital, one floor up from ICU and the operating department and in the same building as the emergency department, and so emergency help was likely to be available quickly. As there were no designated HD beds, if a sick child was admitted, a nurse would have to be allocated from the ward numbers to care for them.

LCSurg was a 22-bedded ward, with three 4-bedded and one 6-bedded bay and four cubicles. Children requiring HD care were nursed in the 4-bedded bays

situated behind the nurses' station. All bedspaces had piped oxygen and suction and some monitoring equipment was kept in a cupboard on the ward, but any other resources could be obtained from the 'equipment bank' in the hospital. The resuscitation trolley was situated to one side of the nurses' station, easily accessed from any part of the ward, and the 'crash team', which included staff from PICU, brought emergency equipment with them as well. Parents' accommodation was purpose-built, with pull-down beds in each bedspace or cubicle and a kitchenette/sitting-room close to the ward.

The ward was on the 4th floor, one away from the PICU, but there were no HD beds in the hospital. This was a tertiary centre, and so 'elective' HD care was provided following major surgery, as well as for emergencies. There were six other children's wards in the hospital, as well as a separate children's emergency department, operating theatres, X-ray department, pharmacy and admissions ward. Children requiring HD care were usually allocated to an experienced E grade nurse, but due to the numbers of sick children and the skillmix available on the ward, they were often 'shared out'. As a result, three or four nurses could each be allocated one child requiring HD care and two or three others with less extensive care needs.

5.1.3 Participant observer role

Brewer (2000) discusses how the researcher's role can develop over the course of fieldwork and according to circumstances, and this was my experience. My role varied from that of almost complete observer to participant-as-observer. On Day 1 in each setting I was an observer and at other times when there were no children requiring HD care, or it was inappropriate to participate, I observed

from the nurses' station. I was still involved in interactions with nurses in this role, however, and helped out at times, such as by making or moving beds and assisting with care under supervision as an observer-as-participant. When a child required HD care, the allocated nurse would decide whether observation was appropriate according to the 'observation schedule' (see Appendix 2J). If so, information sheets about the study were provided and informed consent was obtained by the allocated nurse and/or myself from parents (and, where appropriate, children, see Appendices 2A and 2D) and staff (see Appendices 2B and 2E) prior to any direct participant observation, and re-negotiated as necessary if the situation changed. Once consent was obtained I assisted that nurse in the care of the child, thus becoming a participant-as-observer. Despite the honorary contract enabling me to participate in care, I only contributed to 'hands-on' care under supervision, thus helping to prevent 'disruption' of the natural setting and the behaviours of individuals within that context (Morse & Field, 1996).

The same circumstances applied in all three wards. I did not wear a uniform, instead wearing smart, comfortable, casual clothes that I could work in (as was also the case for the nurse specialists). I was 'allocated' to a nurse who would be delivering HD care on each shift, but I was also able to talk to or observe others. As a result, all forms of participation, including notes from informal conversations, were obtained with the oral assent or, in most cases, written consent, of the individuals involved.

I had to make it clear on the first day to the senior nurses and ward managers that it would not be acceptable (and would also contravene the terms of the

ethics approval) for nurses to be coerced or even expected, for valid reasons, to participate in the study against their will:

'I will have to be careful... about raising the staff's expectations. [Name] is encouraging everyone to participate so I can help them argue for more staff etc. I had to intervene and say that I couldn't promise anything as I did not know what would come out of my observations/findings.' (Reflective journal)

'I explained to [Senior Nurse] about obtaining consent from nurses before observing their care or interviewing them and that if they did not sign the form or agree to this, that was fine. She said that she expected them all to be willing to participate and wanted to know if anyone refused, as she felt they should all be competent enough to have their practice observed without worrying. I told her that I did not want anyone to feel coerced or pressurised into participating... I was not there to 'judge' nurses' practice but to observe what happened if they were nursing a child requiring HD care. [Name] accepted this.' (Reflective journal)

This made me more aware of senior nurses' and ward managers' hopes and expectations about the outcomes of the research and the potential effects on their units. I had to be careful not to promise anything, as I did not know what the findings would show.

The roles of 'insider' or 'outsider' are discussed in ethnography by researchers such as Hammersley & Atkinson (1995) and Brewer (2000). In nursing, a number of authors (e.g. Gerrish, 1997; Pugh et al, 2000; Bonner & Tolhurst, 2002) have considered the potential dilemmas facing nurse researchers as 'insider' or 'outsider' in clinical settings. Bonner & Tolhurst (2002) present a balanced discussion of this debate, drawing on their own experiences of participant observation, and offer a clear summary of the advantages and disadvantages of both positions. My role was less obvious, and aspects of both could apply. I was an 'insider' by virtue of being an experienced children's nurse and was thus familiar with the environment and language of participants.

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However, I was not familiar with the specific settings and individuals working there, and I was present as a researcher rather than as a nurse, which made me an 'outsider' who needed time to acclimatise and establish trust and credibility. I considered that this combination was an advantage because my insider status facilitated acclimatisation and acceptance by staff, but being an outsider helped to prevent role conflict, 'going native' and, I hoped, making assumptions or overlooking the 'obvious'. Reflexivity was therefore essential throughout the fieldwork to ensure that I maintained a balance between these two positions.

5.1.4 Fieldwork experiences

Three types of observations are described by Spradley (1980) – descriptive, focused and selective observations. I conducted and recorded descriptive observations on Day 1 and on subsequent visits, collecting contextual information that would provide an overview of each setting. I also moved on to focused observations of HD care in an attempt to address the issues identified as requiring further exploration in the Preparatory Work and the research questions for the study as a whole. As I became more confident in my researcher role, I was able to approach potential key informants about participation and to seek advice about suitable children to observe. I also became more aware of what I wanted to observe and how to do this. I was then able to record selective observations by 'filling in gaps' and identifying atypical or 'negative' cases. In view of the varied perceptions of HD care arising from the focus groups and to increase the credibility of findings, attempts were made to select nurses who disliked or 'feared' HD care as examples of negative cases. A newly-qualified nurse in DGH/HDU admitted to being 'scared'

(Interview 7) of HD care due to inexperience and two nurses who regularly worked in HDU acknowledged that some of their colleagues were happy caring for sick children on the ward but not in HDU (Interview 13 & field notes, DGH/HDU). No negative cases were identified in DGHMix or LCSurg.

As expected, there were not always children requiring HD care on the wards, even in LCSurg where some were admitted for elective surgery because they would need this level of care post-operatively. There were, therefore, times when I was 'hanging around', waiting for HD care and observing 'routine' ward activities. This was the case in DGHMix as HD care was not observed *directly* there either due to timing (e.g. arriving on the ward just before a child was transferred to ICU), or because it would have been inappropriate according to the observation schedule. As a result, I was only able to obtain written consent from parents for participant observation with six children requiring HD care. However, ward rounds and discussions between nurses and doctors were observed and individual tape-recorded interviews were conducted. I also worked alongside a total of 15 nurses and recorded field notes on routine ward activities and aspects of care (see Table 5.1).

I discovered on Day 1 in each setting that the nurses' station was the best place for informal conversations and gave a good view of the ward as a whole. This was the 'hub of action' in each ward, as the telephones, medical and nursing notes, protocols/ books/policy documents, (including SW audit data and forms) and other stationery were situated there, and it was the place for care plan writing, as well as a 'retreat' at times for the nurses. The ward clerks were based here and became invaluable sources of information, keeping me up-to-

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Table 5.1: Nurses and parents consenting to participant observation in each setting

		DGH/HDU	DGHMix	LCSurg
Nurses	Consent	14	7	7
	Observation	7	3	5
Parent/ child	Consent/observation	2	0	4

date with 'gossip' and informally helping with the selection of key informants by advising me who had been looking after children requiring HD care on the days when I had not been there.

With regard to access and the role of gatekeepers, Hammersley & Atkinson (1995, p67) warn that there may be 'sensitive' periods when the researcher is discouraged or prevented from observing particular activities. This could have happened to me, as there might have been occasions when my presence was unwelcome, or even instances of 'unsafe practice' (which were not observed anywhere). In fact, I experienced the opposite, with the nursing staff wanting me to be able to observe as much as possible in each setting, 'warts and all' as they described it. However, there were times when I had to withdraw from situations, either in accordance with the observation schedule or for other reasons such as lack of space, number of people already present or because I determined that the situation was too distressing for the child or family, even if I was not requested to leave. This could have led to the loss of data, but the moral and ethical aspects of the situation had to take precedence. If this occurred, I followed up my observations whenever possible with interviews or informal discussions.

5.1.5 Writing field notes

The importance of maintaining accurate, contemporaneous field notes is stressed by a number of researchers (e.g. Burgess, 1984; Koch, 1994; Emerson et al, 2001), and so I endeavoured to write these as soon after my observations as possible to ensure that events were still fresh in my mind. Meal breaks, when taken alone, were used for this purpose, but I was often invited to join others from the ward team. This helped me to become more established in the settings, and so it was important to accept their invitations. If this occurred, no notes were taken at the time, but were written up later.

I was also able to make notes whilst at the nurses' stations because this became an accepted part of my role. Brewer (2000) discusses how participants' fears of being observed can be overcome by stressing that field notes are not secret, perhaps by showing them extracts of the data recorded. Staff soon became aware that I was taking notes and many joked about this, and so my notebooks, which contained descriptions or substantive field notes (Burgess, 1984) were sometimes left on view at the nurses' station so they were not seen as 'secret'. Although I did not see anyone reading my notes, I knew they were aware of the presence of my notebook. I also wrote notes on buses and trains or in railway stations after leaving the wards, and in the evenings on my return home or to my accommodation. These hand-written, often scrappy notes were later entered into Word files on the computer and more details added.

5.2 Individual interviews

I had already met prospective interviewees through participant observation and 'hanging around'. Some had already consented to formal interviews and I was able to approach others informally about participating if I knew they were, or had been, involved in HD care. The interviews were tape-recorded whenever possible, but only if written consent had been obtained. I tried to conduct these immediately following a period of observation, but this was not always convenient or appropriate, such as if the ward was busy or short-staffed. It was essential to be 'sensitive' to the ward situation and at times I needed to be 'opportunistic'. Some informants initiated the interview themselves in terms of timing or location, having already consented to this.

I tried to be unobtrusive with the tape recordings by using a small recorder with a built-in microphone. Some nurses were 'put off' by this, despite their evident willingness to discuss issues, with one 'drying up' after only ten minutes, and another talking very quickly. However, I had worked as a participant observer alongside both of them, and so numerous informal interviews had also been carried out and the content included in my field notes. In addition, some nurses did not want to be recorded at all. For example, on LCSurg, following a child's respiratory arrest, the nurse involved was happy to talk to me about this and even thanked me for the opportunity to do so afterwards, but did not want the interview recorded. Also, in DGH/HDU, one nurse consented to me working with her, discussing a range of issues and taking notes on observations and conversations, but did not want to be tape-recorded. As a result, various discussions or conversations took place with a range of people over the course

of the fieldwork in each setting and were included in my field notes, with some comments recorded verbatim and others summarised.

The tape-recorded interviews were guided by an 'interview schedule' (see Appendix 2K) which tended to evolve over the course of the fieldwork. Although there were some constraints on this due to the LREC approval conditions, I was able to probe participants' responses. For example, it was particularly useful to discuss their experiences of HD care on the ward, which I had not observed, by following up comments such as "You should have been here yesterday/last week" with "Why, what happened?" The interviews also enabled me to obtain different perspectives on the same events, or to put nurses' actions and HD care in context. In addition, I asked individuals for their definitions and perceptions of HD care, and details of their knowledge, skills and the preparation they received for providing this care and how they felt about it.

Participants were able to stop the interview at any time. Two did so, one when she was trying to remember some details of an incident, and the other because she was disclosing information that she deemed confidential, although she was happy for me to take notes. Both subsequently resumed the taped interviews.

5.3 Documentary evidence

A range of documents was consulted after I had gained appropriate permission and assured confidentiality and anonymity. Documentation included the SW audit forms and data for each ward/hospital, which gave important background information about the numbers of children requiring HD care in each and nurses' awareness of the criteria for this level of care. I also examined care

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plans or, where available, integrated care pathways, which enabled me to see what care had been given to individual children and the basis for these decisions. Perhaps more importantly, informal conversations or discussions about HD care could be initiated by reference to these documents.

5.4 Sampling

5.4.1 Selection of participants – identifying 'gatekeepers' and 'key informants'

As previously discussed, some gatekeepers and key informants had been identified before starting fieldwork. Initially, because of their known interest and involvement in HD care, I started by talking to and observing the 'HD lead nurse'. Gradually, as I acclimatised and became more familiar with the staff, and through theoretical sampling, I identified other nurses who could offer valuable insight into HD care in each ward and approached them about participation in the study. At times this was planned in advance, but at others, I approached the nurse allocated HD care on a particular shift and obtained consent 'on the spot'.

Seventeen interviews were recorded, and all the interviewees were RN (Child) (see Tables 5.2 and 5.3 for details). I also talked to a range of people, such as medical staff, parents and the ward clerks who were interested in the study and were willing and able to give contextual information. Some of them approached me directly, for example consultants and other doctors who had read the staff information sheets, especially in LCSurg, and some parents in DGH/HDU. In other cases, I introduced myself and spoke to people about the study, but only included information in my field notes with their permission. Other members of staff also volunteered to participate and signed consent forms, including a

Table 5.2: Numbers of nurses consenting to tape-recorded interview in each setting

	DGH/HDU	DGHMix	LCSurg
Consent to interview	13	7	7
Recorded interview	7	6	4

Table 5.3: Details of recorded interviews and participants

Interview Number	Setting	Length of interview	Grade of participant	Length of time qualified	Venue of interview
1	DGHMix	24 min	E	2 years	Cubicle
2	DGH/HDU	31 min	E	3 years	Oncology unit sitting room
3	DGHMix	20 min	E	3 years	Schoolroom
4	LCSurg	10 min	E	8 years	Cubicle
5	DGH/HDU	22 min	F	16 years	Cubicle
6	DGH/HDU	27 min	F	20+ years	Cubicle
7	DGH/HDU	15 min	D	6 weeks	Cubicle
8	DGH/HDU	17 min	D	1 year	Cubicle
9	DGH/HDU	22 min	G	7 years	Ward office
10	DGHMix	16 min	D	2 years	Cubicle
11	DGHMix	12 min	E	6 years	Cubicle
12	DGHMix	20 min	F	20 years	Ward office
13	DGH/HDU	18 min	E	6 years	Ward office
14	DGHMix	24 min	G	14 years	Cubicle
15	LCSurg	10 min	F	7 years	Ward office
16	LCSurg	11 min	F	14 years +	Ward office
17	LCSurg	26 min	G	12 years +	Ward office
Totals	D/HDU x 7 DMix x 6 LCSurg x 4		D x 3 E x 6 F x 5 G x 3		

healthcare assistant and a post-registration student, despite my focus on RNs who were responsible for HD care. Although no one was actually rejected, I made it clear that I was specifically interested in the views of nurses directly involved in the provision of HD care. Others' experiences were important in helping to provide a more holistic overview of each setting, however, and they offered valuable contextual information informally, which I recorded in my field notes. I also needed to be careful about 'self-selection', as Hammersley & Atkinson (1995) highlight the potential for collecting information that is misleading or irrelevant to the study. Not all those who consented to observation or interview were included, therefore, partly due to inability to find appropriate opportunities and also because, by using theoretical sampling, they were not selected as key informants. However, negative cases were sought in an attempt to encompass a range of views and to enhance the credibility of the findings.

5.4.2 Time sampling

I attempted to sample as broad a range of care activities as possible within each setting by planning the fieldwork times carefully, as recommended by Hammersley & Atkinson (1995). I negotiated shift patterns with participants, suggesting that I worked a variety of day and night shifts and weekends. In practice, on the advice of staff, however, I did not carry out any fieldwork at weekends or night because, although it was possible for there to be emergency admissions requiring HD care, this could not be guaranteed. By contrast, any sick children admitted as emergencies during the week had to be 'juggled' around routine admissions, some of which, in LCSurg, would require HD care post-operatively; therefore, I could plan some observations in advance. As a

result, I worked three daytime shifts during the week but varied the start (from 7-10am) and finish (from 4-8pm) times depending on what was happening and who I was observing. This enabled me to speak to night staff, despite not observing during their shifts. In total, I carried out approximately 240 hours of participant observation.

5.4.3 Context sampling

Although HD care was usually delivered in specific areas of each ward, this was discussed in a range of different places, such as the nurses' station, ward office and staff room. Although Hammersley & Atkinson (1995) warn that different locations do not necessarily equate with different contexts, I observed variations in behaviour and communication in these places. For example, in the HDU or at a sick child's bedside, the family were usually present, and any discussions would have been heard by them, so medical and nursing staff tended to present information accordingly. By contrast, at the nurses' station, formal and informal discussions of assessments and interventions took place between nurses and doctors, and decisions about a child's management were often made here. The ward office was commonly used for handover, when only nurses were present, and so information about a child's family or views on their medical treatment were often shared at the same time. This also provided an opportunity for nurses to express their feelings and 'sound off' away from the ward, as observed in DGH/HDU in particular. The office was also used for breaks in the DGH wards at times, whereas LCSurg shared a staff room with another ward. Here, due to the mix of staff, comparisons were often made between the wards regarding staffing or dependency levels. By sampling a range of contexts, I

was, therefore, able to obtain richer information than by simply observing HD care directly.

5.5 Rigour

As discussed in the previous chapter, criteria have been developed to assist in the establishment of rigour or trustworthiness of qualitative research: credibility, transferability, dependability and confirmability (Lincoln & Guba, 1985; Sandelowski, 1986). The development of an audit trail is an essential part of the process and as a novice qualitative researcher, I was aware of the importance of recording information that would help to establish rigour. The four types of documentation that Rodgers and Cowles (1993) suggest should be included in the audit trail (contextual, methodological, analytic and personal response) matched Burgess' (1982, 1984) three types of field notes: substantive, methodological and analytical and were recorded throughout the study. Initially, I experienced difficulties in deciding what constituted each type, with the substantive notes not only including descriptions, but also aspects of reflection and occasionally interpretation, which Burgess (1982) cautioned against. As I developed more confidence and experience in the researcher role, however, the substantive notes became more distinct and were recorded in separate notebooks and files. The methodological notes were linked with reflections on decisions and experiences and recorded in my reflective journal and the analytical notes, which initially overlapped with methodological notes, were subsequently extracted from the reflective journal and combined with coding and memoing. The organisation of the field notes and continuation of the reflective journal, therefore, helped the development of the audit trail, thus

contributing to the establishment of rigour in the study. Rigour will now be discussed with examples of how the criteria were achieved.

5.5.1 Credibility

Credibility or 'truth value' relates to the extent to which the researcher's description or explanation of a social phenomenon is a plausible representation of participants' views or is recognisable to them or others. This is usually demonstrated through strategies such as respondent validation (or member checking), triangulation, audit trail and negative case analysis (Litva & Jacoby, 2002; Tobin & Begley, 2004), all of which featured in this study. In ethnography, key aspects of credibility are the use of multiple methods, data-source triangulation (as previously discussed) and respondent validation (Hammersley & Atkinson, 1995). Mason (2002) and Richards (2004) warn of the dangers inherent in respondent validation, advising that this does not necessarily indicate the validity or credibility of analysis or interpretations. However, this strategy was undertaken by returning to the three settings after fieldwork was completed to present initial findings and interpretations, which were accepted by participants.

5.5.2 Transferability

Transferability is related to external validity or generalisability in quantitative research and refers to the potential for findings from a study to be applied in another similar setting. Findings in qualitative research are context-bound and temporal and settings cannot, therefore, be directly compared. However, the provision of 'thick description' (Geertz, 1993) may enable findings to be transferred. This requires detailed description of research settings, participants,

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sampling strategies, data collection and analysis, all of which should be included in the audit trail.

5.5.3 Dependability

Dependability or consistency relates to reliability in quantitative research. In view of the instability of the social world in which qualitative research is undertaken, this requires documentation of the research process to enable assessment of the accuracy of a researcher's account, demonstrated through the audit trail (Koch, 1994, 2006; Tobin & Begley, 2004). This can be enhanced by tape-recording of data and verbatim transcription (Litva & Jacoby, 2002), as occurred in this study. Accuracy of transcription is also essential to ensure the integrity of a qualitative study and so, once the interviews had been transcribed, I checked their accuracy by comparing them with the original recordings (Easton et al, 2000).

5.5.4 Confirmability

Confirmability relates to the extent to which the findings and interpretations can be demonstrated to have been derived from the data and not from the biases or subjectivity of the researcher. As with other criteria, this can be established through the audit trail and thick description. Reflexivity is another important strategy and is essential in ethnographic research so that the researcher's role and the effect of their presence on the setting and participants are made explicit (Hammersley & Atkinson, 1995; Brewer, 2000). As discussed in the previous chapter, this requires the researcher to be self-aware, reflective and self-critical.

5.5.5 Reflexivity

Reflexivity was particularly important in this study, in view of my role as a participant observer and my previous experience. The information sheets gave some details of my background, so it was known that I was both a children's nurse and an 'academic', with an interest in HD care. I also had to reinforce the fact that I was not an expert, nor was I there to judge practice, but that I wanted to learn from participants about their ward and what it was like to work there. Apart from one newly-appointed nurse in LCSurg asking for details about the SW audit because she thought it was the focus of my research, this was well understood in all three wards.

I was undertaking fieldwork as a nurse researcher, which was a new experience for me, and I needed to remain conscious of this role and retain it throughout. I was carrying out the research overtly, wore a badge with my name, which stated 'Nurse Researcher', and was introduced to parents, children and other staff with this title. As Baillie (1995) warned, however, there was still the potential for role conflict because of my previous experience as a ward-based children's nurse, such as feeling guilty when nurses were busy and being aware that I *could* help them out. On the whole I resisted this, but did help with making beds and other simple tasks that did not interfere with fieldwork and even provided opportunities for data collection through conversation or informal discussion. Creswell (1998, p60) refers to 'reciprocity' and 'reactivity' in relation to fieldwork. Reciprocity is where the researcher considers the need for 'reimbursement' of participants in return for their willingness to be involved, and it could be argued that, by helping out on the wards, this was addressed.

However, I had to ensure that I did not breach the terms of my honorary contract.

There was one occasion in DGH/HDU when I left the ward slightly earlier than I had planned because I felt as though I had been 'left alone' with HDU and was also assisting on the ward. I also became aware that in LCSurg, because of the nature of the experience there, at times I sought information about aspects of care provision that did not relate directly to my research but would be useful for teaching purposes or my general interest. As a result, I had to be extremely careful about what information I collected and how I dealt with it to ensure that I remained focused on the fieldwork.

My background and previous experience may also have led me to make assumptions about the behaviours and events observed in the field. Holloway & Wheeler (1996) and Creswell (1998) discuss the 'emic' (participant or insider) and 'etic' (researcher or outsider) perspectives that may be recorded, and the importance of distinguishing between the two. There was a danger that I could take things for granted and report my own views on the culture and environment, and so it was essential that I 'checked out' my observations or interpretations with participants to ensure their views were represented faithfully. This was done informally in the field, by following up comments or observations with participants to ensure my understanding or interpretation of events accurately reflected their experiences. I also ensured my 'etic' perspective was acknowledged through reflection and recorded after leaving the settings each day and following the completion of data collection. The 'week out' in each round of fieldwork was another opportunity to reflect on and record

my interpretations and assumptions, which were discussed in supervision meetings.

5.6 Data collection and analysis

As already discussed, data were collected or generated (Mason, 2002) from a range of sources, including field notes, interview transcripts, documents and reflections on experiences recorded in the reflective journal. All these data were transferred to Word files as soon as possible, with the original substantive field notes (Burgess, 1984) in particular needing to be expanded; hence the importance of doing this while still fresh in my mind. Much of the writing of substantive and analytical field notes and reflections was carried out in the evenings on return home or to my accommodation, using a laptop computer. This also aided the process of data analysis; by reading, examining and making sense of the data, I was then able to focus my observations and questions accordingly the following day. Mason's (2002) term 'generation' of data was, therefore, more applicable to this study than mere 'collection'. I used the weeks between the periods of fieldwork for more in-depth analysis and interpretation, and was then able to plan for the next stage of theoretical sampling and focused or selective observations (Spradley, 1980).

The three types of reading described by Mason (2002), that is, literal, interpretive and reflexive, were employed with all sources of data. Coding was systematic, initially line-by-line and subsequently applied to 'units of meaning' (Richards, 2004) (see Appendix 4). Wherever possible, participants' own words were used as 'labels' for the categories, such as 'Feeling torn' and 'Giving them the evidence'. As part of the audit trail, analytical and methodological field

notes (Burgess, 1984) were written and added to the interpretations and memos to provide details of how decisions were made and categories developed. For example, initially, separate codes such as 'stress', 'frustration', 'competing demands' and 'role conflict' were identified, but links between these were recognised and the codes were subsequently combined to form the category 'Feeling torn'.

Although the data were not independently coded to demonstrate rigour in the analysis process, supervision meetings were used for 'data challenge'. This involved the interrogation of codes, memos and emerging categories by my supervisors, requiring me to explain and justify decisions and interpretations to their satisfaction and the consideration of alternative explanations. Records from these meetings were subsequently incorporated into methodological and analytical notes and memos.

Initially, coding was non-cross-sectional (Mason, 2002), with data from each ward being analysed separately. It soon became apparent, however, that the same categories could be applied to all three wards, and so cross-sectional analysis (Mason, 2002) was then carried out. This allowed for comparison of findings and interpretations across settings.

The process of data analysis and interpretation was not completed during the fieldwork time, but continued for an extensive period. I was granted a sabbatical from work, which allowed me to become 'immersed in the data' again and thus continue this process. Although I was not using computer software for analysis, all my data had been saved as Word files and I used the 'Spike' facility

(Burnard, 1998) to aid memoing and collate data relating to codes, categories and themes. The eleven categories were eventually organised to form three themes: the sick child's 'journey' to HD care in each of the wards, obstacles and facilitators to HD care. These are presented in the next chapter, accompanied by visual portrayals of the 'journey' and the factors influencing this in each setting.

5.7 Conclusion

This chapter has provided an overview of my experiences of undertaking fieldwork as a nurse researcher and has helped to set the ethnographic approach and findings in context. Three themes were identified and visual representations of these have been developed in an attempt to illustrate the relationship between the categories and themes in each setting.

In the next chapter, the findings from the Main Study are presented, followed by a discussion of the findings in Chapter 7. The final chapter discusses the implications of the study findings and offers recommendations relating to further research and the future provision of HD care in children's wards.

CHAPTER 6:   PRESENTATION AND INTERPRETATION OF FINDINGS

6.0 Introduction

The three ward settings were selected on the basis of differences in size and environment. However, during the process of data analysis and coding, it became evident that the emerging categories and themes could be applicable to all. Therefore, as described in the previous chapter, once the data for each ward had been analysed separately, cross-sectional analysis (Mason, 2002) was carried out to allow for comparison of findings across the settings.

Data were initially coded line-by-line and subsequently by 'units of meaning' and eleven categories were identified to classify the data. These were grouped into three themes, each of which contributed to an understanding of how HD care was accessed and provided in children's wards and, collectively, addressed research questions 2 – 5. The themes were: 1) the sick child's 'journey', 2) obstacles to high dependency care and 3) facilitators. When required, all three settings provided HD care for sick children admitted to the ward, but the categories and themes represented different aspects of the 'journey' and factors that facilitated or hindered progress (see Table 6.1). Themes 2 and 3, therefore, related directly to research question 5 but, together with Theme 1, also helped to address questions 2 – 4.

In the first part of this chapter, the categories and themes arising from the data analysis will be described. A synthesis of the findings will be offered in the second part of the chapter. This will include visual representations of the sick child's journey to HD care in the three settings with associated discussion.

Table 6.1: Summary of categories and themes

Theme	Category
1. The journey:	— Recognising deterioration
1) Skills	— Getting results
	— Giving them the evidence
2) Decision points	— HD care or HD child
	— Juggling staff
2. Obstacles	— They're not used to paeds
	— The normal workload
	— Feeling torn
3. Facilitators	— Nursing expertise
	— Shared care
	— Backup and support

A total of five male nurses volunteered for and/or participated in the study, but their reported experiences were similar to those of their female colleagues. In order to prevent identification of individuals and to maintain anonymity and confidentiality, therefore, throughout the chapter all participants are referred to as though they were female.

6.1 Theme 1: The journey

In each of the wards, sick children who required HD care received this from the nursing staff. However, there were a number of stages through which the child had to progress between admission to the ward and their 'arrival' at HD care. There were two aspects to these stages: 1) the use of specific skills and 2) decision points (see Table 6.1). The categories comprising each of these will be discussed under the corresponding heading.

6.1.1 Skills

1: Recognising deterioration

The category 'Recognising deterioration' was identified at an early stage in the analysis as a key issue and was also highlighted as an important skill in the focus groups. It was crucial that seriously ill children were recognised as such either on admission to the ward or as soon as their condition deteriorated in order to ensure that they received appropriate care promptly.

The importance of 'Recognising deterioration' was asserted in all three settings, and one participant expressed this clearly:

> 'I suppose the best skill you need is assessment skills and looking at children, and just knowing if you think they're well or if they've deteriorated, and obviously knowing that their vital signs are all within normal limits... Yeah I'd say the biggest skill you need is your assessment... and being able to react if you think something's not quite right.' (Interview 15, LCSurg)

'Recognising deterioration' was an essential skill that incorporated several aspects: observation, assessment, clinical decision-making and interventions. Originally, distinct codes were identified; however, the complexity of 'Recognising deterioration' led to difficulties in separating these out:

> '[the codes] are closely related to one another **and** linked to gut feelings/intuition. When I was observing care, it often appeared as though nurses – especially the experienced ones – moved straight from observations to interventions, as their responses were so fluent.
> When I actually asked them about what they were doing, nurses were able to articulate the steps in between, i.e. clinical assessment based on interpretation of qualitative and quantitative observations; and clinical decision-making based on observations/assessment/previous experience /knowledge/protocols (e.g. APLS) etc., resulting in appropriate interventions. This could all happen very rapidly, often within a few seconds, and most acted autonomously, although more senior nurses/doctors were informed. The role of others seemed to be more in terms of verification of what had happened, rather than them needing to 'take over'. (Analytical notes)

As a result, it was decided that this should form one large category rather than trying to simplify such a complex process by separating out the perceived elements. One illustration of this process occurred as fieldwork commenced one morning. On entry to the ward it was evident that an emergency situation had arisen and I was subsequently informed that a baby had had a respiratory arrest. Afterwards, the staff nurse caring for the baby was happy to describe the experience and for notes to be taken, but she did not want to be tape-recorded:

> 'She [the nurse] had been feeding the baby when his parents had arrived that morning. She had stopped to wind him and had turned the baby round to face his mum and dad while she did this, chatting to them at the same time. She had then turned him over again to restart his feed but noticed that his tone was different, he had suddenly become very floppy and "was not quite right" – he was unresponsive, whereas previously he had been gulping his feed. She lifted him onto his cot and his colour drained as she did so, "he looked ashen". She had her hand on his tummy and knew he wasn't breathing. With one hand she reached for the oxygen and with the other she pulled the emergency buzzer.' (Field notes, LCSurg)

By the time others arrived to help, the baby had responded well and was breathing spontaneously again. Another example of 'Recognising deterioration' was described in Interview 10:

> 'He was just having his lumbar puncture done and so I went and helped [the nurses]. He was, he didn't flinch at all, throughout the procedure and at this point I queried with one of the nurses that had been helping... whether he had a fluid bolus or not, because he looked like he could use one.'
>
> MD: 'How did he look?'
>
> Interviewee: 'He was very pale, quite mottled and just completely unresponsive. He was awake the whole time but just was flat. And he hadn't... had one [fluid bolus] downstairs [ED] so we did that straightaway... and initially the capillary refill was 4 or 5 ['normal' is 2 seconds or less] which you could see improving after he had the fluid boluses... After he had received the first fluid bolus he also started to respond a bit more, making a bit of noise when we were touching him, as if to say "get off!" (laughs) which was nice to see.' (Interview 10, DGHMix)

In order to gain a complete picture of a child's status so that a sick child was recognised, nurses had to acquire, process, interpret and prioritise a range of information. This included observations based on use of their senses such as looking at, listening to and touching the child as well as measurable recordings such as heart and respiratory rate, temperature and oxygen saturations. It was essential that these observations of vital signs were then recorded accurately on charts, as they provided a continuous and valuable overview of a child's physical state. Different charts were used in each setting, but their importance was universally acknowledged and the potential implications of incomplete charts were emphasised whilst I was observing care:

> 'J is on ½ to 1 hourly observations, but [Nurse] is unhappy about these and shows me his charts – no respirations recorded since 04.30 hours. [Nurse] tells me: "This is a boy who has reacted to morphine in the past when his respirations dropped to 8 [per minute]. He needed Naloxone to correct this several times." [Nurse] says she will phone the nurse looking after him on the night shift. She doesn't comment further but looks concerned and keeps a close eye on J for the rest of the morning.' (Field notes, LCSurg)

This was a worrying situation, because not only were the charts incomplete, so information was missing, but in view of the child's previous problems, closer observation should have been exercised than appeared to have occurred overnight. Fortunately, no harm came to J as a result but the night nurse was contacted and made aware of the omissions and further action was possible.

Some participants reported that a few of their medical colleagues focused too much on measurable observations, with junior doctors and surgeons in particular relying on recordings of vital signs on charts rather than clinical examination or an oral report from the nurse caring for the child. Although more experienced nurses and paediatric doctors also referred to charts, they did so

alongside clinical observations and discussions with the nurse delivering care. This was particularly important if the child had only been in hospital for a short period of time and/or trends in vital signs were not yet obvious.

In some cases, intuition or 'gut feelings' were also referred to:

> 'OK it's not in the textbook but gut feelings (laughs) all through my career, I've never really been wrong. When I think about, "Oh, I'll just go and see that child for a minute because I'm not particularly happy" and there has been something wrong. But... I might not go in to another child that I am happy with for a couple of hours... I can't put my finger on it... it's just a gut feeling.' (Interview 5, DGH/HDU)

The participants who mentioned 'gut feelings' in this study were all experienced nurses who used their intuitive thoughts to prioritise aspects of assessment or to find objective evidence to support their 'feelings' prior to making decisions about the actions necessary. In addition, these nurses often needed to 'guide' junior doctors in their assessment of a sick child to ensure that they were aware of all the factors involved:

> 'With the doctors, they've got to have their sats [oxygen saturation] monitoring. Yeah, their sats have been really high but... they're in 60% [oxygen] so they're puffing away, intercostal recession, and so their sats are 98% but something's going on somewhere (laughs). "You'd better call the gas men [anaesthetists]"' (Interview 6, DGH/HDU)

The ability to both collect and evaluate information in order to carry out a thorough assessment of a child, such as recognising the significance of increasing heart and respiratory rates despite the child being at rest was, therefore, essential if deterioration was to be recognised and managed appropriately. In the extract above, an experienced nurse was highlighting the importance of considering **all** aspects of observation including the context, i.e. 60% oxygen, and showing awareness of their significance. This information

was not always volunteered, but when prompted, other participants were able to describe their observations and the potential significance of them:

> MD: 'How did you recognise that she was really sick?'
>
> Interviewee: 'Well all of the respiratory signs were present, she had quite a (gestures to throat) high tracheal tug, she was very tachypnoeic and tachycardic, pulse was running from 165 to 210 which was constant, it wasn't sort of coming down with rest. She was sweating a little bit, OK it was humidified oxygen in the... headbox but I think some of it was her perspiration... but she was getting that waxy [look]... with the skin and she was vomiting back her NG [nasogastric] feeds. So we were trying to give her small amounts often to see whether that would help, but she just wasn't tolerating [them].' (Interview 1, DGHMix)

Clinical decision-making was a vital aspect of 'Recognising deterioration', leading on from assessment and informed by appropriate protocols or integrated care pathways. Decisions were therefore made with reference to a range of data sources. Nurses are responsible for making numerous decisions in practice every day and quality of care and patient outcomes are dependent on these decisions. Despite accepting that this is integral to practice, however, it is also recognised that clinical decision-making is a complex process involving diverse factors, including the collection of data from various sources, assessment of the significance of each element and judgement as to the best course of action.

The decision-making process also entailed planning interventions on the basis of information gleaned, or other outcomes such as transfer or retrieval. However, this stage was often not discussed overtly nor was this always obvious or observable:

> '[Clinical decision-making] is a really important stage in the process, but for most of the time, seems to be bypassed, with observations/clinical assessment moving straight onto interventions. This may be partly due to PLS/APLS training, so doctors and nurses 'know' what to do in response to certain signs and symptoms, yet there must also be some elements of processing the information... Some are better at it than

others, and also this 'ability' does not necessarily equate with length of experience or education.' (Analytical notes)

Although the use of research evidence to underpin practice is recommended, this may be difficult to achieve, particularly in acute settings where decisions have to be made rapidly and there may not be time to locate appropriate evidence. However, some of the clinical decisions observed during fieldwork or discussed in individual interviews were research-based through the use of clinical guidelines and protocols. These took various forms, including the use of a structured approach to assessment, e.g. APLS algorithms or 'ABC' (airway, breathing, circulation for basic life support), which were apparent in all three wards. Such algorithms also led to recommended interventions including cannulation, administration of oxygen, infusion of fluid boluses and/or further investigations such as blood tests. Although medical staff were responsible for the majority of these interventions, in an emergency experienced nurses sometimes acted autonomously and then informed doctors so that further interventions or investigations could follow:

> 'Obviously, if their [oxygen] saturations are dropping... the nurse would put their oxygen on and you would call a doctor straight away.' (Interview 15, LCSurg)

After prompt appropriate interventions, there was a need for evaluation of care and treatment, the final stage of the nursing process, leading back to re-assessment of the child. Evaluation is essential, as this identifies the response to and efficacy of interventions and provides a basis for re-assessment and decisions regarding further care and treatment. Despite its importance, however, written evidence of evaluation was variable, with only brief comments being made in care plans or pathways. Instead, ongoing evaluation of a sick child's response to treatment tended to be discussed between medical and

nursing staff directly involved at the time, and a summary of progress was recorded in the notes once the child's condition was stabilised.

'Recognising deterioration', as the first stage in the child's journey to HD care was, therefore, crucial, yet, as discussed above, this was also a complex process requiring the development of a range of skills, particularly of observation and assessment. Consequently, this stage was influenced by a number of factors, including 'Nursing expertise', 'They're not used to paeds' and 'Shared care', as will be discussed later. Once deterioration had been recognised, however, the child was able to progress to the next stage of the journey.

2: 'Getting results'

The 'Getting results' category was the next 'skill' in the journey following recognition of a sick child and referred to nurses using their communication skills to negotiate and convince doctors (and occasionally managers) of a particular course of action. This usually entailed a doctor coming to examine a child the nurse had concerns about or sanctioning the treatment or actions/interventions suggested:

> 'When the doctors came up [to the ward] they started him on oxygen [but] the nurses [were] pressuring the doctor to get him on HDU... so they did transfer him. But it was the nurses... the doctors would have kept him [on the ward] a little bit longer.' (Interview 7, DGH/HDU)

'Getting results' was, therefore, reliant on good communication skills and sometimes persuasion to enable the 'desired outcome' to be achieved.

Several situations were observed where nurses challenged medical decisions, especially those of surgeons or junior doctors, in order to succeed in 'Getting results'. Similar ways of dealing with problems in each centre were witnessed, i.e. referral by nurses to the registrar/consultant or, in the case of adult surgeons, to paediatricians:

> 'The paediatricians were involved as well, they were doing her bloods and everything... I got them involved because our surgical team, probably aren't quite so good at the blood-taking. And also... there wasn't a drip... they needed her electrolytes checking as well (laughs) on a daily basis (laughs) that can be really difficult.' (Interview 12, DGHMix)

Alternatively, ward staff would 'miss out' the junior doctor altogether and call the registrar or consultant directly if they had ongoing concerns about a child or did not think the junior doctor would understand or respond appropriately:

> 'I think sometimes I just go for someone I trust and someone I know I will get the results from, to be honest with you (laughs)... The registrars won't mind and if the consultant happens to walk past, well it doesn't matter whether it's their child or not, you just grab them and get them to come and help.' (Interview 2, DGH/HDU)

If necessary, nurses just instructed a doctor what to do, as in this extract where a child with a serious epistaxis following trauma required urgent treatment from the ENT doctor on call:

> 'I just rang the SHO to say that he would be receiving this child... within the next couple of minutes: "Get there, he's bleeding" because... the only way he could deal with him would be in the treatment room, save him coming to the ward and save time.' (Interview 5, DGH/HDU)

In the above example, the participant was experienced and in a senior position and therefore had the confidence to be assertive because she had developed 'Nursing expertise', which was acknowledged and respected by senior doctors who she knew would support her. More difficulty in 'Getting results' could be experienced by junior nurses who had not developed the same level of

expertise or confidence. However, when necessary they would also contact members of the paediatric team whom they knew well or inform more senior nurses, who would advise and/or advocate on their behalf.

Once a child had been examined or treated and it was agreed that HD care might be needed, they could progress to the next stage. However, there were occasions when the additional stage of 'Giving them the evidence' had to be negotiated before 'Getting results' was achieved and the child's journey continued.

3: 'Giving them the evidence'

The category 'Giving them the evidence' related to 'getting the message across' and was another important skill in terms of communication, particularly the choice of language, by nurses. Sometimes the child's journey progressed directly from 'Recognising deterioration' or the decision point 'HD care or HD child' to 'Getting results', whereas on other occasions, 'Giving them the evidence' was a supplementary stage that had to be surmounted. The language used to communicate information about a sick child was of considerable relevance, therefore, as this could, ultimately, determine the outcome, such as specific interventions or treatment.

'Giving them the evidence' was derived from the words of a participant who, in an interview, explained how she chose her terminology so as to ensure that the doctor to whom she was speaking understood the importance of the information that she was providing and would, therefore, respond:

> 'They [registrars] respond to you giving them... concise information you know, "this child, the recession is getting worse" or "they've now got

[tracheal] tug" or "the sats are dropping" or "they've had a brady[cardia] down to this" or "they're more agitated"... Or even "I'm not sure but they're getting worse can you come and check"... not kind of the long waffly spiel... It is like giving evidence really... "they are worse because" or, "this isn't getting better and...we've given Ventolin but the recession's getting worse" or "we've given the nebulised adrenaline, but their croup's really getting worse" (laughs)... I think it's more concise, short and, giving them the evidence, tends to work best.' (Interview 2, DGH/HDU)

Several strategies had been developed in the wards that assisted nurses in the use of appropriate language or 'evidence' to articulate their concerns. These included criteria for 'early warning systems', integrated care pathways for children with specific diagnoses such as asthma or bronchiolitis or protocols for individual children. In particular, the use of these assisted nurses in the DGH wards with doctors, especially from surgical teams, who had less experience with sick children and could not transfer the knowledge and skills they had developed with adult patients.

During fieldwork, participants in all three settings mentioned Paediatric Early Warning Systems (PEWS) for use in the wards and other departments dealing with children in order to alert ICU and/or the Lead Centre/PICU about seriously ill or injured children who might require transfer due to deterioration. The development of guidelines for PEWS, integrated care pathways or protocols was reliant on good working relationships and multidisciplinary teamworking, hence this category and the previous one, 'Getting results', were influenced positively by 'Shared care'. This enabled various healthcare professionals and departments to work together to agree criteria for dealing with a range of situations involving seriously ill children, the majority of whom would require HD care at some point.

A key aspect of the development of these criteria appeared to be empowerment of nurses by providing them with 'evidence' that enabled them to be more assertive with doctors. If they were unable to move directly to 'Getting results' once a sick child had been identified, these strategies helped them to articulate their concerns, i.e. choose the 'right' language to persuade doctors of the suggested course of action. In turn, this ensured that the journey could progress to 'Getting results', albeit indirectly, so that sick children were assessed and treated appropriately either before further problems arose or to stabilise their condition.

6.1.2 Decision points

1: 'HD care or HD child'

Deciding whether a child required HD care or was a 'highly dependent' child followed on from the 'Recognising deterioration' or 'Getting results' stages. This category was important because the decisions that were made at this stage affected the care the sick child received and how this was provided. It was vital, therefore, that nurses were able to identify whether the sick child required HD care or not and thus were given care appropriate to their needs.

Various definitions and explanations of HD care emerged during fieldwork, including the criteria for the SW audit (see Appendix 3A), because I deliberately did not give a definition of HD care to participants, instead inviting them to tell me what they understood by this term. Many of the nurses in the DGH wards were able to give examples of what they thought constituted HD care. These included children with diabetic ketoacidosis (Interviews 8 and 9), meningitis (Interviews 3 and 10), needing a fluid bolus (Interviews 5 and 11) or 'poorly' with

bronchiolitis (Interviews 1 and 2). They were also familiar with the SW audit criteria and forms.

By contrast, in LCSurg, few of the staff appeared to know about the SW audit and a senior nurse acknowledged that their wards were 'bad' at completing the audit forms. This may have been, as the ward manager asserted, because there were difficulties in 'labelling' some of their children using the audit criteria. With prompting, participants here were able to cite examples of children who had undergone major surgery, such as jaw reconstruction, splenectomy, osteotomy or removal of a ruptured or gangrenous appendix (Interviews 15 and 16), or with a 'new' tracheostomy or a chest drain (Interviews 4 and 15). However, a more common response was similar to this extract from an informal conversation with a staff nurse:

> 'I asked A about HD care on the ward and she was happy to talk to me about this. "We don't get a lot" she told me "unless you count the post-ops"... A thought about this then said that they do have quite a few post-operatively, "but only for about a day". She then realised and acknowledged that this would still count as HD care, "I suppose it doesn't matter how long it's for".' (Field notes, LCSurg)

The same confusion about 'HD care' and 'highly dependent' children arose during fieldwork as in the focus groups, based on the amount of nursing care required rather than severity of illness:

> 'A child who's not always really sick... They might be quite well but they just need a lot of input.' (Interview 17, LCSurg)

On the basis of previous experience in an HDU, one participant appreciated that some children could meet both criteria:

> 'Any of the kids [with] special needs that are requiring oxygenation in the winter, especially some of the babies that have multiple problems, sometimes they can have apnoeas, so they need close observation.' (Interview 1, DGHMix)

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However, even this participant also cited examples of children who required respite or palliative care and so were 'highly dependent' rather than in need of HD care due to acute illness.

Once a decision had been made that a child required HD care, they could progress to the next stage of the journey. For others, such as those identified as 'highly dependent', or who had received appropriate interventions at the 'Recognising deterioration' stage, had been stabilised and so were no longer critically ill, HD care was not necessary. As a result, they were cared for as part of 'The normal workload' on the ward, albeit with continuing observation in case of further deterioration.

2: 'Juggling staff'

When it had been agreed that a child required HD care, a decision had to be made about who was to look after the child and where. The label for this category was derived from the words of a participant describing the difficulties experienced in allocating nursing staff to care for the children on the ward, especially when any needed HD care. Concerns about staffing had been expressed in the focus groups and were raised again in most of the individual interviews conducted during fieldwork. In addition, discussions between staff and phone calls made to managers, the nurse bank and nursing agencies seeking extra nurses were observed. This category, therefore, included issues such as staffing levels (nursing establishment), skillmix, including the ratio of qualified: unqualified staff and allocation of staff. Data on 'normal' staffing levels were recorded in my field notes (see Table 6.2) and on the actual levels

Table 6.2: 'Normal' staffing levels in each setting

	Day shifts	Night shifts
DGH/HDU – 19 beds (includes 2 in HDU, 4 in oncology unit)	3 RN + 1 HCA	3 RN + 1 HCA or 2 RN + 2 HCA
DGHMix – 20 beds	4 RN + 1 HCA or 3 RN + 2 HCA	3 RN + 1 HCA or 2 RN + 2 HCA
LCSurg – 18 beds (normally 22 beds)	5 RN (7 RN when all beds open)	4 RN

every day of fieldwork, as this was an important part of the context and also emerged as a 'problem' early in the Main Study.

Concerns were expressed in each of the wards about staffing, yet perceptions of 'normal' or adequate numbers varied. For example, in both DGH wards, 'normal' was not ideal because they were 'under establishment' and had vacancies they had been unable to fill and so they had to cope with fewer staff:

> 'It basically stems from the problems that we've got on the ward anyway at the moment, which are understaffing generally because so many people have left at the moment.' (Interview 3, DGHMix)

All the ward managers appeared resigned to the fact that their establishment was unlikely to improve, especially if compared with the rest of the hospital:

> 'In an ideal world I would... have my numbers of nurses up to what they should be... because that would help enormously... But I do get up to establishment and then I fall back and then it is like a yo-yo the whole time, and I don't suppose **anybody ever** has a full establishment for very long because it's ...a question of essential movement really. (Interview 17, LCSurg)

The ratio of children's nurses to general/adult nurses was high in all three wards, with very few permanent staff not being RN (Child). However, in the DGH wards, attempts had been made to replace a percentage of the qualified staff with healthcare assistants to bring them into line with adult wards in the hospitals. This had been resisted as much as possible, but budgetary concerns were also a factor in these organisations.

All three settings relied on bank/agency staff to 'fill gaps' in the case of sickness or if there were too few staff to care for the children safely, but these would not necessarily be RN (Child). Skillmix was another problem, therefore, especially in the DGH wards. Skillmix relates to the ratio of different healthcare staff involved in patient care and has been associated with an increase in healthcare assistants alongside a decrease in RN numbers in wards and other settings.

Both staffing levels and skillmix had an influence on the allocation of staff, as this was dependent upon the nurses available for each shift. This was particularly relevant when there were children requiring HD care on the wards or in the HDU, as none of the settings had separate staff, they had to be taken from the overall numbers. However, greater awareness of what constituted HD care through involvement in the SW audit had led to some nurses considering that only those who had undertaken a recognised course should be responsible for this level of care. Even when a nurse had been allocated to care for a child requiring HD care, they often had to care for other children as well:

> 'Last week for example... we had a staffing crisis and I had two high dependency children plus five other children to look after. So I had to look after these other children with another trained nurse as well.' (Interview 11, DGHMix)

In each of the wards a Registered Nurse was always found to deliver HD care, but this could have an impact on 'The normal workload' and often required ongoing consideration to ensure the decisions made about 'Juggling staff' remained appropriate if circumstances changed.

All the sick children who required HD care in the three wards ultimately received this, but the progress of their journey could be facilitated or hindered by a number of influencing factors. The categories representing these factors will now be discussed according to the relevant theme: obstacles or facilitators.

6.2 Theme 2: Obstacles

1: 'They're not used to paeds'

Staff not being used to working with children was a commonly expressed concern, hence the label 'They're not used to paeds' for this category, derived from the words of a participant. Several participants encountered problems at times in dealings with medical and other staff less experienced with children. In turn, this could lead to difficulties for nurses communicating their concerns about deterioration in a child's condition and the potential for appropriate interventions to be delayed, which could have a considerable impact on the provision of HD care.

Difficulty with inexperienced junior doctors was an issue that arose in the focus groups and similar problems and situations were observed during fieldwork and described in individual interviews:

> 'It's very difficult when they change, because we get new SHOs and some of them have never had anything to do with children, or it's all very new to them. So you find... it could be an emergency situation and they'll be asking you what they should be doing.' (Interview 15, LCSurg)

In the following extract, the interviewee was describing nurses' concerns about a junior doctor's suggestions regarding the care of a very sick child just admitted with meningitis:

> 'The doctor did go in and said, "Oh well, he hasn't really deteriorated and he doesn't need to go anywhere else, we could put his observations to two hourly" (laughs), which obviously staff weren't happy to do. We continued on sort of 20 minute, half hourly observations... it was against the nursing feeling of how poorly he was and the nursing staff did continue to keep observing him.' (Interview 3, DGHMix)

As highlighted in the focus groups, many of the surgeons in the DGHs had limited experience of dealing with sick children and nursing staff had not developed the same level of trust and rapport that they had with paediatricians. Situations described during conversations with nursing staff were recorded in field notes:

> 'H tells me about her experiences on [ward] with surgeons, especially housemen and SHOs. She told me that several were "arrogant" and "won't listen", yet there were particular problems with drug dosages and fluids. The surgical doctors would write up either adult doses for the children (e.g. 1 gram of paracetamol for a five year old) or minute amounts. The nurses would query these and suggest appropriate doses but "they don't like it"... They are also reluctant to cannulate infants or try to use large or minute cannulae, despite advice from nursing staff. They often call on the paeds to come and cannulate for them.' (Field notes, DGH/HDU)

Participants also experienced difficulties with doctors from other areas such as the emergency department who were not used to dealing with children and, therefore, may not have managed treatment appropriately prior to the child's admission to the ward:

> 'We had a child in from A&E quite recently, who was seen by a locum senior house officer, who had a metal butterfly inserted into his hand because they couldn't get a vein. But instead of thinking they couldn't get a vein because the child was so sick... Sometimes they'll [A&E doctors] take blood off a sick child but not insert a cannula at the same time, even when you know that child's going to need fluids and might need pain management through intravenous means and that can be really, really difficult (laughs).' (Interview 5, DGH/HDU)

Problems could also be experienced with nursing staff. Following the transfer of a sick child to adult ICU, the nurse returned to the ward and expressed some frustrations to her colleagues:

> 'E said she "felt like a spare part on ICU". The baby was still her patient so she offered them help but they refused. She could see they were having problems siting the [oxygen saturations] probe and offered to help them but they said "no". They can't understand why this should be, but possibly the staff feel threatened because it's a child/baby. They know the ICU staff know what they are doing, but they aren't always sure about some things with a child, and don't seem to like to admit they don't know. "We're not in competition with them, everyone is there for the child".'
> (Field notes, DGHMix)

Misunderstanding of the role of 'resident' parents was also mentioned, with ward nurses stating that adult care managers assumed that this entailed less work for staff. In reality this often required more input due to the advice, support and education needed by the families of sick children.

'They're not used to paeds' was, therefore, an important influence on HD care, potentially acting as an obstacle to the sick child's journey. As highlighted above, the responses and actions (or omissions) of doctors or managers less experienced with children could detract from or delay progress and appropriate interventions and thus impact negatively on a child's access to HD care provision in the wards.

2: The normal workload

This category comprised key aspects of the social context, such as organisation of the ward, patient dependency and various 'routines' and 'rituals'. These included ward rounds, administration of medicines, admissions and discharges (or 'throughput'), procedures (e.g. venepuncture and cannulation), dealing with 'social problems', educating parents, paperwork/care plans, psychological care

and, in DGH/HDU, giving specialised oncology treatments. These were essential activities that ensured the wards continued to meet the needs of all the child patients and their families.

Initially, attempts were made to focus observations solely on the provision of HD care, but it soon became apparent that this was embedded in 'The normal workload' that comprised the social context of each ward. Issues such as ward rounds, care needs of children and families, paperwork and dealing with admissions and discharges continued, whether there were children requiring HD care or not. It was not always possible to separate out HD care from these activities, because they were inextricably linked, each having a direct impact on the other. As a result, the range of tasks and roles undertaken by nursing staff in a normal day were recorded to set the HD care in context.

'The normal workload' on each of the wards tended to be organised around individual patient needs. For example, medication was administered on an individual basis rather than a drug round being carried out, procedures were performed after appropriate preparation of the child and family and liaison with or referral to members of the multidisciplinary team or other agencies occurred when necessary. Psychological care of children and families was ongoing and the completion of paperwork such as care plans tended to occur when a child's needs were met or changed, especially at the end of a shift.

There were noticeable differences in the way some of these routine activities were carried out, however. In addition, the method of care provision or ward organisation, such as team or primary nursing, influenced 'The normal

workload', although all the methods observed were designed to facilitate individualised care. Patient dependency was another major influence on organisation of 'The normal workload', but was difficult for the ward staff to estimate as it could change from hour to hour. The numbers of child patients did not necessarily give any indication of the workload involved, as their acuity and/or activity level could vary considerably. As a result, a ward could be full but not perceived as 'busy' or, conversely, there could be several empty beds, but three or four children who were sick or had complex needs requiring considerable nursing input.

Bed or cubicle availability on all of the wards was a daily problem and the term 'bed-hopping' was used by a participant to refer to movement or transfer within the ward or hospital. This could also apply to transfer to other hospitals if there were no beds available in the ward for emergency admissions:

> 'We've actually had to close the ward down... and send them to [larger city] or have children waiting in A&E as if that was a ward whilst we could get beds.' (Interview 3, DGHMix)

'Bed-hopping' was sometimes seen as a break from the pressures of 'The normal workload', although this was usually undertaken by healthcare assistants under the direction of the nurse in charge. The preparation required before bed moves and the subsequent disruption caused to staff, sick children and families added to the workload, however, particularly if this was due to the admission of a child needing HD care.

It became evident during fieldwork that 'The normal workload' influenced the delivery of HD care, particularly in relation to 'Juggling staff'. Additionally, HD care provision could affect 'The normal workload' as well as leading to other

consequences (see 'Feeling torn'). Despite this, nurses observed and interviewed appeared to take HD care for granted and this was often accepted as 'part of the workload'. Indeed, it was acknowledged in all three wards that there was no choice about caring for seriously ill children, because 'there was nowhere else for them to go'. One commonly heard expression was: 'You just get on with it', because, although children requiring HD care were recognised as being very sick, it was expected that this level of care would be provided on the wards:

> 'We just had to look after them as best we could that day. We didn't get any [extra] staff so we had to make do with what we had, we had to get on with it, which wasn't ideal, but they got all the care they needed.' (Interview 11, DGHMix)

Although all seriously ill children received the care they needed, therefore, 'The normal workload' could present an obstacle to both the journey to and delivery of HD care in the wards.

3: 'Feeling torn'

As a consequence of having to care for very sick children, concerns were expressed about the impact that providing HD care for one or two children had on the rest of the ward. One participant reported that she felt 'torn' when caring for a child requiring HD care, which encompassed the practical and psychological effects of the competing demands she experienced:

> 'It's hard, because... you want to be out there helping them [colleagues], but, especially if they have periods of instability, the patient that you're looking after, you do know that you're needed in there for the family as well. And also when you're stuck in there you always need people to do your running to get your equipment for you if you need it, when they're trying to be looking after their patients on the ward as well... Even though you're just looking after one patient you're still impinging on other patients' care by taking members of staff away when you need a hand with things... so yeah, a bit torn I think.' (Interview 10, DGHMix)

As this extract demonstrates, nurses allocated to care for seriously ill children often felt pleased to be able to concentrate on giving this level of care, but were also aware of the extra pressures on other staff resulting from their 'absence'. In addition, they still had to call on busy colleagues to check medication, top up supplies and relieve them for breaks, which created further demands.

This requirement for nurses to balance the competing demands of HD care and other responsibilities had the potential to create role conflict, and some admitted to feelings of 'stress' or 'frustration' due to the difficulties these situations created. Dilemmas associated with balancing competing demands were particularly evident for more senior nurses, who recognised that, in view of their skills and experience, they should be looking after the sick child. However, they were also required to run the ward and so they either allocated junior nurses and tried to supervise them or attempted to take on both roles:

> 'I really enjoy [HD care] but if you're short-staffed it's very stressful. And if you're the most senior and the skillmix isn't very good then you need to have the high dependency patients, but you also need to be in charge of the ward, so it's a lot to juggle (laughs) and keep sane (laughs).' (Interview 15, LCSurg)

One ward manager admitted that she had decided to overcome the dilemma by no longer allocating herself to HDU, despite being the most experienced nurse on duty:

> 'I don't work in there [HDU] (laughs) very often any more because I don't feel I can be in charge of the ward and look after these high dependency patients.' (Interview 9, DGH/HDU)

Several participants described incidents and I also observed occasions where a seriously ill child received the nursing and medical input they needed immediately, but at the expense of other children on the ward whose care

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needs could wait. Whilst no child or family was ignored or failed to receive appropriate care, this was often delayed or parents were relied on or expected to provide more care than was ideal:

> 'If you have [HD] children, the other children on the ward suffer... Not in terms of, they'll get their medication on time, they'll get all their... essential care if you like, but they'll miss out on... having a chat with the nurses about what's going on that day, maybe not getting their bed changed until later in the day than you'd like to have done, having lunch a bit late, having no one to go and play with them and show them stuff... That's what happens as soon as anybody sick comes in... children on the ward will be left on their own, because they can wait, whereas obviously these children can't.' (Interview 9, DGH/HDU)

Nurses in all three settings highlighted the needs of families as well as their child patients and also the role that parents could play in the care of their hospitalised child. Many instances of psychological care and support for families were observed in all of the wards and several parents told me how much they appreciated the care that the nurses gave them as well as their sick child. Staff often expressed frustration, however, because they felt they could not always deliver the level of care and support that they wished because of other demands on their time, including provision of HD care. They were grateful to parents who were able to stay with their children, as this meant that they knew the children were being observed, but they also felt guilty about relying on families to undertake a role that they felt should be their responsibility.

Some participants commented on how HD care or facilities were perceived by parents, both positively and negatively. One stated that 'sometimes the actual words of high dependency freak parents out' (Interview 2, DGH/HDU) and the mother of a baby admitted to HDU who had spent some time in the neonatal unit did appear to be frightened of the monitoring equipment. The skill and

confidence of the nurse giving HD care were considered to be important factors in how this was perceived by parents:

> 'These children are very sick and it's important... to not under-estimate how parents feel. So that if parents have got confidence in the nurse, then that makes the child happier.' (Interview 16, LCSurg)

Nurses in DGH/HDU also remarked that the HDU could be 'reassuring' for parents because their child was receiving the 'extra' care and attention they required and they could stay locally rather than having to transfer to the Lead Centre.

'Feeling torn' had the potential to be an obstacle to the delivery of both HD care and 'The normal workload', but was experienced more as a consequence of the extra or competing demands of HD care provision. Nurses reported a range of negative feelings and acknowledged that the level of care provided was not always optimal, yet parents and children appeared to be satisfied with the care they received.

6.3 Theme 3: Facilitators

Despite the obstacles that could hinder the sick child's journey to HD care, there were also positive influencing factors that facilitated their progress. As with the obstacles, these incorporated both individual and organisational elements, and are discussed below.

1: Nursing expertise

The facilitating influence of 'Nursing expertise' on various stages of the 'journey' was observed in all three settings and in a range of situations. This category included attributes such as clinical experience, competence and confidence,

which were of particular relevance in HD care, where nurses had to recognise a sick child and act appropriately, often within a very short time period. Participants mentioned the importance of experience, competence, confidence, fluency of action, evidence-based practice, specialist knowledge and skills and use of opportunities to develop these further. Therefore, there were two key aspects to this category: a) acknowledgement and utilisation of nurses' existing experience/expertise in HD care and b) enabling nurses to develop and maintain competence, knowledge and skills.

The value of experience was discussed in the focus groups but was perceived as something that was acknowledged but not necessarily officially recognised or rewarded. This was one of the issues identified as requiring further exploration in the Main Study and was developed further here to include the demonstration of clinical competence and expertise leading to confidence in practice. The importance of confidence and competence combined with acknowledging one's limitations was highlighted by a staff nurse in DGHMix:

> 'I think I always have felt confident looking after the high dependency children because I'm quite logical in my approach to situations. I don't panic, because I don't feel that gets me anywhere, it's not good for the family as well as the child. ...I always ask... if I do feel I need an extra pair of hands or just some knowledge about something that I'm unsure of.' (Interview 10, DGHMix).

In turn, these attributes can lead to more abstract issues such as assertiveness, advocacy and empowerment. This could facilitate communication, with experienced nurses being observed 'Getting results' from doctors or managers more easily than junior staff. A ward manager acknowledged that this tended to be the reality in practice:

'If you're an experienced nurse and people know you, I think, rightly or wrongly, they probably listen to you more quickly and... perhaps a bit more.' (Interview 17, LCSurg)

Research questions 3 and 4 related to the skills nurses required in order to provide HD care and how they were prepared for this. Consequently, two of the questions posed in the interviews were: 'What skills are needed to provide HD care?' and 'How have you acquired your knowledge/skills in HD care?" (see Appendix 2K). Participants referred to several strategies, including: working alongside specialist nurses, good role models or mentors in practice, reflection on experience, research, scope for practising key skills on a regular basis and formal training or educational opportunities. During fieldwork, many of their examples could be verified, such as by observing junior staff being taught and supervised by more experienced nurses, questions relating to patient care being asked and answered, and referrals being made to specialist nurses or other members of the multidisciplinary team. These occurred through both 'official' channels and informally on an ad hoc basis.

Many of the skills highlighted in the focus groups featured again, in particular the importance of recognising the sick child and basic life support (BLS). Although APLS/PLS courses were seen as desirable, maintaining the ability to perform BLS competently was seen as essential:

> 'We're trying to get more [nurses] doing the three day APLS course which helps, of course... [but] we're hoping to get a dummy to practise BLS and bagging technique. That's a fairly essential key skill, really, for us, I mean you can do a heck of a lot with a bit of bagging, can't you? (laughs)'. (Interview 6, DGH/HDU)

Various other interventions were also identified and strategies for developing and maintaining competence were discussed and observed. In all settings, 'generic' skills including assessment, BLS, use of oxygen therapy equipment,

suctioning or monitoring of vital signs were mentioned. Additionally, the value of good communication, empathy and essential nursing care featured. More specific skills relating to the care of individual children with complex conditions such as endocrine, metabolic, oncology or specialised surgical problems were also identified as important. These included the management of chest drains, complex fluid and drug administration, traction and electrocardiography and, in the DGH wards, airway management and the increasing use of non-invasive ventilation were of particular relevance.

As well as training for specific skills or interventions, several participants from all three wards had undertaken recognised courses including HD, paediatric or neonatal intensive care modules with their local university, or APLS courses. For some, this had resulted in them gaining new knowledge, skills and confidence, whereas others had developed their existing understanding and proficiency further by studying the pathophysiology or evidence underpinning practice:

> 'I've been qualified for eight years now, so you get a degree of knowledge from that, [but] I've just done a three month course on the critically ill child, which I finished about a month ago. [The course] was great because... I actually had a chance to look at the way I nurse and why and actually look at the research behind the practice that we carry out'. (Interview 4, LCSurg)

> 'We're fairly lucky as a unit, a lot of people are going on the Acutely Ill Child module... so that is helping a lot. People come back completely different after they've been on that module (laughs) on how they clinically assess'. (Interview 5, DGH/HDU)

However experienced the nurses were, therefore, formal educational opportunities were seen as valuable. Organised study days, whether in-house or regional/national, were also highlighted as effective strategies, particularly for

developing underpinning knowledge of specific treatments/conditions such as airway management, care of the sick/injured child, cardiac problems or sepsis.

Despite highlighting the value of the courses and study days, most of the more senior nurses also acknowledged that education often had to be seen as a bonus rather than essential due to the financial costs and time involved. Organised training activities such as sessions on specific equipment provided by company representatives or opportunities for more junior nurses to work alongside an experienced nurse were identified as more accessible methods of developing skills.

Some form of learning 'on the job' was mentioned in every interview, with participants explaining how they increased their knowledge and skills in various areas of practice by observing experienced nurses or working alongside a mentor or role model. At times, some participants felt that they had been 'thrown in at the deep end' to a certain extent, but despite this they believed they had learned from the situation:

> 'I've learned a lot off people around me, and just generally getting on and doing it... You just have to face it and say, "Right, I'm going to do that, come and watch me do it". As horrible a feeling as it is to be made to do something, you have to do it (laughs) and then I think you do learn from it.' (Interview 13, DGH/HDU)

Effective use of quieter times for reflecting on practice situations or following a 'significant event' were also seen as beneficial, as were taking opportunities to search for information on the ward in books and journals or on the internet.

A range of strategies involving both education and training were therefore identified in all settings as suitable methods for acquiring, developing and

maintaining knowledge and skills that were deemed necessary for the provision of safe, effective HD care. No one strategy took priority, as these were often used in combination to ensure the best outcome in terms of 'Nursing expertise', which in turn had a considerable facilitating influence on the child's journey to HD care.

2: 'Shared care'

'Shared care' was a term used by several participants in DGHMix to describe a recent initiative for joint management of children admitted for general surgery between the adult surgeons and paediatricians. This enabled the majority of children admitted to the ward to have a paediatrician involved in their care and for more specific interventions such as cannulation or fluid management to be undertaken by doctors with greater experience of children:

> 'They [paediatricians and surgeons] work well together and it was both... in there [child's cubicle]... they had both been involved throughout... [Paediatrician] took it... that she needed to [change treatment]... and that's what she said to the surgeon, but he came round as well and it was all sorted out within half an hour.' (Interview 12, DGHMix)

However, participants in the other wards also referred to 'Shared care' when discussing more general aspects of multidisciplinary teamworking. This category, therefore, included co-operation and collaboration between and within professions and departments in each setting and reflected views expressed in the focus groups regarding 'Teamworking'.

There were numerous opportunities to observe 'Shared care', such as during ward rounds, telephone calls or conversations at the nurses' station and examples were also given in the individual interviews. The majority of these situations concerned 'collaboration' between nurses and paediatricians

(especially in the DGH wards), nurses and surgeons (all settings) or paediatricians and adult surgeons (DGH wards). However, interactions with other individuals (e.g. other healthcare professionals or porters) and departments (particularly ICU or A&E) and, for the DGH wards, the Lead Centre, also featured.

In all three settings, nurses described 'Shared care' as beneficial for staff, which in turn could improve care for children and families. Good working relationships were observed between the ward nurses and paediatricians in the DGH wards or paediatric surgeons in LCSurg and positive experiences were described in interviews:

> 'I've also had good experiences... with children... in that I have... either myself or my colleagues have expressed concern and we've been listened to. And we've had medical staff come and... sorting out the situation and we've worked together as a team, and the outcome has been great because the child got better, in front of our eyes.' (Interview 17, LCSurg)

In both DGH wards, nurses viewed their working relationships with paediatricians very favourably, particularly in comparison with working with adult surgeons. Differences were also observed, with nurses being on first name terms with paediatricians of all levels, but more often using titles, i.e. 'Mr' to address surgeons. This was perhaps inevitable, because, when children with medical problems required HD care, a paediatrician oversaw this and they were all examined at least once a day by a paediatric consultant. As a result, nurses were working with doctors who had specialised in the care of children and opportunities had arisen for shared responsibility and mutual respect for each other's knowledge and skills – important aspects of successful collaboration – to develop:

'I think the consultant knows we do that bit more if we really know them and they will take advice from us if they don't know. At the end of the day, the consultants are great, we can just ring them and say "Look, I need help, I'm not... happy with what's going on... can you just come and have a look". And they will.' (Interview 2, DGH/HDU)

In DGHMix, the introduction of the 'Shared care' initiative had led to improved teamwork, particularly if the nursing staff co-ordinated a child's care. Although 'shared care' between paediatricians and surgeons was less evident in DGH/HDU, being a medical ward, nurses did need to develop good working relationships with departments such as ICU. When they had a sick child in the HDU, liaison and teamwork with anaesthetic staff were important as they could enhance support for the nurses delivering this care. I observed telephone conversations and situations were described in interviews:

'I can certainly think of a few children who were reviewed by the anaesthetist from the intensive care team here... They phone and check how you are every hour or whatever and ask you what's going on and do you need any help and do you need any advice... (laughs). And to be honest [they] ask the nursing staff how they are as opposed to the medical staff because you're the person who's there at the end of the day.' (Interview 2, DGH/HDU)

The quality of working relationships or level of multidisciplinary teamwork affected the communication process. 'Shared care' was, therefore, a positive influence as it facilitated 'Getting results' and 'Giving them the evidence' and thus the decision-making process in the early stages of the journey. In turn, this eased the sick child's progression and enabled them to arrive at HD care more quickly.

3. Backup and support

'Backup and support' was another positive influence in all three wards, again facilitating the journey to HD care. Key aspects of this category were the availability of resources in terms of people and equipment and the management

and leadership skills of staff in more senior positions. All three settings had support above ward level from experienced managers who were also children's nurses, as well as supportive paediatric medical staff. Additionally, all the ward managers had developed excellent collaborative working relationships with senior medical staff and were passionate advocates for the children and families in their care.

Participants in both DGHs explained how their senior managers had assisted ward staff in acquiring more specialised equipment or improving the environment for HD care provision. However, they had also had to resist demands for nurses to take on additional tasks such as non-invasive airway support or blood gas analysis before they had received adequate preparation.

In LCSurg, the 'clinical co-ordinator' role provided 'Backup and support' to all the wards, as explained by two participants:

> "This was a G grade nursing post, and the clinical co-ordinators were responsible 24 hours a day, 7 days a week for bed management and staffing within the hospital. They were able to co-ordinate admissions to each ward, so could inform surgeons if there were no beds available in LCSurg, and arrange for children to be admitted elsewhere, but they could not actually cancel admissions. They could also deal with staffing problems and received copies of off duty rotas from all wards; they could then 'forecast' the need for bank/agency staff in advance. If someone went sick, they had some idea of the likely impact and could assist with obtaining bank staff, although the ward staff often had to make the phone calls.' (Field notes, LCSurg)

Although some individual co-ordinators were more supportive than others, nurses in LCSurg were observed telephoning about shortages of beds, staffing on the ward and transfers from other hospitals, which were subsequently dealt with by the clinical co-ordinator. One interviewee highlighted the assistance provided the previous evening:

'I spoke to the clinical co-ordinator and explained that I wanted to close more beds, of course she said "no" which I expected (laughs). But what she said was that we could stagger our admissions.' (Interview 4, LCSurg)

The support resulting from multidisciplinary teamworking was discussed in 'Shared care', but participants identified other staff and departments who provided 'Backup and support' in emergency situations:

'If children are involved and they need resuscitation, as soon as people know that it's children, the anaesthetists or intensive care managers will all come down very quickly.' (Interview 3, DGHMix)

The 'climate' of the wards was perceived to vary according to who was in charge on a shift, with nurses using words such as 'calm', 'unsafe', 'frantic' or 'quiet':

'The ward seemed to be calm and organised, and [staff nurse] agreed and said it came from [ward manager] who "keeps calm, doesn't panic" so the ward was well organised... The ward was busier that day... but I noticed how [senior staff] thought ahead and planned for changes and admissions, so... the ward was manageable and staff got their breaks.' (Field notes, LCSurg)

The 'climate' when a child requiring HD care was admitted also appeared to be influenced by the individual doctors involved:

'The scene is quite often set by the people who are there. I remember various occasions where children have come in and a doctor who's new and stressed and... the whole of the atmosphere just climbs up the walls (laughs). Whereas you get someone else where you have to resuscitate or whatever, a really, really sick child and have a calm, collected team and it all goes really smoothly.' (Interview 2, DGH/HDU)

Variations in 'ward climate' were influenced by the leadership and/or management styles of individuals in positions of responsibility and in turn could affect the culture of each ward. Leadership and management aspects could, therefore, exert a positive influence on both 'Juggling staff' and the actual

delivery of HD care. As a result, this category had a facilitating effect on the child's journey to HD care and its provision in each setting.

6.4 Summary

The categories and themes comprising the child's journey to HD care and the influencing factors have been described above and it became apparent that these could be applicable in all three settings. The relative importance of each differed between the wards, however, even though all sick children who required HD care received this. The journeys, provision of HD care and influencing factors in the three settings will be discussed in more detail in the next section of the chapter, accompanied by visual representations of the child's journey to illustrate the variations identified.

6.5 Comparison of settings

In the previous section of the chapter, the categories and themes that were developed following cross-sectional analysis were presented. This section highlights how, despite similarities being found, differences between the settings were also evident and had an impact on the journey to and provision of HD care. Some differences, such as physical environment and type of ward, were inevitable because the settings had been selected for fieldwork on the basis of their diversity; however, others were also observed. For example, although many of the routine activities in 'The normal workload' occurred in all three wards, there were noticeable variations in the way these were carried out. Illustrations of differences included 'single checking' of medication (apart from intravenous or controlled drugs) by one RN (Child) in DGHMix, whereas both DGH/HDU and LCSurg continued the practice of two RNs checking all

children's drugs. In the DGH wards, a play specialist was normally involved in preparing children for surgery or other procedures, whereas nurses usually took responsibility for this in LCSurg, as no play specialist was based on the ward. The organisation of care, such as team or primary nursing, also influenced 'The normal workload' and varied slightly between the wards.

Despite the presence of similar stages and influencing factors, therefore, the child's journey to HD care was different in each setting, attributable to the contrasting contexts of care and culture of the wards and hospitals. These variations are presented in the following sections, where the child's journey to HD care in the three settings will be discussed and illustrated by a visual representation of the process.

6.6 DGH/HDU

DGH/HDU was a children's medical ward and was the only one of the three settings with an HDU. It could be argued that this should have facilitated the journey to and provision of HD care. However, due to a range of factors, including the physical environment, staffing levels and context of the ward, this was not always the case; a number of stages had to be negotiated on the journey (see Figure 6.1). The child's journey to and provision of HD care in DGH/HDU will now be discussed, with reference to Figure 6.1.

6.6.1 The child's journey to high dependency care in DGH/HDU

The majority of admissions to DGH/HDU were emergencies, either via the emergency department (ED) or, more often, by GP referral directly to the ward. Only a few children were 'booked' admissions, usually for blood tests or

chemotherapy on weekdays, and so it was very difficult for the staff to plan ahead:

> 'Having GP admissions straight onto the ward, that is definitely [challenging], because we get some sick kids that are phoned through from GPs who say they're absolutely OK [but are very sick]. The ward in general can be like a more mini A & E.' (Interview 13, DGH/HDU)

HD care was, therefore, usually required for medical emergencies, such as respiratory problems or diabetic ketoacidosis, when the child would be transferred to the HDU. If a child requiring surgery needed HD care, because of the distance from the main hospital they would not go to HDU, but would either be managed on the ward or transferred temporarily to post-anaesthetic recovery or adult ICU/HDU, which were nearby.

DGH/HDU also contained a separate, purpose-built unit for children with cancer. These children were not admitted to HDU, yet a) were often very sick, b) required special skills to care for them and c) were in a separate part of the ward. As a result, they were an important part of the context for this setting, because they had an impact on 'The normal workload' and 'Juggling staff' as well as the provision of HD care.

Nurses here were able to develop skills in 'Recognising deterioration' because this was an everyday experience for them. Additionally, several had undertaken APLS courses or HD modules at the local university and so had developed their knowledge and skills, thus contributing to 'Nursing expertise'. A staff nurse who had only been qualified for one year but had regularly cared for sick children in HDU referred to the importance of using a structured approach to assessment: "obviously your ABC is always in your mind (laughs)" (Interview 8). Several of

Figure 6.1: The sick child's journey to high dependency care in DGH medical ward with HDU

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Facilitators

Nursing expertise

Shared care

Nursing expertise

Backup & support

GP

Giving them the evidence

Ward

Sick child on ward

Recognising deterioration

Getting results

HD care or HD child

YES

Juggling staff

HD Unit

ED

NO

Transfer/retrieval

Obstacles

They're not used to paeds

The normal workload

Feeling torn

Legend: ◯ = Start/end point of journey   ▭ = Skills   ◇ = Decision points

the more experienced nurses also commented on "the old mantra of ABCD" (Interview 6) and the importance of "just [using] your ABC approach all the time, and as long as you can use a structured approach then you're laughing really" (Interview 13).

'Shared care' influenced 'Recognising deterioration', with nurses contributing to all aspects of this process and the good relationships with paediatricians and the generally positive experiences of communication emanating from their collaboration were identifiable. However, the negative influence of 'They're not used to paeds' could hinder all three of the skills points. An experienced nurse described how she would deal with junior doctors who refused to listen to her concerns or suggestions:

> 'I just tell them, very politely (laughs)... For example, recently we've had one or two tricky customers and I just say "Fine, I'm telling you and I shall write in my documentation that I have informed you that this is best practice".' (Interview 6, DGH/HDU)

Although no adverse incidents were directly observed, there was potential for this:

> 'The SHO on call is a locum with limited experience of paediatrics, although he does have some neonatal experience. He has been asked to take blood from a couple of children, but [Nurse] had to intervene. She overheard him asking whether to use a butterfly or a broken needle when taking blood from a toddler. She followed him to the treatment room and warned him that the use of a 'broken needle' was now considered 'unsafe practice' and was supported in this by [registrar].' (Field notes, DGH/HDU)

One way of attempting to overcome problems with inexperienced doctors and communication was the development of integrated care pathways (ICPs) for bronchiolitis and asthma and protocols for individual children with complex conditions. These were multidisciplinary, with contributions from medical, nursing, physiotherapy, dietetic and other healthcare professionals being

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encouraged. Participants stated that this had led to better communication between medical and nursing staff and their use was observed on a number of occasions. These were, therefore, effective examples of the influence of 'Shared care' on 'Getting results' and 'HD care or HD child'.

However, 'They're not used to paeds' could also influence communication because, for this to be successful, both parties needed to be involved fully. For example, during a morning ward round in the HDU, the paediatric consultant questioned the rationale for non-invasive ventilation being set up for the child during the night. The junior doctor on-call explained, with reference to the criteria in the ICP, but this had not been documented. On further questioning, the doctor admitted that he had relied on the nurse to set this up and record the information and she had done so in the 'variance' section of the ICP. The consultant insisted that, as the doctor had taken the decision, he should have documented all the information leading to the intervention, which included blood gas results and deterioration in the baby's respiratory status, in the ICP. This demonstrated the consultant's support for nursing staff and the appropriate use of the ICP and thus the value of 'Shared care' and its influence on HD care.

Criteria for admission to HDU had been developed alongside those for HD care in the SW audit, so progression from 'Recognising deterioration' to 'Getting results' should have been unproblematic, yet 'Giving them the evidence' was often required first. Nursing staff regularly had to remind junior doctors of these criteria and argue their case with reference to this evidence. However, once the child had been examined and appropriate interventions given, it was then easier to decide whether they needed HD care or could stay in the main ward.

When agreement had been reached that a child needed to be transferred to HDU, decisions had to be made about who would deliver the care. 'Total patient care' was practised in DGH/HDU, with each member of staff taking responsibility for the care of four or five children for the duration of their shift. This included healthcare assistants, but RNs supervised them. Because the cubicles and bays were spread out and the HDU and oncology areas were self-contained, it was difficult to 'share out' HD care.

Staff were aware of the recommendations on staffing for HD care, but there was often no choice; they had to cope with the nurses available on a shift. Various strategies had been attempted or suggested, but these were met with varying degrees of acceptance or success:

> 'For a short period we had particular nurses who would... be assigned to HDU for that day. That hasn't been able to carry on, so now they're one of the ward numbers. If an HDU child comes in then they move into HDU and the other children get re-allocated, otherwise, somebody would be around all day not really doing the... level of patient care and nobody coming into HDU, we haven't got the staff to do that.' (Interview 9, DGH/HDU)

The issues of staffing HDU and the potential for de-skilling were closely related. Although various strategies for staffing the HDU had been attempted, partly due to funding problems but also in an attempt to prevent de-skilling, it was eventually decided that staff would be taken from the ward establishment on an ad hoc basis. A rotation scheme between the three children's wards was also in operation, allowing more nurses to develop skills in HD care, but this was not always recognised:

> 'I worked upstairs on the baby unit last winter and HDU was down here... it felt like every baby that was admitted with bronchiolitis that got [sick] would get transferred down and then not come back up again until they were ready to go home... it made you feel very de-skilled upstairs. (Interview 2, DGH/HDU)

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Additionally, the children with cancer required specialised input that could only be provided by staff with appropriate skills and experience. An RN who had been qualified for only a year told me that HD care was preferable to oncology because it was more straightforward if you used a systematic approach, whereas extra training and skills were needed for oncology:

'In general I've only gone into the high dependency bit when there's been short staffing or something... One night that springs to mind there was two children in there (points to HDU) and there was only two trained on and there was also... three or four oncology patients. I'd much rather have been in high dependency than having to do (laughs) the oncology so it was just the way the ward worked.' (Interview 8, DGH/HDU)

Perhaps because of these extra demands on staffing, in comparison with the other two wards, DGH/HDU always tended to 'feel' busy and short-staffed, and, whichever nurse was in charge, attempts to find additional staff were observed on almost a daily basis.

6.6.2 High dependency care provision in DGH/HDU

This DGH children's medical ward was the only one of the three settings that had an HDU. Despite some of the practical difficulties experienced in terms of staffing, size of the unit and limited availability for admissions from the children's surgical ward in the hospital, nurses identified several advantages of having an HDU. These included having the appropriate space and equipment to hand, being able to keep children in the local area for longer, better recognition by nursing and medical staff of a child who was sick and possibly, improved quality of care:

'Thinking back to when we've had some fairly flat children in, it's been a nightmare in the cubicles, just the sheer logistics of getting equipment in there. The beauty of the HDU is when you get your [sick child] in and everything's there, set it up and it's away, it is easier'. (Interview 6, DGH/HDU)

Other benefits included recognition by parents and others that nurses working there could not be 'disturbed' because they were caring for seriously ill children. This contrasted with the perceptions prior to the opening of the HDU:

'Other parents... don't come in, asking you for anything... whereas when they were out on the ward, I think you [the nurse] were seen as being out there, you were asked everything because you were there (laughs). You were almost the easiest port of call because you were there all the time (laughs) so you almost got the worst of both worlds really'. (Interview 2, DGH/HDU)

The new equipment in the unit was also valued, although on occasions items were 'borrowed' for use in the ward and not always replaced immediately, leading to problems if a child was admitted to the HDU. One of the nurses involved in setting up the unit showed me a separate store cupboard where spare equipment and resources specifically for use in the unit, such as continuous positive airways pressure (CPAP) tubing were kept. However, although the unit was well-equipped, the rest of the ward had no piped oxygen or suction, adding to the obstacle of 'The normal workload'.

One of the questions asked in interviews related to the impact of having an HDU, as this was one of the issues identified for further exploration in the Main Study. Nurses in DGH/HDU were able to respond based on actual experience and one participant immediately commented on the negative perceptions of the HDU, despite the positive aspects previously identified:

'There are differing attitudes, some people would suggest that it's not needed. I've heard it said, "We coped before with the same patients, and all the money that's been spent on it, perhaps it wasn't needed". Other opinions are that it's elitist, that certain members of staff treat it as if it's the be all and end all (laughs)'. (Interview 8, DGH/HDU)

Another participant, describing the impact that the opening of an HDU had on some staff, used the phrase 'getting round the label' to highlight how, as a result

of the new facilities, HD care was seen as something 'different'. These views were echoed by others, who pointed out that this was 'nothing new', they had always looked after very sick children on the ward and even 'specialled' at times. However, rather than viewing the HDU as helping them to provide a better standard of care because of the extra equipment and designated area, I was told that some nurses had become 'scared' of caring for these children because they were now admitted to an area labelled 'HDU'. Only a newly-qualified nurse directly expressed this view to me and her 'fear' of HD care related to lack of experience. She also told me that there were two main perspectives of the HDU: people were either happy with it or not:

> 'People are scared of working in there, but they're pushed to go in there but on the other side, people who do work in there and are confident in there [say], "Oh, it's just got HDU written there, it's a cubicle on it's own, it's nothing", like it's not high dependency. I think there seems to be a big gap, there's not really a middle ground.' (Interview 7, DGH/HDU)

Airway management and the increasing use of CPAP were of particular relevance, and some participants expressed concern that they might be expected to extend their skills or use new equipment with inadequate preparation, as had happened prior to the opening of the HDU:

> 'There are times when, like with CPAP, you're completely thrown in at the deep end and you just have no choice. The first night we put a child on CPAP there was no high dependency as such. Special Care came across, one of the Staff Nurses from there and brought the CPAP driver and set it up and showed us how to use it and they were really good.' (Interview 2, DGH/HDU)

This situation had arisen as an emergency one night, when the adult ICU had been full and the Lead Centre had refused a transfer because they were also too busy. Fortunately, the paediatrician on call had assisted with the baby's care and the Neonatal Unit was not far from the ward, and so they had coped. Training on the use of the CPAP driver was initiated for the nurses caring for the

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baby by a consultant the next day and over subsequent weeks. Training programmes were also set up when the HDU opened the following year. The maintenance of skills was another concern, however:

> 'We trained everyone how to use it and why we were doing it... It's coming up to bronchiolitis season now and a lot of people are a bit worried about doing CPAP again, because they've not done it for a whole year.' (Interview 2, DGH/HDU)

One of the managers also highlighted this problem during an informal discussion on the ward. She acknowledged that, although staff were receiving training on new equipment, they needed regular updates, especially if they did not use the equipment or skills on a regular basis.

To assist with this, a designated Training and Development Officer had recently been appointed part-time for the children's wards. A teaching session about a new humidifier and mask for children who were too big to use or unable to tolerate a headbox for oxygen therapy was held one afternoon in an empty cubicle. As the ward was quiet that day this session was repeated so that all staff on duty were able to attend. This rarely happened, however, because many of the staff, including the Training Officer, worked part-time; therefore, there were difficulties in ensuring that everyone received updates or training on new equipment.

For others, the new equipment such as the 'posh monitor' in the HDU was daunting, and one participant explained that staff were not fully informed about the unit and why it was needed; this may have led to nurses viewing HD care differently:

> 'I really feel that people weren't kept informed of why we were having it [HDU]... Even for me working here and having an interest in it... to

suddenly be faced with one and have all this equipment moved in and the building work done in there, it just sort of hit us that there was this new built unit (laughs).' (Interview 13, DGH/HDU)

Participants also expressed concerns that measurable observations could take precedence if a child was attached to a monitor, especially if nursed in HDU, with staff becoming 'machine attached' and 'forgetting to look at the child':

'I quite like the HDU but on the other hand, people get machine attached. I mean... I like sticking things on people in terms of monitoring when you need [to], but when you know they're stable, I think they then become a biohazard (laughs) in a way, because you don't use your eyes, you don't use your five senses, you go on the machine there, which is there to assist you but not to replace your observational skills.' (Interview 6, DGH/HDU)

Due to the distance of the children's ward from the main hospital building, difficulties arose if the condition of a child in HDU deteriorated and they required intensive or more complex care and treatment. The consequences of having a child who was receiving HD care deteriorate further and require airway support were explained clearly by an experienced nurse:

'So you have to call them [ICU anaesthetists] to intubate, down in our neck of the woods. And some anaesthetists get awfully scared, bless them and a little bit irritable... Because although they are a consultant and they anaesthetise every day, they don't anaesthetise sick children, and that is a different ballgame. And some of them come down and, you know sweating buckets because they're winging it, basically, they're out of their environments and they're scared.' (Interview 6, DGH/HDU)

Although retrieval by the Lead Centre was an option, transfer to the adult ICU was still necessary because the team did not retrieve from the wards. The practicalities of transferring children needed careful consideration, as this involved other personnel, including porters and the ambulance service:

'It's a nightmare getting children to Intensive Care when you have to. You have to find an ambulance and a paramedic crew and an anaesthetist and an intubation box (laughs) and bag and mask, you know anything you're going to need you have to take with you and pray till you get there, basically.' (Interview 2, DGH/HDU)

Transferring children out of HDU onto the main ward could also create problems and often resulted in other, less sick children being moved so the child from HDU could be within sight of the nurses' station or in a cubicle.

As well as the difficulties highlighted above, having an HDU and providing this level of care for a child had a direct impact on 'Juggling staff' and 'The normal workload', because there was no separate staffing establishment for the HDU. If a sick child was admitted to HDU, a nurse had to be taken from the overall staffing numbers to care for them, thus putting more pressure on the remaining staff to meet the needs of children and families in the rest of the ward. This was exacerbated if the nurse in charge had to staff HDU and could lead to role conflict. Additionally, this situation frequently resulted in bed-hopping, problems with providing family-centred care and also led to the nurse allocated to HDU 'Feeling torn' due to the competing demands and stress engendered for her and her colleagues.

Another aspect was the issue of 'getting round the label', which arose due to the 'new' perceptions of HD care arising from the opening of the HDU and the consequent concerns of some nurses about providing this level of care. This may explain why negative views of HDU or HD care were only elicited from participants in this ward. Although opportunities were available for staff to acquire skills through both education and training, and there were experienced and specialist nurses who could provide nursing expertise and support, some still did not appear to feel adequately prepared.

Despite familiarity with the criteria for HD care in the SW audit, an area of potential confusion in DGH/HDU was the care of children with cancer or leukaemia. These children were often very sick and met the HD criteria on the basis of complex fluid management or other interventions, but because they were nursed in a separate unit they were not usually considered to be in need of HD care:

> 'I think our biggest problem are the oncology children... when you get sepsis with meningococcal septicaemia, you put them in HDU. But I think they forget that the neutropaenic fever is actually a haematological, HDU situation... So it's kind of an odd category, that's where some of the problems arise, because I don't think people realise how sick that group of people are.' (Interview 6, DGH/HDU)

The special circumstances of these children clearly illustrated the confusion surrounding 'HD care or HD child', because they met both criteria. Comparisons could also be made between the HDU and the four-bedded oncology unit in terms of size, facilities and whether or not it was purpose-built, as was the case with the latter. Some of the differences related to funding, i.e. the oncology unit received charity funding, some money from the League of Friends and commitment and support from families/friends and the general public, possibly due to this being for children with cancer. As with other forms of chronic illness, where there is a need for longer-term care, these parties may become involved and help to push things forward, particularly if they help with fundraising. Publicity may also be gained if money is being raised to help children with disabilities or who are unwell. By contrast, the money for the HDU came from 'winter pressures' money, i.e. taxation, and therefore the unit would have had less financial support from families, except perhaps in raising money for specific pieces of equipment. As a result, staff and families may have had less commitment to the development and maintenance of a unit in which they

had no direct involvement, although problems with staffing were similar for each. This could also explain why it tended to be viewed differently and was constructed differently, i.e. by converting two existing cubicles rather than purpose-built.

Despite the advantages associated with having an HDU and the positive influence of the facilitating factors, therefore, the child's journey to and the provision of HD care were not entirely uneventful in this setting. At several stages in the journey, obstacles had to be overcome and the practical difficulties of the ward environment and staffing levels and the negative perceptions of 'getting round the label' added to these. The complicated journey experienced by some sick children and the difficulties encountered once they had been admitted to HDU in this ward suggest that the opening of an HDU is not unproblematic and such developments need careful planning to ensure all potential obstacles are overcome.

6.7 DGHMix

DGHMix was a mixed speciality ward, the only acute children's ward in the hospital. The journey to HD care was similar to that in DGH/HDU, but there were a number of differences in the stages and influencing factors, illustrated in Figure 6.2 and discussed below. There was no HDU on the ward, so the provision of HD care also differed, but, in accordance with the DH (1997b, 2002) recommendations, HD care was still offered here for any child that required it.

6.7.1 The child's journey to high dependency care in DGHMix

Care was provided in DGHMix for children who had medical conditions, following trauma or who required surgery, with a mix of elective and emergency admissions. The ward was supposed to take a maximum of five children for elective surgery each weekday, but these were 'shared' between the different specialities such as ENT, orthopaedic and general surgeons. In addition to these, DGHMix also received medical, surgical and trauma emergencies via the emergency department or at the request of local GPs.

The 'throughput' of children here could be considerable; it was not unusual for the ward to be 'overflowing', with 24 or 25 patients officially admitted to a 20-bedded ward. This was managed by using beds designated for children on overnight or weekend leave to accommodate emergencies on a temporary basis, in the hope that some children would be discharged later in the day, thus 'freeing up' the beds. HD care in DGHMix could be required for medical, surgical and trauma emergencies as well as for any children whose condition deteriorated after admission.

As in DGH/HDU, because the ward was always 'on take' for emergencies, nurses had developed good skills in observation and assessment to aid with 'Recognising deterioration'. Some had also undertaken HD modules at the local university, thus opportunities were available to develop knowledge and skills, components of 'Nursing expertise', further.

During fieldwork, a Paediatric Early Warning System (PEWS) was developed in the hospital for use in all departments dealing with children in order to alert ICU

and/or the Lead Centre about seriously ill or injured children who might require transfer due to deterioration. The PEWS criteria were based on physiological parameters including respiratory and heart rate, capillary refill time, systolic blood pressure and temperature and also accounted for differences in age and stage of development. Additionally, criteria from the SW audit such as fluid bolus, Glasgow Coma Score of less than 12 or IV aminophylline for asthma were incorporated. Nursing staff and paediatricians from DGHMix had been involved in this development, along with interested staff from departments such as ICU, theatres and emergency department.

Nurses in DGHMix were familiar with the SW audit and most of the criteria and knew their local 'audit nurse' because she was based on the ward. This audit nurse was particularly good at reminding staff about completing forms (see Appendix 3B) and had considerable support from nurses on the ward and in other departments. She also assiduously distributed, checked and collated the forms before sending them to the audit co-ordinator.

As a result of their familiarity with the audit criteria and use of the PEWS, nurses here appeared to be more successful at 'Getting results' than those in DGH/HDU, although the supplementary stage of 'Giving them the evidence' was also required at times. The PEWS criteria emanated from multidisciplinary teamworking that contributed to 'Shared care', which facilitated the child's progress in the journey to HD care and had a positive influence on 'Getting results' and 'HD care or HD child'. This was particularly evident when dealing with paediatric doctors, where nurses were happy with their communication and interactions because this usually led to the 'desired outcome'.

Figure 6.2: The sick child's journey to high dependency care in DGH mixed speciality ward
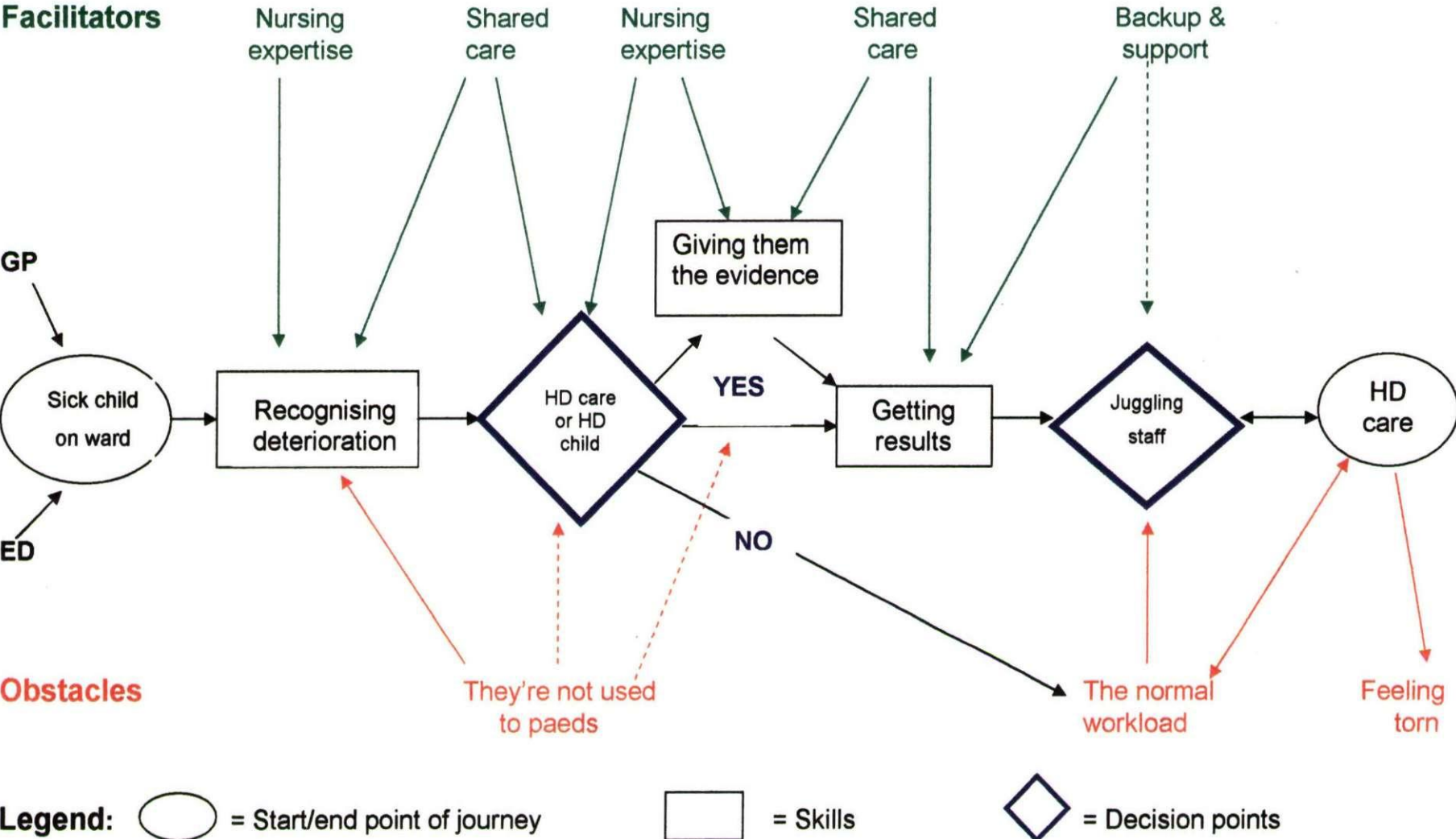
The level of rapport could determine whether or not nurses' judgements at these stages were trusted by medical staff. This was illustrated in exchanges between junior doctors and/or nurses, where it was evident that most of the surgical team would seek advice from paediatric colleagues, not nursing staff, in contrast to paediatric doctors. Problems were associated with junior doctors, however, due either to their lack of experience in dealing with children or because the same level of trust had not been developed:

> 'E told me that they can have problems with paediatric SHOs when they are fairly new as they do not always recognise 'sick' children and are reluctant to make decisions or trust the nurses, so it is often necessary to call the registrar. The nurses are happy to do this if they are not happy with the SHO's decision.' (Field notes, DGHMix)

Despite some difficulties, the policy of 'Shared care' between the paediatric and surgical teams had resulted in these nurses having more positive experiences with surgeons than those in DGH/HDU. This was not all positive, however, as problems with some adult doctors and managers and other departments in the hospital, as discussed in 'They're not used to paeds', were also apparent.

Surgeons in DGHMix did not always inform nursing staff that they had been to see a child and their visit was sometimes only discovered through a chance remark from a child or parent or by finding a new entry in the medical notes. One way of attempting to overcome this problem was the use of shared documentation. This meant that nurses wrote in the medical notes; however, doctors rarely, if ever, consulted and certainly did not write in nursing care plans. Additionally, although there was a 'bed manager' whose role involved co-ordinating elective admissions, some surgeons (notably one orthopaedic consultant) telephoned the ward directly in an attempt to bypass the system and ensure that 'their' patients were admitted rather than those of colleagues.

Other less positive experiences were also observed and described in DGHMix. A senior ward nurse explained how she had attempted to improve links between the children's ward and other departments providing HD care for children, but had not been entirely successful:

> 'I think with A & E it's perhaps a little bit historical... We did have a rotation scheme to A & E and I think it's that attitude, I don't know whether it was bad feeling... And it's stuck a little bit... the nurses in between, but we were setting up quite good links with ICU nurses... I suppose everybody is really busy and has got their own priorities and maybe A & E... don't feel that children are their priority... maybe that's where it's come from.' (Interview 14, DGHMix)

Several nurses in DGHMix grumbled about managers' lack of understanding of the difficulties of accepting adult patients on the children's ward and the potential for them to have to be moved again if children required admission, as the latter could not be admitted to an adult ward. One nurse commented on how it was difficult to explain to adult managers that having several sick children on the ward created extra demands:

> 'The bed manager coming up to the ward will look at the board and go, "Oh lovely, you've got lots of room, thank you, we'll admit all the 17 and 18 year olds we can to keep the pressure off the adult wards". And sometimes it doesn't always, it's quality sometimes and not quantity.' (Interview 1, DGHMix)

The interaction described here highlighted a relatively common situation for DGHMix, which was the only children's ward in the hospital. It did not occur in DGH/HDU, possibly due to the ward being in a separate building away from the main hospital block.

A combination of primary and team nursing was practised in DGHMix, allowing for continuity of care for children regularly admitted to the ward, or admitted for longer than 24 hours, including those requiring HD care. Nurses here were

aware of the recommendations on staffing for HD care, but there was often no choice; they had to cope with the nurses available on a shift. Problems also arose if a nurse escort was required to take a child to another hospital. Critically ill children were retrieved by the Lead Centre, but those children who were acutely ill, such as with serious head injuries or requiring surgery at the tertiary centre had to be transferred with a nurse and sometimes a doctor from the ward. This was observed on two occasions, with the result that a nurse was 'lost' to the ward for the remainder of that shift and there was no RN to replace her.

Difficulties were experienced in terms of acquiring more staff. Nurses in DGHMix had been encouraged to submit incident forms when they considered that staffing levels were 'unsafe' for the dependency of the children on the ward. Although some cynicism was expressed by nurses about their value, the ward manager explained that she attended meetings with senior medical and nursing staff where the incident forms and potential solutions were discussed. She then reported back to the ward staff both collectively and individually, as appropriate.

Skillmix could also present difficulties when there were children requiring HD care on the ward or if there was sickness, as it was often difficult to find a children's nurse – or even a Registered Nurse – to cover at short notice. This caused problems when children requiring HD care were admitted, as there was no 'dedicated' nurse, someone had to be taken from the ward numbers. A senior staff nurse described some of the difficulties encountered following the admission of a seriously ill child with meningitis:

'It was a morning shift that I worked on and the young man had... come in the night before... Normally we'd have four trained on and one

untrained, but at the moment we quite often have three trained and two untrained, quite often one of those untrained is somebody from the bank who's not worked here before (smiles). It does make it difficult.' (Interview 3, DGHMix)

6.7.2 High dependency care provision in DGHMix

The ward had no HDU; therefore, seriously ill children were managed either in a cubicle (infants) or a bay (older child) as close as possible to the nurses' station. However, problems arose if more than one child needed HD care:

> MD: 'Where were the children that were particularly sick?'
>
> Interviewee: 'In totally different places on the ward. Two were in our cot cubicles, down one corridor... both of the other children were actually in the ward. One was in the first bay of the ward and the other was in the furthest away bay of the ward. So they were nowhere near each other at all and they certainly couldn't be observed from the nursing station or from any point other than being in those rooms or in that area.' (Interview 3, DGHMix)

As in DGH/HDU, if the child subsequently deteriorated, they were transferred to adult ICU and/or retrieved by the Lead Centre. Although they had to be planned, these transfers did not pose major difficulties due to the proximity of ICU to the ward.

As a result of the increase in children requiring HD care on the ward, nurses expressed anxieties about extending their skills or using new equipment without adequate training and the ward manager raised the issue of non-invasive ventilation being introduced to her ward in the near future. She accepted that it would be possible to provide CPAP, but she was determined that it would not happen without nurses undergoing preparatory training:

> 'One of the consultants has suggested that we could just buy the CPAP driver and then we could start doing it from this bronchiolitis season. And I thought: "No you don't"... I think we can, with the training, that's what we need.' (Interview 14, DGHMix)

Fewer examples of teaching sessions were noted in DGHMix, partly because it was the only children's ward in the hospital, and also due to their concerns about staffing the ward and providing HD care alongside 'The normal workload'. Although opportunistic learning and teaching took place and mandatory training sessions were well attended, participants here identified either the HD modules offered by the university or rotation schemes between the ward and other departments as learning opportunities:

> 'From working down in A & E for 9 months, it helped me massively to see the children that were actually coming in and who were in a critical condition at the time... Because despite the fact that I was a D grade at the time, I'd be asked to go into resus with these children when they came in, so I learnt a lot down there'. (Interview 3, DGHMix)

Participants also mentioned the PICU 'roadshows' – multidisciplinary study days run by the Lead Centre at the invitation of medical and/or nursing staff at the DGHs in the region, from which they were able to access and apply new knowledge.

One participant explained that she was involved in planning the HDU they hoped to have on the ward and, due to her previous experience, was advising on some of the equipment required. She acknowledged that what they had at present was sufficient, but changes would be necessary:

> 'We need to have interviews with some reps and we need to update some of our equipment as well... Some of our cardiac monitors are rather old, with the dial buttons on the front instead of any digital system (laughs). So I think there's a lot of work to be done first before we can even think about getting anything into practice.' (Interview 1, DGHMix)

Following the interview she took me to a cupboard to see the old monitors, adding that her view was that, when nurses knew that protocols were in place, equipment was available and they felt supported, this gave them confidence.

However, difficulties were sometimes exacerbated if a sick child was admitted to the adult ICU or from the emergency department (ED), because they did not always have the appropriate-sized equipment in stock, necessitating borrowing from the ward. In the course of one week, a humidifier for a headbox was lent to ICU and a nurse took an infusion pump and burette giving set to ED from the ward because they did not have them. In the latter case, the child was subsequently admitted to the ward and so there was continuity in the use of equipment.

Similarities between the child's journey to HD care in DGHMix and DGH/HDU were identifiable, mainly attributable to this being another DGH ward. In particular, 'Feeling torn' due to the impact of HD care provision, difficulties with staffing and good relationships with paediatricians were evident. However, because this was the only acute children's ward in the hospital accommodating a wide range of specialities and it did not have an HDU, there were also a number of differences.

Although nurses on DGH/HDU had contact with surgeons either due to staff rotation through the wards or admissions via GPs who subsequently required surgery, this was not a regular occurrence. Nurses in DGHMix worked with surgical teams on a daily basis and were able to discuss differences in their working relationships with paediatricians and surgeons. The 'Shared care' initiative had improved the situation in terms of recognising and managing sick children requiring surgery, but difficulties were still experienced with some surgical teams, e.g. orthopaedic, who did not always abide by the agreed criteria. Additionally, due to the wide range of specialities encountered here,

there were more junior doctors dealing with sick children who needed guidance from experienced staff. The PEWS was, therefore, of considerable benefit to the nurses because they were able to refer to this when 'Recognising deterioration' and argue for specific actions on the basis of these criteria, thereby more easily 'Getting results' and deciding whether 'HD care or HD child' applied than in DGH/HDU.

The experience of 'Feeling torn' was evident to a considerable extent because, as in DGH/HDU, the impact of admitting a child needing HD care resulted in problems with 'Juggling staff' and 'The normal workload'. Additionally, the effect was heightened if the nurse in charge had to take responsibility for this care. Despite the nurses being familiar with the SW audit criteria and therefore very aware of what constituted HD care, however, their perceptions of it did not pose the same problems as in DGH/HDU. This may have been due to the lack of an HDU, so that the provision of HD care continued to be part of the normal workload rather than being perceived as something 'different'.

6.8 LCSurg

LCSurg was a tertiary centre for paediatric surgery, but also provided elective and emergency surgery for the local population. Sick children admitted here had a much less problematic journey to HD care than those in the DGH wards. Although similar stages were encountered, few obstacles hindered their progress and the facilitators influenced their journey positively throughout (see Figure 6.3).

6.8.1 The child's journey to high dependency care in LCSurg

Admissions to the ward were overseen by the 'clinical co-ordinator', a nurse who also had a role as bed manager. All referrals for admission were co-ordinated between this person and the nurse in charge of the ward, thus taking pressure off ward staff to cope with unexpected admissions. As a result, 'Backup and support' could facilitate a child's journey to HD care before they had arrived on the ward.

Four beds had been closed on the ward due to staffing problems and there were only four cubicles, which were normally needed for infants, especially young babies who had not yet been immunised and were therefore at risk of infection. Occasionally, if there were two or three babies in this position, one of the bays near the nurses' station would be designated a 'baby bay', where these non-immunised infants could be nursed together. In addition, if there were not enough beds available, children could be accommodated on other wards in the hospital, such as the short stay or observation wards, as a temporary measure.

The majority of HD care in LCSurg was provided for children following planned major surgery such as splenectomy or formation/closure of colostomy, but the ward also took surgical emergencies, either directly from the ED or from post-anaesthetic recovery following emergency surgery. LCSurg also took sick children for surgery or more specialised aspects of care directly from DGH wards in the region. Due to their specialist knowledge, skills and experience, nurses were normally able to decide which children would require HD care and plan ahead for this. Unlike in the DGH wards, the majority of these children

progressed directly from admission to the decision points 'HD care or HD child' and 'Juggling staff' to HD care provision. Although nurses had opportunities to develop skills in 'Recognising deterioration' and 'Getting results' when necessary, these stages were usually supplementary, only being encountered if a child deteriorated unexpectedly or inadequate information was provided prior to admission:

> 'We were full and... lots of children with different drips and drains and then [name of baby] arrived, and nobody had told us that she had a trache[ostomy], so there was a bit of... We put her down there (pointing to bay at end of ward) and then we had to swap all the beds over and we were short staffed in the afternoon... I was in charge that day and...I'd allocated [baby] to be looked after by one of the junior members of staff, thinking she's not going to theatre until tomorrow.' (Interview 4, LCSurg)

Nurses observed and interviewed appeared to take HD care for granted; this was accepted as 'normal' on the ward and was not even recognised as anything specific by some:

> 'We do see a lot of high dependency children. It's quite easy to forget that they are actually high dependency children, because it's par for the course... that very sick children come here, or children that have complicated surgery and then require high dependency nursing care.' (Interview 17, LCSurg)

This may help to account for the poor completion rate of SW audit forms in LCSurg, despite many nurses commenting on how busy they were:

> 'We've probably got on average six or seven high dependency patients at a time... Obviously it varies, sometimes we can be really quiet and not have any but busy midweek. When we've got a lot of post-ops usually our two HD bays as we class them are full, so that'd be eight patients.' (Interview 15, LCSurg)

Additionally, the problems with the audit may have been because the situation was different here compared with the DGH wards. Rather than being based on the ward, the remit for this 'audit nurse' was the whole hospital and so she did

Figure 6.3: The sick child's journey to high dependency care in Lead Centre surgical ward

Facilitators

Backup & support

Shared care

Nursing expertise

Backup & support

Getting results

DGH →
ED →
Home →

Sick child on ward

HD care or HD child

YES

Juggling staff

HD care

Recognising deterioration

NO

Obstacles

They're not used to paeds

The normal workload

Legend: ⬭ = Start/end point of journey   ▭ = Skills   ◇ = Decision points

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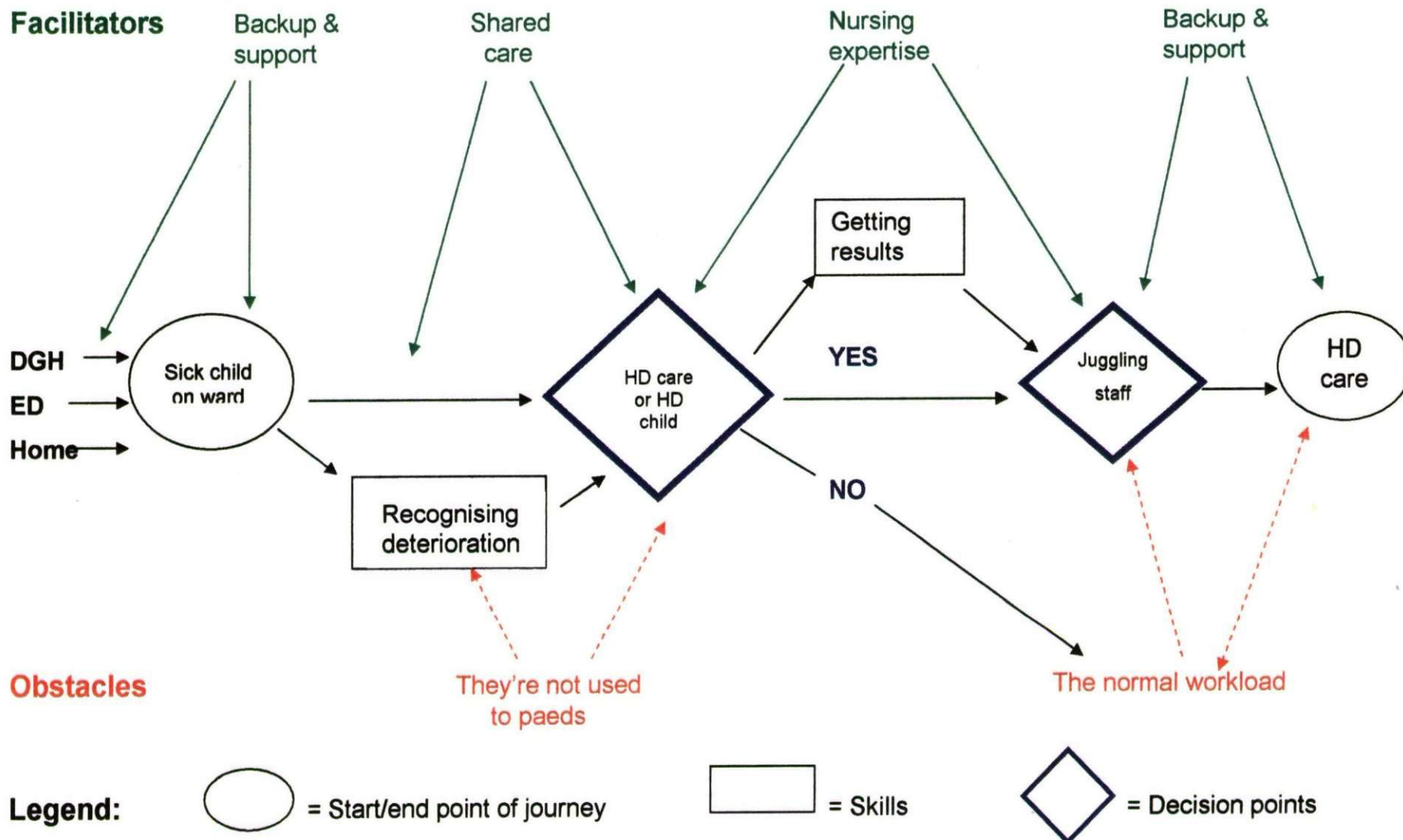
not have the same level of support or understanding from individual ward staff as those in the DGHs.

Differences in working relationships with surgeons were noticeable between DGHMix, where adult surgeons (general, ENT and orthopaedic) were operating on children and LCSurg, where paediatric surgeons normally managed all aspects of care. However, some difficulties had been experienced in LCSurg because, although paediatric orthopaedic surgeons carried out elective surgery, children admitted via the emergency department following trauma could be managed by adult orthopaedic surgeons:

> 'When we arrived here [new building]... all orthopaedic trauma went to the [general hospital] so they were looked after by... teams that had dealt with adults and children. So... we had to be aware of what analgesia they were written up for, what type of fluids they were written up for, and the amount.'
>
> MD: So what did you have to do about those?
>
> Interviewee: Um, mainly get someone to change the analgesia, the fluids and the antibiotics. Not on all cases but... more than a few. So you just have to be aware in the back of your head, for example, that a two year old does not need 80 to 150mls an hour of fluid, otherwise they get overloaded, or you don't want the child to have twice or three times the amount of antibiotics or painkillers.' (Interview 16, LCSurg)

Being in a tertiary centre, LCSurg tended to have a higher number of RNs (Child) on each shift than the DGH wards and they had argued successfully against the employment of healthcare assistants. In addition, there were more E grade (senior) staff nurses than D grade (junior) here, in contrast to the DGH wards. Although staffing numbers were lower than they should have been, the ward had coped by closing beds with the agreement of managers and consultants. This had not been possible in the DGH wards.

The physical environment and method of ward organisation also influenced staff allocation. The ward was divided into two teams, each covering half of the ward. Each nurse was then allocated a 'mix' of children of varying dependency within their team. This appeared to work well because the nurses were able to help each other out as necessary:

'In the morning we'll try and make sure that each person has got say one high dependency patient and then a couple of patients that aren't high dependency or are going home or have got parents with them. It makes it easier if you allocate properly'. (Interview 15, LCSurg)

This did not always work, however. For example, dependency levels may have been higher on one side of the ward, or a child's condition could deteriorate, and so more staff would be needed in another team.

Additionally, towards the end of the fieldwork, a 'skillmix exercise' was introduced by the trust which, a senior nurse asserted, was an attempt to reduce the number of E grade staff nurses and replace them with D grades. It was acknowledged that they needed to examine staffing because it was possible that they were 'over-protecting' their newly-qualified nurses, but concerns were also expressed. At that time, all the nurses on LCSurg were involved in HD care because these children were 'shared out', but that could have altered if the skillmix changed, because the newly-qualified nurses might not have developed the skills needed to provide this level of care.

Whilst the majority of difficulties with staff not used to dealing with children arose in the DGHs, on one occasion, two nurses on LCSurg were off sick and none of their usual 'bank' staff were available to cover a late shift. They had, therefore, referred the problem to the on-call clinical co-ordinator. I was at the

nurses' station when she came to the ward and also observed the nurses' conversation after she had left:

> 'The clinical co-ordinator on today is fairly new and is "not used to paeds" – she has worked as a bed manager elsewhere, "It's not the same though". The staff don't think she understands what is needed. She asked if they can organise the workload so that most things are done before the early shift leave and there is then less to do between 3.30 and 7.30pm. The staff laughed about this and joked about how they can tell babies not to need feeds or to stop children going to theatre during this time.' (Field notes, LCSurg)

This situation was almost a daily occurrence for nurses working in the DGHs, yet, because the clinical co-ordinator role was normally a source of 'Backup and support' in LCSurg, was highly unusual here. Differences between the DGH wards and LCSurg in terms of both observed and perceived levels of 'Backup and support' became evident very early in the fieldwork when the 'clinical co-ordinator' role was first encountered. Initial impressions were followed up with nurses being asked about their perceptions of 'Backup and support'. Nurses in LCSurg appeared to have more support with HD care than those in the DGH wards, but seemed unaware of it, although some of the advantages were acknowledged.

6.8.2 High dependency care provision in LCSurg

As in DGHMix, there was no HDU, but only if a child's condition deteriorated to the extent that they required respiratory support were they transferred to PICU. The sickest children were usually nursed in one of the bays behind the nurses' station:

> 'We're very lucky in the set up that we got [in the ward]. We've got our two bays which are close to the desk and we nurse our high dependency children in them, and then move them down to the further away bays.' (Interview 4, LCSurg)

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This was not always possible, however, and at times LCSurg experienced problems similar to those described in DGHMix:

> 'If our [nearest] bays are full, then we've got no other choice [than] to put patients that we'd class as high dependency in our bays that are miles away from our desk where we can't see them, and babies in cubicles.' (Interview 15, LCSurg)

There was no designated person on the ward to organise training, but examples of study days, updates on new equipment or procedures and teaching sessions, for example on the care of chest drains, were discussed in interviews and observed during fieldwork:

> 'I ran one [a session] the other day on chest drains for the junior staff and the students... and one of the senior staff nurses on [ward] ran an all day orthopaedic study day.' (Interview 4, LCSurg)

One nurse in LCSurg stated that she enjoyed working there because 'the buck stops here', whereas for the DGH wards, she thought they might get frustrated because the sicker, 'more HD ones' were transferred out. This generated discussion with colleagues about how things had changed, with surgery for conditions such as pyloric stenosis now being carried out at tertiary centres rather than DGHs.

Despite the improvements in safety and outcomes that these changes had brought for sick children and especially infants, there were associated disadvantages for families. In the two DGH wards, the majority of children were admitted from the local area and so parents were able to go home during the day or take turns in the hospital with other family members. In LCSurg this was not always the case, as the ward provided specialised surgery for children for the whole region.

Aspects of a conversation with the mother of a baby who had had major abdominal surgery were recorded in field notes. The hospital was over 80 miles from their home, but they had to stay on LCSurg until the baby was feeding properly and there had been problems with vomiting and re-establishing a normal feeding pattern. The mother was grateful for the care and treatment the baby had received, but wanted to get back nearer home because she had another child who was missing her.

More discussions about the differences between working in a DGH compared with a tertiary hospital arose another day. The pain nurse specialist commented that children with epidural analgesia were nursed on the ward in LCSurg, whereas they were often nursed in an HDU in DGHs. Three nurses had had placements in DGH children's wards as students, but had not worked in one since qualifying. One continued that she thought it was easier working in the tertiary centre because they could call on other wards or departments for advice, equipment etc. within the hospital. "You can't do that in a DGH, you have to make do or go without".

This was illustrated during fieldwork when LCSurg experienced a shortage of essential equipment. One afternoon an oxygen saturation monitor was required for a child returning to the ward as he needed to be monitored following palate repair. The nurse was unable to find a suitable one and so had borrowed from another ward. Vital equipment could also be obtained from an 'equipment library' in the hospital, where staff checked, repaired or even acquired new machines such as infusion pumps and monitors. Staff could also call on other

wards or departments within the hospital for advice or stores as well as equipment, again highlighting some of the differences between the settings.

Another potential source of support for HD care in the wards of the Lead Centre was an outreach team from PICU. This was being discussed during fieldwork but was not established until 2004. Plans for an HDU for the hospital as a whole were also being considered rather than having a designated area on the ward for children requiring surgical HD care. Although the advantages of having an HDU were recognised, these were viewed alongside the loss of these children to the ward and thus the potential for 'boredom':

> 'I'm sure we would still get surgical high dependency patients, it would just take some of the pressure off us, but it would probably be very boring (laughs)'. (Interview 15, LCSurg)

The apparent disadvantage of not having an HDU was also out-weighed by the positive influence of a range of other factors. This included the level of 'Backup and support' and 'Nursing expertise' available, excellent working relationships with medical and other hospital staff and the advantages of being in a tertiary hospital environment. The provision of HD care appeared to be part of 'The normal workload' in LCSurg because it was not always recognised as something distinct, as indicated by the limited completion of the SW audit forms. Unlike the DGH wards, however, providing HD care did not result in problems with staffing because the skillmix allowed for all the nurses within a team to be allocated a child requiring HD care as well as others whose needs were less acute. In turn, therefore, the experience of 'Feeling torn' did not feature in this setting, as the impact of HD care on the rest of the ward was minimised, although bed-hopping was often necessary. In addition, the 'Backup and support' provided by the clinical co-ordinators enabled the ward staff to exert

more control over their normal workload, which again helped to minimise any potentially negative effects.

Despite the lack of an HDU, therefore, the child's journey to and provision of HD care in LCSurg were smooth and unproblematic, particularly in comparison with the DGH wards. All of the facilitators exerted an influence here; obstacles were rare and, if they arose, were overcome relatively easily. The main reason for this has been identified as the organisational culture of the hospital, but differences between HD care provision in this setting and the DGH wards will be discussed further in the conclusion of this chapter.

6.9 Conclusion

The journeys presented above appear to explain the key features required to access and provide HD care appropriately in all three settings. The configuration of the different categories varied, sometimes quite considerably, however, according to factors such as the level of multidisciplinary teamworking, communication, managerial support and staffing numbers and skillmix. Organisational differences between the hospital settings were particularly apparent, in turn contributing to variations in the access to and provision of HD care in each ward.

The different configurations of the child's journey to HD care demonstrate the influence of the context of each setting and therefore the importance of considering local needs and the contributing factors in each. Despite the absence of an HDU, the provision of HD care in LCSurg was less problematic than in the DGH wards, where the admission of a sick child led to difficulties

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with staffing and workload and the nurses 'Feeling torn'. Variable perceptions of HD care also featured in the DGH wards, but not in LCSurg. It became evident that this was due to differences at both the ward and hospital level, i.e. the organisational context and culture, rather than solely at the ward level.

Communications and interactions were also affected by the context in which these took place. In the DGH wards, the majority of observed exchanges occurred in the children's ward, nurses' 'home' environment, where they appeared confident, relaxed and 'in control'. This enabled them to be flexible in their approach to children and families, to discuss and challenge the views of colleagues including medical staff and to offer support and advice as appropriate. This was not always possible in departments such as ICU, ED or theatres, nor with medical staff for whom the majority of patients were adults. In these areas they were perceived as 'visitors' who had to conform to the departmental or organisational culture and adjust their communication accordingly. The multidisciplinary teamworking that had led to the development of integrated care pathways and PEWS had assisted here and at times resulted in them becoming strong advocates for children and families. However, they were not always able to express their views freely due to the often hidden constraints of other departments, which they found frustrating. This was not a problem in LCSurg, where the organisational culture and, therefore, staffing in all wards and departments were adapted to the needs of children rather than adults.

The existence of an HDU in DGH/HDU facilitated the provision of HD care in this setting but, as previously discussed, a number of disadvantages were also

associated with this development. The opening of an HDU to aid in the provision of HD care in children's wards is generally considered to be a positive step and staff in the other two settings spoke enthusiastically about plans for an HDU in their hospital. In view of the disadvantages identified, however, the potential problems as well as benefits of such developments need careful consideration.

These issues will be discussed further with reference to relevant literature in the next chapter.

CHAPTER 7:   DISCUSSION

7.0 Introduction

The aim of this study was to investigate what happened to children who needed HD care in three different children's ward settings in SW England and to identify and evaluate factors that influenced this care. The findings presented in the previous chapter indicated that HD care was being provided in the three wards, but differences in the management and delivery of care were noticeable. The three themes described related to the child's 'journey', or access to HD care, obstacles to HD care, and facilitators. The latter two themes represented factors influencing HD care, which this study sought to identify and evaluate, but their effects on Theme 1, the child's 'journey' to HD care, were also apparent. Despite shortcomings previously discussed, the provision of HD care for children has received attention (e.g. DH, 2002), but access to this higher level of care has not been accorded such consideration. However, variations in the child's 'journey' to HD care in each ward were demonstrated and were important, because this contributed to the care eventually received by sick children.

Many of the differences between the settings, such as the environment and resources available, were expected, because the wards were selected on this basis. However, the findings also reveal the effect of the ward context and organisational culture, particularly on the access to HD care in each setting and the influencing factors. Previous studies (e.g. Chase, 1995; Byrne & Hayman, 1997; Melia, 2001; Coombs & Ersser, 2004) have highlighted the influence of the social context and culture of a ward or department on issues such as

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teamwork, communication, decision-making and care provision that also featured in this study. However, these earlier studies were all undertaken in predominantly adult units with adult patients and no similar research has been conducted in paediatric settings.

Some of the differences between working on a children's ward in a DGH and a tertiary centre, for example the resources available, were recognised by participants in this study, yet little attention has previously been paid to these differences or the implications for staff, children and their families. The DH (2002) report advocated that HD care should normally be provided on a children's ward and recommendations were made for equipment (paras 15, 32-7), staffing (paras 25–28) and education/training (paras 29–30), with differences between hospitals based on the presence or otherwise of a PICU being recognised (e.g. paras 13, 16, 21). However, limited acknowledgement was made of other differences in resources available or difficulties that may be encountered in DGH wards, such as staffing levels and expertise as found in this study, despite the majority of HD care for children being delivered in a DGH (DH, 2003).

A DGH is predominantly organised around the needs of adult patients and so the culture of the hospital is adult-focused. Therefore, it is difficult, especially where only one children's ward exists, as was the case for DGHMix, for the needs of child patients and their families to be recognised, even with assertive paediatric staff. This is in contrast to the situation in a Lead Centre or tertiary/children's hospital, where the environment, staff and resources are more focused on the needs of children (Doman, 1998; Lee, 2002; DH, 2003).

In this chapter, the findings presented in Chapter 6 will be discussed with reference to current research and recommendations for acute, HD and critical care for children. The discussion has been organised into sections that address research questions (Q) 2 – 5, namely: the recognition of and response to HD care (Q2, Section 7.2); skills and resources (Q3 and 4, Section 7.3); and influencing factors (Q5, Section 7.4), followed by implications for HD care provision (Section 7.5). The culture of the wards and the organisations of which they formed a part appeared to explain many of the similarities and, particularly, differences between the settings. Consequently, an overview of organisational culture will be offered in the next section in an attempt to provide a context for the findings and offer some explanation of the differences identified.

7.1 Organisational culture and differences between settings

Many definitions of the concept of 'culture' exist (e.g. Schein, 1991; Pheysey, 1993; Holloway & Wheeler, 1996; Creswell, 1998; Martin, 2002). As this was an ethnographic study, the anthropological view of culture (outlined in Chapter 4), which results from the shared values, beliefs, attitudes or behaviours of a group (e.g. Holloway & Wheeler, 1996; Savage, 2000) was used as a working definition. The findings of this study suggest that cultural groups existed at both the ward and organisational level. These helped to account for both similarities and differences between settings in the configurations of the child's journey to HD care and subsequent provision of HD care.

Studies of organisational culture have developed from anthropology and organisational sociology, leading to better understanding of how organisations function (e.g. Frost et al, 1991; Pheysey, 1993; Brown, 1998). Consequently,

different models of organisational culture and approaches to its study have been described and developed (e.g. Peters & Waterman, 1982; Smircich, 1983; Meyerson & Martin, 1987; Meek, 1988; Schein, 1992; Hatch, 1997; Hinshelwood & Skogstad, 2000a; Martin, 2002). Despite the various approaches, two key distinctions have been made: culture 'has' or culture 'is' (Meek, 1988; Ormrod, 2003). The former, functionalist view is a 'top-down' approach referred to as 'strong' (Hatch, 1997) or 'corporate' culture (Savage, 2000; Ormrod, 2003) because this arose from the world of business (e.g. Peters & Waterman, 1982), whereby organisational culture was seen as a variable that could be manipulated to gain competitive advantage, resulting in cultural change. The second, structuralist (Meek, 1988) or interpretivist (Ormrod, 2003) view is closer to that espoused by anthropologists, resulting from the social interactions and shared meanings and practices of individuals within the culture (e.g. Smircich, 1983; Meyerson & Martin, 1987; Hatch, 1997; Martin, 2002). The latter view was, therefore, more applicable to the current study and informs the ensuing discussions in this section.

In the last decade, the culture of healthcare provision and organisations has received increased attention, culminating in a proliferation of policies and recommendations relating to aspects of culture in the NHS (e.g. DH, 1997c; 1998; 2000c; 2001c). Some of these have linked quality improvement to culture change (e.g. DH, 1998, 1999) and this is evident in the work of the NHS Institute for Innovation and Improvement (previously NHS Modernisation Agency). Despite the availability of numerous definitions, 'culture' has not been clearly defined by the DH, with assumptions being made that its meaning is understood and shared by others (Savage, 2000).

The organisational culture of various healthcare settings has been studied in the UK and elsewhere (e.g. Ormrod, 2003; Braithwaite et al, 2005), leading to improved understanding of factors influencing care provision and the planning of future services. However, to date, limited consideration has been paid to children's services. Findings from the current study indicated that similarities in the culture of the three wards existed, for example, the provision of individualised care, nurses' concerns about staffing levels, aspects of 'The normal workload' and consideration of the needs of families of children on the ward. However, differences between the settings due to the individual ward contexts and the organisational culture of the hospitals, particularly the DGHs and Lead Centre, were also identified. Such differences have not previously been acknowledged or studied; assumptions appear to be that, apart from providing care for children of different ages or specialist needs, all children's wards are the same. Whilst similar assumptions could be made in relation to critical care or neonatal units, several studies have been undertaken that highlight the importance of considering the social context of aspects of care provision in individual units (e.g. Chase, 1995; Melia, 2001; Coombs & Ersser, 2004; Wilson et al, 2005; Spence & Lau, 2006).

Studies of organisational culture presented by Hinshelwood & Skogstad (2000a, 2000b) focus on the psychological dimension of organisations and refer to the 'atmosphere' perceptible in different settings. This 'micro' level considers the perspective of individual members of staff or units and helps to explain the different cultures or 'ward climates' identifiable in the current study, which had a direct effect on the provision of HD care. By contrast, the 'macro' level of an organisation as a whole is considered within the three paradigms or

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perspectives on organisational culture offered by Meyerson & Martin (1987): integration, differentiation and ambiguity, subsequently 'fragmentation' (Frost et al, 1991; Martin, 2002). These perspectives were developed as a framework for studying organisational culture and cultural change and reflect the level of ambiguity within an organisation. Meyerson & Martin's (1987) perspectives have been applied in healthcare research (e.g. Ormrod, 2003; Braithwaite et al, 2005) and help to explain the effect of the organisational culture on Themes 2 and 3, the influencing factors, directly and thus Theme 1, the child's journey, indirectly in this study.

The 'integration' perspective (Meyerson & Martin, 1987; Martin, 2002) incorporates consistency, consensus and clarity and these characteristics were manifested in LCSurg by the collective focus on and approach to the care of children throughout the organisation. Whilst some aspects of the 'fragmentation' perspective may exist within DGHs, inherent within this paradigm are confusion, ambiguity and irreconcilable differences (Meyerson & Martin, 1987; Martin, 2002), which were not observed. Findings from the DGH wards in this study were more indicative of 'differentiation'. This perspective acknowledges diversity within an organisation, with subcultures, of which the children's wards could be one, characterised by 'integration', with ambiguity being 'channelled' (Meyerson & Martin, 1987, p633), enabling co-existence between subcultures. Despite apparent conflict with or resistance to the demands of adult managers or departments by the DGH children's ward staff, they were able to work together at an organisational level when necessary.

In a comprehensive literature review conducted in 2005, Scott-Findlay & Estabrooks (2006) identified 29 studies of organisational culture research by or on nurses, none of which used Meyerson & Martin's (1987) framework. The studies were categorised using Hatch's (1997) three perspectives: modernist, symbolic-interpretive and postmodern. According to Hatch (1997), the modernist perspective views culture as an objective reality that can be measured, for example using a survey, and changed, thus reflecting the 'functionalist' approach. By contrast, the symbolic-interpretive and postmodern perspectives highlight the social construction of organisations and the multiple realities that may exist, with research focusing on understanding of an organisation. Meyerson & Martin's (1987) 'integration' and 'differentiation' perspectives may be classified as symbolic-interpretive, which uses ethnographic methods for study, whereas the 'fragmentation' paradigm is a postmodern view due to its inherent ambiguity (Hatch, 1997). None of the studies reviewed by Scott-Findlay & Estabrooks (2006) used a postmodern approach and only six of the 29 had a symbolic-interpretive perspective.

The present study focused on the provision of HD care at the 'micro' level of the individual wards rather than the organisations as a whole. Moreover, it was only after withdrawal from the settings and reflection on fieldwork experiences that 'unconscious awareness' (Hinshelwood & Skogstad, 2000b, p23) of the organisational cultures was appreciated. However, Meyerson & Martin's (1987) framework has been used in mental health services (e.g. Ormrod, 2003) and to compare hospital settings (Braithwaite et al, 2005) using ethnographic methods. Although the perspectives offered by Meyerson & Martin (1987) have not previously been used to study organisational culture in nursing, they provide a

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framework that contributes to an understanding and explanation of the differences identified between LCSurg and the DGH wards in terms of the influencing factors and thus, indirectly, the access to and provision of HD care. Consequently, the findings relating to Themes 2 and 3, the obstacles and facilitators, will be discussed and synthesised in Section 7.4 with reference to the 'integration' and 'differentiation' paradigms of organisational culture (Meyerson & Martin, 1987; Martin, 2002) where appropriate.

7.2 Recognition of and response to high dependency care

Although the provision of HD care for children is recognised as being essential, the process by which sick children access this level of care has received limited attention. Theme 1 in this study incorporated the stages involved in the sick child's 'journey' to HD care in the three wards, thereby highlighting the importance of this process, and addressed research question 2. In this section, discussion of the child's journey to HD care has been subdivided into recognition of the need for HD care, communication of concerns and subsequent access to HD care provision.

7.2.1 Recognising the need for high dependency care

Participants in all three wards asserted the importance of recognising deterioration and this was the first stage on the sick child's journey to HD care in the two DGH wards. The need for HD care was often decided prior to a child's admission to LCSurg, but children admitted as emergencies could also deteriorate on the ward and require HD care. The ability to recognise a sick child and respond appropriately, thus commencing the journey to HD care was, therefore, essential in all three settings.

Failure to recognise clinical deterioration in adults, resulting in sub-optimal care and cardiac arrest prior to admission to ICU has received considerable attention in recent years (e.g. McQuillan et al, 1998; Goldhill et al, 1999; Hillman et al, 2002). The Audit Commission (1999), in a report on critical care services, highlighted how 'deterioration' was not always recognised and identified the need for training in these skills for nurses and doctors. More recently, the National Institute for Health and Clinical Excellence (NICE, 2007) and DH (2008) have published guidance on the recognition and response to acute illness in hospitalised adults. However, these reports focused on adult services and evidence from the studies cited above was based on research with adult patients. Such concerns are also of relevance to the care of sick children, yet they have not received the same level of attention as adult services. This is an important deficiency because, if difficulties have been experienced in identifying signs of deterioration in adults, it is unlikely that deterioration would be recognised in children, in whom the signs may be less overt. Additionally, deterioration may develop with greater rapidity in children, necessitating prompt action.

Findings from this study indicated that the recognition of a sick child who might need HD care required nurses to evaluate the significance of information acquired from various sources in order to build up a complete picture. Sources included 'qualitative observations' (Hazinski, 1992, 1999), recorded measurements and trends in vital signs, and intuition. However, concerns were expressed in all three wards about the lack of observational skills in junior doctors, which could lead to delays in appropriate interventions. Two studies by

medical staff (Smith & Poplett, 2002; Clayton et al, 2005) provide some support for such concerns.

Clayton et al (2005) conducted interviews with 152 junior doctors, asking about their experience of performing certain procedures and their competence and confidence in managing common emergencies. Participants expressed confidence in dealing with a range of situations and procedures, including those where they lacked clinical experience, raising concerns about 'over-confidence' and potential threats to patient safety. This is of particular relevance with junior doctors in surgical teams, who may be involved in the management of a child in a ward such as DGHMix. However, both the Smith & Poplett (2002) study and that by Clayton et al (2005) relied on self-report. Neither involved any form of observation, nor corroboration of the doctors' clinical practice and so the results should be viewed with caution. The findings from these studies confirm some of the concerns expressed about junior doctors by participants in my study and may help to explain why nurses contacted more senior or experienced paediatric medical staff about sick children. However, the use of observational methods in future studies of this kind would offer verification of reported behaviours.

Deterioration was recognised in a child's physiological status by several experienced nurses in the current study before changes in vital signs were evident, enabling them to alert medical staff and initiate appropriate responses promptly. When questioned, participants had difficulty explaining how they knew a child was sick despite the lack of 'evidence', stating 'you just know', 'I can't put my finger on it' or referring to 'gut feelings'. Such terms are similar to

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those identified by Cioffi (2000a) in a descriptive study exploring the experiences of nurses calling a hospital emergency team for patients about whom they had concerns. Her findings demonstrated that nurses 'knew' that something was wrong because of previous experience, even in the absence of physiological changes or 'evidence'.

The use of 'gut feelings' or intuition by experienced nurses in the present study to interpret subtle changes in a child's physiological status were influenced by 'Nursing expertise', which appears to reflect the findings of previous studies. Intuition and gut feelings have been discussed extensively in the nursing literature and attempts have been made to explain or formalise the apparent subjectivity involved; for example, Effken (2001) argues that intuition is 'direct perception'. The recognition of deterioration and subsequent response by nurses in the current study suggests a relationship between intuition and clinical decision-making, as has been identified by others (e.g. Greenwood & King, 1995; Lauri & Salaterä, 1998; McCutcheon & Pincombe, 2001; King & Macleod Clark, 2002). Perhaps the most well-known proponent of the use of intuition (or 'clinical forethought') is Benner (1984), whose original work led to further research (e.g. Benner et al, 1996, 1999) notably in acute and critical care settings including paediatric and neonatal units. Her work highlighted the comprehension (or 'grasp') of a situation despite apparent lack of deliberation or awareness of salient factors and the importance of a sound knowledge base and 'unconscious' comparisons with similar experiences were underlined. The influence of nursing expertise on the recognition of deterioration identified in the current study reflects the findings of Benner, but further study conducted in clinical practice settings rather than based on scenarios is required.

The context in which clinical decision-making takes place has also been identified as a major influence on the process (e.g. Lauri & Salanterä, 1998; Melia, 2001; Bucknall, 2003; Coombs & Ersser, 2004). Lauri & Salanterä (1998) developed a structured questionnaire to measure nurses' decision-making in five fields of practice, including adult critical care. Following factor analysis, five factors emerged, representing different models of decision-making, including intuition. Significant differences (p=0.0001) in the decision-making models used by nurses were identified on the basis of the five fields of practice. Lauri & Salanterä (1998) reported that intuition was regularly used in critical care because this context often required rapid decision-making, and the importance of physiological information combined with intuition based on knowledge and experience were key features.

Numerous studies of clinical decision-making by nurses, especially in acute or critical care settings, have been published since Lauri & Salanterä's (1998) study (e.g. Bucknall, 2000, 2003; Cioffi, 2000a, 2000b; Manias & Street, 2001; King & Macleod Clark, 2002; Coombs, 2003; Coombs & Ersser, 2004; Twycross & Powls, 2006). However, all except that of Twycross & Powls (2006) were based on work with adults. By contrast, the majority of the research on clinical decision-making with child patients relates to oncology, palliative or community care, which is not applicable to HD care. No previous research on clinical decision-making with acutely ill child patients was found.

Twycross & Powls (2006) sought to gain understanding of nurses' decision-making in relation to children's pain management, comparing groups on the basis of experience (five years working in the speciality) using the 'think aloud'

technique. Greenwood & King (1995) also used this technique in concurrent and retrospective reports by 'novice' and 'expert' nurses of 'real' practice situations, some in the presence of patients. The study by Twycross & Powls (2006) was not conducted in practice settings, however; instead, they used scenarios with nurses from a children's hospital in Scotland. Similar decision-making strategies were identified in both groups of participants in these studies, but neither incorporated the complexities of clinical practice, nor accounted for the context in which decision-making took place. In view of the differences highlighted in the present study arising from the context and organisational culture in which care was delivered, future studies of this kind need to be conducted in a range of clinical settings. Whilst it is acknowledged that ethical difficulties may be encountered in conducting research with seriously ill children, greater understanding of decision-making with this client group through studies conducted in practice could enhance care and outcomes.

Although observations and intuition were identified as key aspects of nurses' recognition of a sick child, trends in a child's vital signs recorded on charts also provided important information about their clinical status and could help to detect signs of deterioration. Junior doctors and surgeons were observed and reported to refer regularly to charts for information, in preference to clinical assessment or discussion with the nurse caring for the child. This may reflect the 'snapshot' view of a patient that is often experienced by doctors, in contrast to the longer periods of observation undertaken by nurses. Chase (1995) highlighted such difficulties in an ethnographic study of clinical judgement in critical care. Her findings indicated that nurses can develop a more holistic view of their patient, whereas for doctors this is more fragmented.

In view of the nursing expertise available and the influence this could have on recognising deterioration in a child identified in the present study, information-sharing between medical and nursing staff to enable consideration of all aspects of a child's clinical status appeared obvious. Furthermore, the potential for nurses to recognise deterioration prior to changes in vital signs was an important asset, yet charts were the main focus for junior doctors and surgeons. However, the value of observation charts and trends is reliant on changes in vital signs being recognised, measured and recorded accurately. Although only one instance of incomplete observation charts was directly observed, according to Goldhill et al (1999) and Sharpley & Holden (2004) such omissions, particularly of respiratory rate, are not uncommon in adult wards and others may have occurred during fieldwork that were not observed or reported.

Findings from a study by Chatterjee et al (2005) highlighted the importance of both completing observation charts correctly and identifying abnormal parameters. Part of their study required junior doctors (n = 32) and healthcare assistants/nursing students (n = 31) to identify abnormal physiological values from adult patient data recorded on observation charts. Overall, 88% of doctors and 53% of 'nurses' recognised signs of deterioration/abnormal parameters, raising concerns about competence in recording and reporting abnormalities. Although generalisability is limited and the study was conducted on adult wards with adult patient data, the results may be applicable to the use of observation charts in children's wards. Therefore, the competence of medical and nursing staff in recording and recognising deterioration or abnormal parameters in children's vital signs needs to be assessed in future studies of this kind.

7.2.2 Communicating concerns

Following recognition of a sick child, the child's journey to HD care continued,. but findings indicated that some doctors were reluctant to make decisions based on information provided by nurses. In such circumstances, the language used by nurses to communicate their concerns to medical staff was of particular relevance because this could determine the outcome for a sick child in terms of intervention or treatment. This provides some support for the findings of an ethnographic study of nurse-doctor relationships in clinical decision-making undertaken by Coombs & Ersser (2004) in three general ICUs. Buckingham & Adams (2000a, 2000b), who reviewed decision-making approaches in nursing, also highlighted the differing use of language or terminology by doctors and nurses. On the basis of their review, they asserted that doctors tend to use 'scientific' terminology, whereas nurses communicate with more focus on emotive or intuitive aspects. Use of different terminology may be an illustration of the dichotomy between the art and science of nursing, compared with the more 'scientific' basis of medicine. However, Buckingham & Adams (2000b) argued that nurses could improve their decision-making and professional standing if they were able to communicate in more scientific or rational terms with other professions in the multidisciplinary team, especially doctors.

One method of assisting nurses to use appropriate language or 'evidence' to articulate their concerns is through the use of 'early warning systems'. Participants in the current study made reference to the use of Paediatric Early Warning Systems (PEWS) to improve communication with medical staff about sick children. DGHMix had recently introduced a PEWS and nurses reported that this assisted them in communicating concerns about a sick child to medical

staff because they were able to use the same language. Findings from a grounded theory study by Andrews & Waterman (2005) investigating nurses' experiences of identifying and reporting deterioration in adult patients included the category 'packaging deterioration', which combined observations and the early warning system to provide 'quantifiable evidence' (p476) to present to doctors. Although the PEWS in DGHMix had only just been introduced, this development appears to support Andrews & Waterman's (2005) findings, but audit and evaluation of the tool are required prior to wider dissemination.

Early warning systems have been recommended to help ward staff recognise deterioration in adult patients and the potential need for transfer to ICU (Audit Commission, 1999; DH, 2000b, NICE, 2007) resulting in their development and adoption in many hospitals (e.g. Subbe et al, 2003; Sharpley & Holden, 2004). However, evidence of the efficacy of these tools is lacking because their ability to predict deterioration is uncertain and the variability of systems developed in individual hospitals prevents direct comparison of outcomes or subsequent care.

The development of PEWS has followed on from experiences in adult settings, but similar criticisms can be applied to these as in adult studies and evidence of their sensitivity and specificity is as yet uncertain. Criteria for the PEWS in DGHMix were developed for use in all departments dealing with children in order to alert ICU and/or the Lead Centre about seriously ill or injured children who might require transfer due to deterioration. A PEWS and outreach service was implemented in Brighton following pilot testing and audit (Monaghan, 2005) and Haines et al (2006) describe the development and pilot testing of a PEWS

for use on the wards in a children's hospital and to assist in referral to the PICU. The latter was audited in another children's hospital by Tume (2007) to assess the tool's ability to identify children at risk of deterioration and provided some degree of validation. However, these PEWS emanate from tertiary centres with a PICU and could not be adopted in DGHs without considerable modification. Findings from the present study demonstrate that such developments are possible and anecdotal evidence suggests that several are now used in SW England and further afield, but no published examples of PEWS developed for use in a DGH unit have been identified. As with adult early warning tools, therefore, systematic evaluation of PEWS is required to assess their efficacy.

In addition to the PEWS, algorithms emanating from APLS/PLS courses were regularly referred to and used by nurses in the present study, which reflected recommendations from the DH (1997b, 2002). Individualised protocols had also been developed for children with complex disorders (e.g. metabolic or endocrine problems) and integrated care pathways for conditions such as bronchiolitis, asthma or diabetic ketoacidosis were used regularly in the DGH wards. Similar clinical guidelines and care pathways have since been developed for NICE (2004) and the British Thoracic Society (2005). Armon et al (2004) introduced care pathways for children aged 0 – 15 years with diarrhoea and seizures in an emergency department. Following evaluation, findings indicated that the use of guidelines by all staff could improve quality of care in terms of documentation, fewer invasive procedures such as cannulation, less time spent in the department and more appropriate treatment. However, application of their findings to other settings or problems is limited because they only reported on care pathways developed for two problems in an emergency

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department. Further development, implementation and evaluation of guidelines and care pathways for different problems in other settings is required.

Several incidents were observed in the current study where nurses challenged medical decisions and succeeded in 'Getting results' by referring to protocols. Findings from an ethnographic study conducted in a critical care setting by Manias & Street (2000) indicated the value of written guidelines or protocols for nurses, particularly when communicating with medical staff about care decisions or to challenge medical decisions nurses deemed 'undesirable'. Other researchers (e.g. Coombs, 2003; Coombs & Ersser, 2004; Wilson et al, 2005) have suggested that nurses may not be as assertive as they perceive themselves to be in interactions with doctors. Findings from Coombs (2003) ethnographic study demonstrated medical dominance in decision-making in all situations, despite nursing knowledge being recognised as essential to good patient management. Wilson et al (2005) reported similar findings from a study undertaken in a special care nursery, where nurses felt 'scared' or uncomfortable challenging medical staff or considered such decisions to be 'the doctors' domain' (p32).

Assertiveness and involvement in clinical decision-making, particularly by experienced participants in the present study, may reflect the influence of collaborative working relationships and the 'Nursing expertise' available. Past experience and expertise were used in conjunction with protocols or integrated care pathways to ensure appropriate care for individual children. This appears to support the assertions of Christensen & Hewitt-Taylor (2006) that the increasing use of evidence-based clinical guidelines and care protocols may

restrict holistic care and aspects of expert practice such as intuition and reflection. Whilst protocols can be of considerable benefit to inexperienced nurses and medical staff by assisting in the development of knowledge (Manias & Street, 2000), they may also be considered too rigid to incorporate individual circumstances. Practical experience and the social context are also important factors in the achievement of learning and effective patient care (Prowse & Lyne, 2000; Smith et al, 2003). In an emergency, such as the admission or deterioration of a seriously ill child, although evidence-based protocols are useful to guide practice, they cannot account for all situations; this is where clinical expertise may triumph due to the flexibility and consideration of individual patient circumstances it provides (Hewitt-Taylor, 2003). Variations in the use of protocols and guidelines, therefore, need to be investigated in future studies.

Confusion regarding whether children were 'highly dependent' due to the amount of nursing input required or acutely ill and in need of HD care was highlighted in the Preparatory Work and persisted in the Main Study. It was evident that, despite attempts to develop a more precise definition of HD care than that originally provided by the DH (1997a, 1997b), which the subsequent report (DH, 2002) acknowledged lacked clarity, this had still not been achieved. Of more use in identifying HD care are pre-defined intervention or nursing criteria from the SW audit (Appendix 3A) and the DH (2002) or the HD care measurement tool based on interventions currently under development by Rushforth (2006). Diagnostic criteria are also included in the SW audit and the DH (2002), but these do not necessarily indicate severity of illness or the interventions required. The RCN has a working group examining this issue and it is hoped that a more appropriate definition may emerge from their work.

7.2.3 Arriving at high dependency care

When agreement had been reached that a child required HD care, decisions were made about who would care for them and where. The process of 'Juggling staff' was required in all three wards and the resources required to provide HD care are discussed further in the next section. If children deteriorated further in the DGH wards and required intensive care, they had to be transferred to the adult ICU. A number of studies and audits have been carried out to examine the process of transferring critically ill children to and from ICUs (e.g. Heward, 2003; Tume, 2005) and to other hospitals (e.g. Neill & Hughes, 2004; Moss et al, 2005) including retrievals with parents accompanying their child (Davies et al, 2005). As a result, the potential for adverse events has been identified and changes made to procedures, including the development of standards and protocols, in an attempt to minimise problems (e.g. Heward, 2003; Neill & Hughes, 2004; Moss et al, 2005). Transfer between wards and departments within a hospital have not received such attention, yet this carries similar, if not more potential for hazard, particularly when dealing with sick children at risk of deterioration. Although planning of intra-hospital transfer requires further investigation, protocols also need to be developed at a local level to ensure specific circumstances and facilities are accounted for.

7.2.4 Summary

In this section, the recognition of a child's need for HD care and subsequent actions have been discussed and the importance of issues such as assessment, clinical decision-making and communication has been highlighted. This is consistent with findings from related studies with adults and, in some cases, studies with children also confirm the relevance of these issues.

However, the child's journey to HD care, which was a process that incorporated these issues in a succession of stages, was also identified but has not previously been studied. This should be acknowledged in future policy and requires further investigation to examine the process in more detail.

Once a sick child had accessed HD care, a range of skills and resources was required to ensure they were cared for appropriately, as will be discussed in the next section.

7.3 Skills and resources for high dependency care

7.3.1 Knowledge and skills for high dependency care

Participants identified a range of knowledge and skills that they considered necessary for HD care provision. These included communication and the recognition and response to deterioration, as discussed in the previous section, as well as various clinical skills. Recommendations relating to specific skills for paediatric HD care are limited, but there is a paucity of studies generally that identify the skills or competencies required by children's nurses. Notable exceptions include a multi-method case study by Gibson et al (2003), who aimed to differentiate children's nursing from other branches of nursing. They classified a range of competencies and compared 'generalist' children's nurses and specialist (cancer) children's nurses on the basis of these, resulting in a definition for children's nursing. This study provides useful insight into the skills required by children's nurses, but focuses on specialist care for children with cancer. The RCN (2004) offered a framework for the development of roles in children's services, giving examples related to the speciality of paediatric diabetes, which may provide guidance for future work, but as yet this has not

been applied to HD care. Additionally, benchmarking has been used widely in paediatric services in NW England to improve the quality of care and raise standards in practice (Ellis, 1999, 2000), including HD care. Further investigation of the skills needed to care for children with acute or HD care needs is required and could be achieved by using such strategies

In relation to HD care, the DH (2002) refer to competencies in respiratory or cardiac arrest, BLS training, communication and emotional support for parents and children (para 30), but acknowledge that training may vary according to the clinical setting (para 29). The report (DH, 2002) also recommended that an RN (Child) 'who has completed an advanced life support course, e.g. PLS/APLS/ PALS should be present at all times throughout every 24 hour period' (para 26). This is dependent on appropriate training being available and accessible to nurses, however, and the wards studied did not have staff with these qualifications on every shift. The DH (2002) report was published the same year as fieldwork was undertaken, which may help to account for failure to comply with these recommendations. However, data relating to nurse staffing in children's wards in Yorkshire were collected between May and November 2005. These indicated that, although over 60% of senior nurses had undertaken APLS training, nearly 50% shifts had no nurse with advanced life support training on duty (Rushforth, 2006, p40). The situation in the wards of the current study was not, therefore, unique and further investigation of staffing and training for HD care in children's wards is required.

More recently, the DH (2006) published recommendations for the care of *The acutely or critically sick or injured child in the DGH*, produced by a Working

Group following wide consultation with a range of organisations and individuals involved in such care and with reference to relevant research-based evidence. The report identified six generic skills for staff involved with sick children: recognition of the critically sick or injured child, initiation of immediate treatment, teamworking, development of skills, awareness of safeguarding children issues and communication. Key themes of this report were the development of 'pathways' of care from pre-hospital to HD or intensive care with consideration of the child's journey, and a team approach focusing on competencies not professional roles. Although these recommendations are to be welcomed and provide support for the present study's findings relating to the child's journey and initiatives such as 'Shared care', no details are provided. Moreover, the skills identified are *generic*, required of all staff, including paramedics, anaesthetic, A&E or surgical staff (doctors and nurses) and paediatric staff. Different levels of competence or skill were recommended for some members of the team, but not nurses providing HD care, despite the expectation that this level of care would be provided for children who required it. All of the generic skills should be present in any nurse working on a children's ward (RCN, 2004), yet no mention is made of specialised or higher levels of skill or competence in those delivering HD care. Indeed, only brief mention is made of the provision of HD care (DH, 2006, pp6 & 32), with reference to the DH (2002) report. This suggests that local needs should determine the skills required by nurses, depending on the clinical setting and type of HD care provided, although 'commonalities' are alluded to (para 29) but not specified. Such imprecision is exacerbated by the vague definitions of HD care.

Participants in the current study identified a range of clinical skills deemed important for HD care. These, combined with criteria associated with the SW audit (Appendix 3A) and the developing HDC tool (Rushforth, 2006), could be used with the RCN (2004) guidance for developing nursing roles in children's services to identify skills and provide a framework for HD care. In combination with benchmarking (Ellis, 1999, 2000), this would offer managers formal guidance about the training and education needed by their staff, whilst enabling individual units to identify the specific skills and competencies required.

7.3.2 Preparation and support for high dependency care

Delivering HD care in the children's wards in the current study considerably extended what Coombs & Ersser (2004) refer to as the 'spectrum of acute care' (p246) within one setting. Preparation for HD care was, therefore, essential and involved the acquisition, development and maintenance of knowledge and skills. When asked how these had been acquired, a range of responses was elicited from participants, but in all the wards, 'learning on the job' featured, as well as working alongside experienced nurses, reflection, practising key skills on a regular basis, research and formal training or educational opportunities. Such strategies have been identified as effective by others (Audit Commission, 2001; Doman & Browning, 2001; Clarke, 2002; Bonner, 2003; Field, 2004; Wilson et al, 2005).

Opportunities for observing or working alongside experienced colleagues such as nurse specialists were identified in the current study as particularly effective methods of developing nurses' knowledge and skills. These findings provide some support for Field's (2004) assertions that the development of skills can be

facilitated by working alongside a mentor in practice due to the knowledge being context-specific. However, contrary to her claims, several junior nurses in the current study found that this was enhanced if combined with reflection, as advocated by Benner (1984). Experienced staff and specialist nurses were also valued for the advice and support they provided, especially to junior staff in situations of uncertainty that required immediate action. Estabrooks et al (2005) refer to this as 'affirmational support' (p464), although in contrast to the nurses in my study, findings from their ethnographic studies demonstrated reliance on immediate colleagues for this, with participants contacting nurse specialists or managers less frequently. These differences may again reflect the influence of the organisational culture and facilitators such as 'Nursing expertise' and 'Backup and support' identified in the current study.

Despite their support for education, senior nurses acknowledged that training sessions or 'on the job' experiences were more accessible and cost-effective methods of developing knowledge and skills. However, the availability of these opportunities was also dependent on working relationships and interactions in the context of each ward or the influence of the prevailing organisational culture. Similar findings have been demonstrated in the studies by Conway (1998) and Estabrooks et al (2005), but Conway's (1998) study is now over 10 years old and Estabrooks et al (2005)'s studies were conducted in Canada. Therefore, further study of the effects of context and culture on the development of knowledge, skills and expertise in the UK is required.

7.3.3 Resources for high dependency care

In this study, although the equipment required for HD care was not necessarily the most recent, it was functional and met the standards recommended by the DH (2002, Annex A). However, skillmix and staffing resources were a concern in all three wards. Skillmix relates to the ratio of different healthcare staff involved in patient care and has been associated with an increase in healthcare assistants alongside a decrease in Registered Nurse numbers in wards and other settings, justified as ensuring 'value for money' (Spilsbury & Meyer, 2001). A number of studies have been conducted into skillmix and several comprehensive literature reviews have been published (e.g. Spilsbury & Meyer, 2001; Crossan & Ferguson, 2005; Currie et al, 2005; Lankshear et al, 2005). Problems relating to lack of rigour, comparability of data from different hospitals or countries and inconsistencies in terminology were identified. However, the reviews by Spilsbury & Meyer (2001), Currie et al (2005) and Lankshear et al (2005) highlighted the influence of staffing and skillmix on patient outcomes and quality of care. Results of a large-scale study conducted in acute hospital trusts in England by Rafferty et al (2007) supported these claims.

Despite the comprehensive nature of Rafferty et al's (2007) study, as with many previous studies, children's wards were excluded and hospitals rather than individual wards were the unit of analysis. Adams & Bond (2003a, 2003b) sought to address the latter issue in their study by collecting a range of data relating to individual wards and their findings demonstrated organisational differences. Studies by Boyle (2004) and Seago et al (2006) conducted at the unit rather than hospital level in the USA also identified differences on the basis of organisational characteristics. Furthermore, findings from Seago et al's

(2006) longitudinal study highlighted the potential influence of patient acuity and speciality, not just staffing levels and skillmix, on outcomes. Hurst (2002), who presented a comprehensive review of methods to calculate staffing levels and skillmix in hospital wards acknowledged similar differences. No specific method was recommended following this review due to the effects of differences in speciality, bed numbers, acuity level and ward layout.

Findings from the current study identified differences between the three settings and children's wards differ in many other ways from adult wards. Consequently, the use of hospitals rather than individual wards as the unit of analysis in studies of staffing and skillmix is a major failing. This was addressed by Adams & Bond (2003a, 2003b), Boyle (2004) and Seago et al (2006), with findings from all three studies demonstrating various differences between wards. However, as in previous research, children's wards were excluded from these studies, with data only being collected from adult units and patients. Therefore, children's wards need to be included, but treated as a discrete group, in future studies of this kind.

Findings from the current study highlighted concerns about staffing levels in children's wards generally, as well as for delivering HD care. Although some studies of staffing in children's wards have been attempted (e.g. Dickinson & Jackson, 1999; RCN, 2003), inadequate attention has been paid to the variability in workload and the potential need for increased staffing levels in wards providing HD care, especially in DGHs. Moreover, the study by Dickinson & Jackson (1999) was only a 'snapshot' survey with a low response rate (36%) and the RCN (2003) guidelines failed to consider dependency and

acuity, although staff:patient ratios were offered, in contrast to their earlier report (RCN, 1999). The DH (1997b, 2002, 2003) acknowledged that many children requiring HD care receive this on ordinary children's wards in DGHs and suggest that extra staff may be in place (DH, 1997a). However, findings from both stages of the current study indicated that this was not always the case and results from Rushforth's (2006) comprehensive survey of children's ward staffing in Yorkshire identified similar problems. Data relating to the qualifications of nursing staff were also collected by Rushforth (2006) and findings suggested that skillmix was also inconsistent and not always in accordance with DH (1997b, 2002) recommendations for HD care delivery.

Attempts have been made to develop viable methods of estimating skillmix and nursing numbers in response to concerns about workforce planning, skillmix and staffing on children's wards. Ellis & Chapman (2006) developed a 'paediatric dependency acuity tool' for use in Great Ormond Street Hospital based on professional judgement and data relating to nurses per occupied bed, acuity and quality of care in order to identify levels of care, nursing staff requirements and a skillmix review. They did not, however, give details of how they 'measured' quality of care nor how this contributed to the tool. Ellis & Chapman (2006) claimed that this tool could be used to plan skillmix, accounting not only for RNs, but also healthcare assistants, nursery nurses and play specialists, according to the age and dependency of children in the wards. The nurse:patient ratios for HD care in the wards are the same as those in the DH reports (1997b, 2002), however, and the appropriateness of these for DGHs has previously been questioned. Although the authors state that interest in the tool is now being shown in other children's hospitals and acute paediatric

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settings, its use in DGH children's wards may be limited. Therefore, future studies of this kind need to consider DGH children's wards and units as a separate group.

7.4 Factors influencing high dependency care provision

Research question 5 related to the factors that enhanced or hindered the provision of HD care. A range of influencing factors was identified in the Main Study and presented in Themes 2 and 3, obstacles to HD care, and facilitators. These themes included both individual and organisational aspects and directly influenced the child's journey to HD care and, to a lesser extent, provision of HD care in the three settings. Individual factors included 'Nursing expertise' and 'They're not used to paeds' and organisational factors were 'Shared care', 'Backup and support' and 'The normal workload'. Although 'Feeling torn' was experienced at the individual level, this was a consequence of HD care provision rather than an influencing factor and so is discussed in the next section. The facilitating influences of 'Nursing expertise', and 'Backup and support' were closely linked and, in combination with 'Shared care', were able to overcome the obstacle of 'They're not used to paeds'. This section, therefore, offers a synthesis of the factors that influenced access to and provision of HD care. In turn, the culture of the wards and hospitals appeared to exert a direct influence on these factors and so the findings are considered with reference to organisational culture theory where appropriate.

The hindrance associated with junior doctors was experienced in all three settings and participants in the DGH wards identified difficulties working with surgeons because they normally treated adults and were, therefore, often

unfamiliar with the needs of children. Problems were exacerbated in DGH/HDU because this was a medical ward, but some sick children were admitted here prior to assessment by surgeons and transfer to the children's surgical ward in the main hospital. Fewer difficulties were experienced in DGHMix due to the introduction of the 'Shared care' initiative and the management of admissions for elective surgery, but this had not overcome problems associated with emergency surgery. Numerous reports and recommendations (e.g. RSCEPF, 2000; DH, 2001a, 2003, 2004) have been published relating to the needs of sick children requiring surgery and the importance of involving paediatric medical and nursing staff in their care. Despite improvements noted by the Children's Surgical Forum (2007), difficulties with the implementation of these have persisted, especially, as highlighted by the Healthcare Commission (2007), for surgical emergencies, which supports findings from the current study.

Problems related to working with nursing staff from other departments or convincing managers and others in DGHs about the specific needs of children were highlighted in the Preparatory Work and appeared to be an ongoing difficulty. Kenny (2003) asserted that there is a potential for managers to focus on generic 'adult' nursing skills rather than acknowledging the skills that children's nurses have developed to meet the needs of children and families. This may be partially accounted for by the fact that few, if any, nurses working in departments other than the children's ward in a DGH have qualifications or experience with sick children. Despite recommendations that children's nurses should be available in all areas that provide care for children in successive reports since the Platt Report (MoH, 1959) was published (e.g. DH, 1991), recruiting children's nurses to work in areas with mainly adult patients can be

problematic (Smith & Long, 2002). Although this helps to explain some of the difficulties experienced by participants, especially in DGHMix, it does not overcome them and further study to determine the extent of these problems is required.

The contrasts between LCSurg and the DGH wards may also be explained by the variations in organisational culture. The 'integration' perspective (Meyerson & Martin, 1987; Martin, 2002) perceived in the tertiary hospital helped to ameliorate difficulties associated with junior doctors and problems with other departments did not arise. Conversely, in the DGH wards, the 'differentiation' paradigm (Meyerson & Martin, 1987; Martin. 2002) was more apparent, with integration being observed in dealings within the wards or with paediatric staff, but disagreement or inconsistency in interactions with individuals or departments less used to children.

Findings from this study also demonstrated variations in the culture of each ward, which were partly due to the influence of the different 'ward climate' in each setting. The organisation of care can influence the 'ward climate', with primary nursing in particular being associated with increased authority, autonomy and accountability but also tending to require higher levels of competence (Ersser & Tutton, 1991). None of the wards practised 'true' primary nursing, but in all three, staff were encouraged and facilitated to make decisions about the care of their allocated patients. This reflects the 'devolved' system of ward organisation described by Adams & Bond (2003a), who analysed data from 72 adult wards following development of the 'ward organizational features scales' and identified three systems of ward

organisation: 'devolved', 'two tier' and 'centralised'. These classifications related to the degree to which patient care responsibility and communications were devolved to individual nurses and the level of individualised care and teamwork practised. All three wards in the present study demonstrated the features of a devolved system in contrast to 11% (n=8 wards) in Adams & Bond's (2003a) study. An association between a high nurse:bed ratio and devolved nursing was identified, leading Adams & Bond (2003a) to suggest that, where higher staffing levels were not available, organisation of care could regress to task allocation. Wards with a poor grade mix (lower percentage of nurses at grade E and above) were also more likely to offer a task-orientated approach to care (Adams & Bond, 2003b).

Nurse:bed ratios were not measured in the current study, but higher staffing levels and a richer grade mix were apparent in LCSurg compared with the DGH wards. Despite this, task allocation was not observed in any of the wards; individualised care was practised at all times, including when HD care was being provided on the ward. This lends some support to Adams & Bond's (2003b) assertion that the influence of the ward ethos or culture on staffing numbers and perceived standards of care is of more significance than the organisational system. However, these findings may also be a particular feature of children's wards; therefore, future research of this kind needs to include children's wards as a discrete group.

Differences in ward climate may arise directly from the organisational culture (Hinshelwood & Skogstad, 2000a), but in the current study the leadership and/or management styles of individuals in positions of responsibility were

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particularly influential and facilitated aspects of the child's journey. The clinical co-ordinator role in LCSurg provided considerable support to ward staff and they also benefited from an 'integrated' organisational culture (Meyerson & Martin, 1987; Martin, 2002) that focused on the needs of child patients. In the DGH wards there were managers above ward level who were experienced as both children's nurses and managers, as recommended by Clothier et al (1994) and subsequently by the RCN (2003), the NSF for children (DH, 2004) and the Healthcare Commission (2007). In the focus groups, the lack of senior paediatric nursing support was highlighted and DGHMix had experienced a gap of over six months before their previous manager had been replaced, which had increased pressure on the ward manager. However, this had been rectified prior to commencement of the fieldwork and so such problems were not observed in the Main Study.

Transformational leadership has been promoted in nursing (e.g. NHS Executive, 2001; Welford, 2002; Thyer, 2003) and elements of this such as creativity, shared vision and empowerment of staff (Manley, 2000; Stanley, 2006a) were observed in the three settings. However, these attributes were associated more with the ward and senior managers, especially in the DGH wards. Nurses observed providing HD care demonstrated characteristics that Stanley (2006b) identified with clinical leadership, such as clinical knowledge and skills, effective communication, decision-making, approachability and accessibility. Ward managers, particularly the G grade nurse in LCSurg, also possessed many of these attributes, but managerial responsibilities often precluded opportunities for them to exploit their clinical skills, requiring them to allocate HD care to more junior members of staff. Stanley's (2006b) emerging

theory of congruent leadership appears to explain and integrate aspects of 'Nursing expertise' and 'Backup and support' in the current study, but more research is required to validate his theory.

The positive influence of nursing expertise was evident in several of the more experienced participants in all three wards. This enabled them to be assertive, act as an advocate or role model or empower other nurses, children and families, thus facilitating the child's journey to HD care at various stages. Expertise includes several attributes and has been linked to claims that this leads to improved patient outcomes and quality of care (e.g. Hardy et al, 2002; Bonner & Greenwood, 2006; Christensen & Hewitt-Taylor, 2006). The seminal work of Benner (1984) is extensively cited in the context of nursing expertise and has become particularly influential in the UK. Her work highlighted how expertise can be developed through reflection and *learning* from experience, rather than experience based on the length of time a nurse has been qualified or in a particular post (King & Macleod Clark, 2002; Twycross & Powls, 2006).

Although details about the acquisition of psychomotor skills and progression or transition between the stages of expertise are lacking in Benner's (1984) work, nursing expertise does not only entail the development of specific skills. In a grounded theory study of nephrology nursing expertise, Bonner & Greenwood (2006) described 'skilfulness' in terms of a more generalised ability to deal flexibly with a range of concurrent situations rather than merely the performance of specific tasks. Kenny (2003), in the context of children's nursing, made similar distinctions between 'having a skill' and 'being skilled', referring to the

importance of family-centred care and working in partnership with children and families, not simply mastery of a specific skill.

The RCN Expertise in Practice project incorporated a range of evidence to develop understanding and recognition of the concept, leading to an accreditation process for clinical nursing expertise (Manley & Garbett, 2000; Hardy et al, 2002; Garbett et al, 2007). Attributes identified in this project that were mentioned by participants in the present study included experience, competence, fluency of action, evidence-based practice, specialist knowledge and skills and use of opportunities to develop these further. However, evidence relating to the influence of this process on practice development is limited. Findings from the current study suggest that further investigation of the effect of nursing expertise on children's nursing practice is required and this could also contribute to the testing of Stanley's (2006) theory of congruent leadership.

This study found that collaboration and multidisciplinary teamworking associated with 'Shared care' appeared to have promoted decision-making and the development of PEWS, integrated care pathways or protocols for individual children in the DGH wards. This initiative was also beneficial in helping to overcome obstacles such as 'They're not used to paeds', facilitating progress on the child's journey to HD care at the skills stages. Although participants collaborated with other healthcare professionals, such as in the development of care pathways, the majority of interactions observed and discussed in interviews involved doctors and nurses, consistent with previous studies (e.g. Porter, 1995; Chaboyer & Patterson, 2001; Manias & Street, 2001). Collaboration between nurses and paediatricians or paediatric surgeons

appeared to reflect the attributes identified in a concept analysis by Henneman et al (1995) and Taylor's (1996) definition based on a 'deconstruction' of the literature on collaborative practice. Factors included co-operation, sharing of expertise and responsibility, effective communication, mutual respect, non-hierarchical relationships and trust, resulting in teamwork and shared decision-making, which are also features of the 'integration' paradigm of organisational culture (Meyerson & Martin, 1987; Martin, 2002). However, these were often not present in interactions with adult surgeons or managers in the DGH wards, perhaps reflecting the diversity associated with the 'differentiation' perspective (Meyerson & Martin, 1987; Martin, 2002).

Variable experiences of teamworking and collaboration have been reported in critical care settings (e.g. Chase, 1995; Manias & Street, 2001; Coombs, 2003; Coombs & Ersser, 2004; Wilson et al, 2005). Findings from Chase's (1995) ethnographic study are consistent with those of the current study in terms of nurses and paediatricians discussing differences of opinion amicably because of the level of mutual respect and collaboration that had developed. By contrast, findings from Wilson et al's study (2005) of the culture of a special care nursery indicated that perceptions of teamwork were contradictory and that an 'authoritative, autocratic' (p32) decision-making culture was prevalent, with doctors not always listening to nursing staff. Similar difficulties with power relationships have been identified in other critical care units (e.g. Manias & Street, 2001; Coombs, 2003; Coombs & Ersser, 2004).

Critical care units such as ICUs or neonatal units tend to have sicker patients requiring more advanced interventions; therefore, medical staff are more likely

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to be present in the units and involved in the management of care. Conversely, although the children needing HD care in the three wards were very sick and doctors were involved in the management of their care, they were not present all the time and nursing staff took responsibility for the majority of interventions. This may help to explain the difficulties experienced by participants reported in the studies by Coombs & Ersser (2004) and Wilson et al (2005) and may reflect differences between HD and intensive care. Further study of teamworking and collaboration in HD care is therefore required to explore these differences.

The establishment of an outreach team from PICU as another source of support for wards in the tertiary hospital was being discussed during fieldwork, but this was not set up until 2004. The Audit Commission (1999) and Department of Health (2000b) originally recommended critical care outreach teams as a method of providing hospital-wide support for staff caring for seriously ill adult ward patients. Despite the widespread introduction of outreach teams (e.g. Coombs & Dillon, 2002; Richardson et al, 2004), as with the development of early warning systems, evidence of the effectiveness of such innovations has been questionable, partly due to the variability of schemes and consequent difficulties in comparing results (DH & NHS Modernisation Agency, 2003). Guidelines from NICE (2007) on caring for the acutely ill patient in hospital recommend the development of outreach teams. Furthermore, positive effects resulting from the support of outreach teams have been identified in individual hospitals, such as improved survival rates for patients (Ball et al, 2003; Priestley et al, 2004) and support for ward staff (Chellel et al, 2006). Endacott & Chaboyer (2006) identified four themes relating to outreach teams from analysis of interview data from their study: patient interventions, support for ward staff,

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liaison between the ward and ICU and hospital-wide role. Similar roles may offer support to children's nurses providing HD care in ward settings and evidence from adult studies could assist in their development. Paediatric outreach teams are still in their infancy in this country, but an outreach service to support staff delivering HD care has been established in London (Day et al, 2005) and plans for a similar scheme have been described by Haines (2005). These require evaluation and robust evidence of their effectiveness in terms of patient outcomes. Such teams could only be provided in hospitals with a PICU, however, and other arrangements would again be obligatory in a DGH.

A key aspect of the provision of HD care in all three of the study settings was that this had to occur within the context of 'The normal workload' of a busy children's ward. Inevitably, these activities had an impact on each other because care was required for all of the children and families, but a sick child's needs had to be prioritised due to the potential for further deterioration if interventions were delayed. If the ward was busy and a child needed HD care, parents were often relied on to contribute to care activities for less sick children, especially in the DGH wards. This was contrary to the tenets of family-centred care (e.g. Darbyshire, 1994; Hutchfield, 1999; Coyne & Cowley, 2007) and was recognised as such by several participants. The importance of family- and child-centred care is highlighted in numerous studies and policy documents, including the NSF for Children (DH, 2003, 2004) and has been widely adopted as a 'philosophy' underpinning children's nursing.

Some adult managers misunderstood the role of families, considering their presence to mean 'extra pairs of hands' and, therefore, that no more staff were

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needed. Contrary to providing more support to nursing staff, however, there was the potential for extra demands to be made in terms of giving information, educating children and families and psychological care. Callery (1997) termed such activities 'a hidden area of nursing work', as they are rarely recognised or accounted for in nurse staffing establishments, including the wards in the current study.

Although LCSurg did not experience problems with managers, as a result of recommendations regarding the centralisation of paediatric surgery (Arul & Spicer, 1998; RCSEPF, 2000; Children's Surgical Forum, 2007), parents here were often far from home and so did not have the social support of friends and family that could be offered in the DGH wards. Difficulties in providing family-centred care were also exacerbated by the high numbers of admissions and discharges to the wards. Although the efficiency of health care delivery has been measured by the use of 'throughput' figures, based on numbers of admissions and discharges, this does not give any indication of the quality of care received or patient outcomes. Increased throughput could also exert greater pressure on staff to maintain standards, requiring 'higher levels of skills, flexibility and commitment' (Beil-Hildebrand, 2002, p267). Consideration of the need for psychological and social support due to the increasing numbers of children undergoing surgery in tertiary centres and the impact of HD care delivery and increased throughput is therefore required in future studies of family-centred care.

7.5 Implications for high dependency care provision

In the previous sections, the findings relating directly to the research questions were discussed. In this section, the implications of these findings will be considered. These include the effects of having an HDU and the impact on staff and the quality of care associated with providing HD care on a children's ward.

7.5.1 The effects of having an HDU

In this study, only one of the wards had an HDU. As the experiences of participants in DGH/HDU demonstrated, having an HDU had advantages and disadvantages, but such developments were seen as desirable for nurses in DGHMix and LCSurg. The opening of an HDU appears to conform to many of the recommendations and guidelines about the provision of HD care (e.g. PHDCSGNW, 2000; DH, 2002). In the SW, the development of HD facilities including HDUs has been advocated, with advice being provided on how to bid for funding using SW audit data as a basis for submission (Fraser & Maskrey, 2003). However, as a result of changes in commissioning arrangements, critical care for children was no longer funded separately, but was incorporated into 'specialist services' (RCPCH, 2004). This led to budgetary constraints for critical care, which also affected HD care developments.

At the time of this study, few paediatric HDUs existed, but many have since been opened across the UK, including in SW England, and descriptions of some of these service developments have been published (e.g. Day et al, 2005; Datt & Robinson, 2007). Perceived benefits of an HDU included: taking pressure off the ward, preventing beds becoming blocked in PICU and the security of being able to admit children to a designated area in the ward.

Similar advantages have been identified for adult patients (e.g. Ryan et al, 1997; Fox et al, 1999; Armstrong et al, 2003) and Datt & Robinson (2007) reported such benefits following the opening of a paediatric HDU.

However, as in the focus groups, a number of disadvantages to HDUs were also encountered. These included: the potential for de-skilling staff, concerns regarding new equipment and possible demands for nurses to extend their skills without sufficient preparation. These issues were identified in relation to adult HD care by the Audit Commission (1999) and used as a basis for arguing against the indiscriminate establishment of HDUs. Difficulties in staffing the HDU, which entailed taking a nurse from the ward establishment, were also experienced in this study. Furthermore, problems could arise when a child's condition improved sufficiently for them to no longer require care in the HDU, with pertinent links being made in the focus groups and Main Study between transfer out of HDU to the experience of moving from intensive care to a ward setting. Although the admission of children to a PICU has been identified as a stressor for parents (e.g. Noyes, 1998, 1999), the transfer from such facilities can be equally stressful (Keogh, 2001) and requires preparation (e.g. Bouve et al, 1999), despite this being for positive reasons, i.e. improvement in the child's condition. No research has yet been published on parents' perceptions or experiences of HDUs. Findings from studies conducted in PICUs (e.g. Board & Ryan-Wenger, 2003; Shudy et al, 2006), particularly evidence-based approaches to coping or meeting parents' needs (e.g. Melnyk & Alpert-Gillis, 1998; Aldridge, 2005) may have some relevance for these units. However, the considerable differences in the environment and culture of a designated PICU and a paediatric HDU that may be attached to or part of a children's ward limits

the transferability of these findings. With the proliferation of HDUs, studies focusing on parents' perceptions of these units and the care provided are now required.

A key drawback identified in DGH/HDU arising from the opening of the HDU was the 'new' perceptions of HD care, referred to as 'getting round the label' and the consequent concerns of some nurses about providing this level of care. Working in critical care environments can be stressful for nurses (e.g. Tyler & Ellison, 1994; Corr, 2000; Kincey et al, 2003), but the majority of staff in designated units have chosen to do so. The provision of HD or critical care on a ward may also cause nurses stress, yet there is often no choice about involvement in this level of care. No research appears to have been conducted into the impact of providing this level of care, although it has been recognised that working in a children's ward *per se* may be stressful (Jolley, 1995; Doman, 1997). Datt & Robinson (2007) reported similar difficulties following the opening of their HDU, which they attributed to lack of confidence.

A number of advantages and disadvantages of HDUs have been identified in this study, but further exploration is required to establish the effectiveness of HDUs for children and their impact. Although adult HDUs have been in existence for longer than those for children, no systematic evaluation of the impact of opening an HDU has been undertaken. Moreover, no research evidence relating to paediatric HDUs has been published and so such studies are urgently required.

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7.5.2 The impact of providing high dependency care on children's wards

Quality of care was not assessed in this study, but the findings demonstrate that the components of Donabedian's (1966) structure-process-outcome model were discernible. Aspects of 'structure' incorporated staffing levels and skillmix, managerial support, workload and the organisational culture; 'process' was represented by communication, collaboration, skills and expertise; and 'outcomes' were the provision of HD care and its consequences. These were experienced by nurses, parents and children in terms of increased workload resulting in threats to the provision of family-centred care and 'Feeling torn'. Difficulties were evident in all three components of the model, suggesting that the quality of care provided was not optimum, particularly when HD care was being delivered. Therefore, the impact of providing HD care in children's wards requires further investigation.

Although 'fear' of working in an HDU was acknowledged by some participants, those who were happy to deliver HD care also experienced conflicting emotions, with 'Feeling torn' being experienced by nurses who were allocated to deliver this care in the DGH wards. This appears to reflect findings from studies by Williams (1998) and Sørlie et al (2003). Williams' (1998) grounded theory study of quality care identified how nurses used 'selective focusing' to help them cope with stress and limited time for patient care. Factors contributing to 'quality focusing', the most effective phase, included teamwork and resources such as sufficient staff and appropriate equipment that were identified as facilitators to HD care in the present study. Findings from a phenomenological study by Sørlie et al (2003) identified 'emotional pain' arising from undertaking the 'right' care, which was socially confirmed by others, but resulted in a 'bad

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conscience' because it was at the expense of other children and parents. 'Disconfirming child and parents' (Sørlie et al 2003, p288) related to the prioritisation of tasks such as recording observations at the expense of psychosocial care, especially when short-staffed, which corresponds with Williams' (1998) 'needs focusing' phase. The potential for patients to be 'neglected' (Sørlie et al, 2003) or the quality of care to be adversely affected (Williams, 1998) as a result of competing demands and stress was identified in these studies, but both were reliant on self-report by nurses. Although no 'neglect' of children or families was observed or reported in the current study, time and resources were limited due to the impact of providing HD care, leading to lower quality of care for the remaining children on the ward. Coggins (2000) demonstrated similar results in an adult surgical ward that lacked HDU facilities.

Hinshelwood & Skogstad (2000a) refer to the seminal work of Menzies in their discussion of anxiety and organisational culture, highlighting how individuals may develop 'defences' to enable them to cope with their job. Menzies (1959, cited by Hinshelwood & Skogstad, 2000a) found that nurses developed 'defensive techniques', including moving between wards, task-oriented care, discipline and hierarchical management to thwart the formation of relationships with patients, resulting in depersonalisation and denial of feelings. Current nursing practice appears to encourage the reverse; caring and involvement with children and families are promoted, yet support for nurses in coping with the competing demands and stress that may result is often inconsistent. This might lend support to the 'selective focusing' process described by Williams (1998), but the experience of 'Feeling torn' in the present study and 'emotional pain' described by Sørlie et al (2003) may also be associated with the concept of

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'emotional labour'. This was originally described by Hochschild (1983) and has since been discussed extensively in nursing (e.g. Smith, 1992, 2001; Cribb, 1994; Staden, 1998; McQueen, 2004) but evidence of this in children's nursing is limited. Emotional labour associated with the competing demands experienced by nurses working on children's wards needs further investigation.

The organisational culture was identified as an important factor in the observed differences between the wards in the present study. The positive influence of an organisation was highlighted in the influential work on 'Magnet hospitals' and particularly 'failure-to-rescue' by Aiken and others (e.g. Aiken et al, 2000, 2002; Needleman et al, 2002; Boyle, 2004; Seago et al, 2006). These studies linked good quality of care and patient outcomes to supportive organisations and appropriate staffing levels and skillmix in terms of Registered Nurses.

This work has been done almost exclusively with adults, however, and there is limited evidence relating to 'failure-to-rescue' in paediatric settings. A major reason for the dearth of paediatric research appears to be because children's wards have been excluded from many studies (e.g. Needleman et al, 2002; Boyle, 2004; Seago et al, 2006; Rafferty et al, 2007). Even where they have been included (e.g. Aiken et al, 2001), the unit of analysis was the hospital and so no differences were discernible because the results were combined. Notable exceptions include studies by Coté et al (2000) and Sedman et al (2005), who suggested that failure-to-rescue may be applicable to children. Coté et al (2000) set their own outcomes and analysed critical incidents relating to adverse sedation events in children from a range of settings, not all in hospital. Sedman et al (2005) used failure-to-rescue criteria to assess the relevance of

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patient safety indicators in children's hospitals in the USA. They found that current indicators for failure-to-rescue were inappropriate for children, and argued that there was a need to set outcomes in relation to the local context, as Coté et al (2000) appeared to have done. Despite being conducted with children, these studies fail to add to the understanding of failure-to-rescue because they did not use standard indicators, the study settings were not comparable and the system of healthcare in the USA differs considerably from that in the UK.

Although the links between organisational culture, staffing issues or managerial support demonstrated in the current study appeared to be associated with failure-to-rescue, further consideration identified that this was not the case. Nurses in both DGH wards expressed concerns about the potential for situations to become unsafe as a result of providing HD care, especially when short-staffed, but assertions regarding failure-to-rescue were not supported. Results from the studies by Aiken et al (2001), Needleman et al (2002) and Rafferty et al (2007) suggested that seriously ill patients could deteriorate or even die from complications because there were not enough qualified staff to care for them and the signs might have been 'missed'. Findings from the current study suggest the opposite; sick children received the care and attention they required, but at the expense of those whose conditions were less acute and were able to wait, which could result in lower quality of care for the remaining children in the wards. This may reflect the presence and involvement of families in their child's care, which is less apparent in adult wards. Children's services in the UK, therefore, need to be treated as a discrete group in future studies of failure-to-rescue.

7.6 Conclusion

In this chapter, the findings presented in Chapter 6 have been discussed with reference to relevant literature. A number of implications for children's HD care arise from this discussion, including differences between hospital settings, the sick child's journey to HD care, benefits and challenges of an HDU and the impact of providing HD care on a children's ward.

Comparisons between the DGH wards and LCSurg indicated that considerable differences existed at an organisational level, partly attributable to the prevailing culture. Although the influence of the social context and organisational culture on aspects of care provision has been identified in adult settings and neonatal units, this has not previously been reported in children's wards. Whereas the DH (2002) recommendations acknowledged differences on the basis of the presence or otherwise of a PICU in a hospital, other differences between wards and hospital settings have not been considered, despite their effects on access to and delivery of HD care observed in this study. Therefore, findings from this study contribute to our understanding of the influence of the context and culture on the provision of care for children. Consequently, rather than viewing children's wards as more or less the same, greater recognition of differences between wards and hospitals, particularly the effect of the organisational culture and the ensuing implications for care provision, is required in future policy. Additionally, studies focusing on the organisational culture of children's services at a micro and macro level are needed. To date, the three perspective framework of organisational culture described by Meyerson & Martin (1987) and Martin (2002) has received limited attention in nursing studies. Although this was not used as a framework, the 'integration' and 'differentiation' perspectives

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contributed to an explanation and understanding of the organisational differences identified in this study. Further research using this framework is also required to verify its wider application to the study of organisational culture in nursing and the ability to explain differences between settings.

The importance of the child's journey to HD care was also highlighted in this study. The process by which a sick child accesses HD care has not previously been recognised, although individual aspects or stages on the journey have been studied. The process of accessing HD care should be acknowledged in future policy and the child's journey to HD care requires further investigation in other settings to examine this in more detail and provide support for the preliminary findings of this study.

Numbers of children requiring HD care are much higher than those for PIC (Fairfield, 1997; DH, 2002; Rushforth, 2006) and all children's wards are expected to provide this level of care. The development of HDUs is popular, associated expectations being that these will enhance the provision of care, yet a number of disadvantages have been identified. For wards such as LCSurg, which are part of a larger children's unit, HDUs could be planned and staffed as separate entities without creating the problems observed in DGH/HDU. However, findings from this study also indicated that HD care could be provided in LCSurg without the associated problems because they had appropriate staffing levels, skillmix, expertise and support and collaborative working relationships with medical staff, possibly due to the 'integrated' organisational culture. Additionally, the obstacles identified caused minimal hindrance to the child's journey to or the provision of HD care. The opening of an HDU needs

greater consideration, therefore, especially in DGH units where the impact on the care of other children in the ward was found to be of major consequence.

The potential impact on other patients and staff of providing HD care in a ward has been reported in adult studies. However, the effects identified in this study were intensified in the DGH wards, especially if care was provided in an HDU. Quality of care was not measured, but the perceptions of nurses in the DGH wards were that this could be compromised if HD care was being provided. Additionally, the competing demands of delivering HD care and the normal workload had consequences for the nurses themselves.

Although an increase in staffing levels and a richer skillmix could contribute to amelioration of some of the identified problems, this is not easily achieved, particularly in the current financial climate of the NHS. Robust evidence would be required to support such a case, especially in a DGH, where there are often pressures on children's wards to conform to standards similar to those in adult units, despite the many differences. Data from the SW audit have been used to support the case for improvements in HD care provision in several DGH children's wards, including, in some instances, an HDU, but this cannot assist directly with staffing levels. Further exploration of the impact of providing HD care on a ward is therefore required and potential solutions to the identified consequences need to be sought.

Findings from this study highlight the need for more research and greater consideration of the access to and provision of HD care for children and the influencing factors. It is evident that the DH (2002) report is seen to offer

definitive guidance for children's HD care, since no attempts have been made to revisit the recommendations or clarify issues further in subsequent reports. This is illustrated in the DH (2006) document, which failed to provide any specific advice relating to HD care, merely referring to the DH (2002) report for more details and including this as an Appendix to aid the process.

Although investigation and change are needed at a local level, perhaps supported by regional benchmarking, this does not preclude the requirement for updated national standards, such as for clinical skills, competencies or experience, which would offer more support to managers of DGH children's services in particular. Revision and updating of the recommendations for HD care are urgently required, therefore, to establish a more pertinent direction and structure for this level of care provision.

In the final chapter, the study will be evaluated and recommendations for future practice, education and research will be offered.

CHAPTER 8:   CONCLUSION

8.0 Introduction

This study has explored the provision of children's high dependency care in three children's wards in SW England and identified factors that enhanced or hindered delivery of this care. All three wards were able to provide HD care safely but differences were evident in the sick child's 'journey' to HD care and the influencing factors in each setting, which in turn were affected by the ward context and organisational culture. The impact of providing HD care in a children's ward on children, families and staff and the need for further research were also highlighted.

In this chapter, the study will be evaluated with reference to the original aims and research questions. Acknowledgement of the study's limitations, an appraisal of the role of the researcher and consideration of the audit trail to assess the rigour or trustworthiness of the study will also be included, followed by a discussion of the implications arising from the findings and recommendations for future practice, education and research.

8.1 Evaluation of the study

The main purpose of this study was to explore the provision of HD care in children's wards and identify the individual and organisational factors that influenced this care. This was achieved by conducting a study in two stages. In the Preparatory Work, three focus groups were carried out with nurses directly involved in the provision of HD care in children's wards, based on the recommendations of Morgan (1988, 1993), Krueger (1994), Barbour & Kitzinger (1999) and Bloor et al (2001). Following analysis of the data, these findings

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were used to inform the Main Study, which entailed an ethnographic approach (Hammersley & Atkinson, 1995; Brewer, 2000), with fieldwork and individual interviews being conducted in the 'natural setting' of three children's wards.

Participant observation enabled 'immersion' in the culture of each setting and data were collected through written field notes, interviews and documentary sources. The three phases of observation described by Spradley (1980) were undertaken in all the settings and field notes were recorded in the three forms outlined by Burgess (1982). Interviews were tape-recorded and transcribed verbatim and relevant details from documents such as SW audit forms and care plans/pathways were included with field notes. Both non-cross-sectional and cross-sectional analysis were used to code data, following the recommendations of Mason (2002), and a thematic analysis of the developing codes and categories was subsequently undertaken. Eleven categories, emerged, classified into three themes: the child's 'journey' to HD care in each of the settings, obstacles and facilitators to HD care. Illustrations of the different configurations of the 'journey' and the interplay of these themes in each ward were also offered.

8.1.1 Aims and research questions

The aims of the research study were translated into five questions that were addressed in the Preparatory Work and Main Study. The first question, 'What are the experiences of nurses providing HD care in children's wards?' was addressed in the focus groups in the Preparatory Work. A range of other issues also emerged from this stage, as discussed in Chapter 3, which linked to research questions 2 – 5; these were used to inform the data collection

methods in the Main Study (see Table 3.2). The findings emanating from the subsequent data analysis addressed the principal aim of the study and research questions (Q) 2 – 5 (see Table 8.1), as outlined below:

Q2: How do nurses recognise a sick child's need for HD care and what then happens to the child?

This was answered in Theme 1, the sick child's journey to HD care, which highlighted how nurses recognised deterioration, identified whether or not a child required HD care and communicated their concerns so that the child accessed HD care. These stages were also influenced by the obstacles and facilitators in Themes 2 and 3.

Q3: What knowledge and skills are needed to nurse children requiring HD care?

A range of skills was identified, including 'Recognising deterioration' and communication discussed in Theme 1, various clinical skills and aspects of 'Nursing expertise' and 'Shared care' in Theme 3.

Q4: What preparation, support and resources do nurses require to provide HD care for children?

A key resource was staffing, as discussed in 'Juggling staff' in Theme 1. Preparation and support were addressed in Theme 3, facilitators to HD care, particularly 'Nursing expertise' and 'Backup and support'.

Table 8.1: Research questions, issues from Preparatory Work and links to Themes and categories in Main Study

Research questions	Issues from Preparatory Work	Relevant Theme or category
2	Differing definitions and perceptions of high dependency care	HD care or HD child
4, 5	The impact of having an HDU on nursing staff, the ward, patients and families	The normal workload Feeling torn Juggling staff
5	Differences between hospital settings in terms of environment and culture	Throughout: The child's journey Obstacles to HD care Facilitators of HD care
2, 3	Knowledge and skills required for high dependency care, especially how nurses recognise the sick child	Recognising deterioration Giving them the evidence Getting results
3, 4	The value of nurses' experience, e.g. in recognising the sick child, assertiveness, confidence, intuition and decision-making	Recognising deterioration Nursing expertise
4	The preparation for high dependency care that nurses receive, e.g. skills training, courses undertaken	Nursing expertise
3, 5	Working with inexperienced doctors and 'adult' surgeons	They're not used to paeds Shared care
3, 5	Communication and interactions between nurses, medical staff and other departments	Giving them the evidence Getting results Shared care
4, 5	Staffing and managerial support of children's wards and units	Juggling staff Backup and support

Q5: What individual or organisational factors may enhance or hinder the provision of HD care in children's wards?

Themes 2 and 3 incorporated a range of obstacles and facilitators to HD care. These affected the provision of HD care, but their influence on Theme 1, the child's journey, was more noticeable.

8.1.2 Study limitations

Although the study addressed all of the research questions, there were a number of limitations. These include the exploratory, descriptive approach and the small-scale nature of the study, both of which were deemed necessary for a qualitative study, but which also limited the breadth and depth of the data collected and the findings. Additionally, there was a major risk that, due to the dynamic nature of children's HD care and developments occurring nationally, this study and the findings would become out of date before completion. However, this does not appear to have been the case.

In the Preparatory Work, the small number of participants in the focus groups, particularly in FG3, may have led to the full range of views about HD care not being represented but this was not the purpose of the Preparatory Work and may be inevitable in a small-scale study. Potentially of more concern was the lack of a co-moderator in two out of the three focus groups, which may have led to bias. However, the issues identified were able to provide a basis for further investigation in the Main Study, as planned.

The approaches used in the Preparatory Work and Main Study were appropriate. The Preparatory Work needed to be exploratory, due to the

paucity of research and experience of providing children's HD care available at that time. In the Main Study it was necessary to follow up the findings in practice; however, an alternative approach could have been used, such as action research in one or two wards, which could have engendered results of more direct relevance to practice. An action research study could still be used to investigate issues emanating from this study in more depth.

Restrictions on the time available for fieldwork and continuing work commitments limited the opportunity for observation at weekends and particularly at night. Participants in all three settings advised that this would not necessarily be advantageous, as it was not possible to predict when sick children might be admitted to the ward. Indeed, in LCSurg, the majority of HD care was provided for children following major elective surgery and so fieldwork time was planned in advance to exploit these opportunities. No HD care was directly observed in DGHMix, however, and more variation in fieldwork times may have enabled this to happen, thus enhancing the data collected.

In addition to time shortage, there were other constraints to this study, mainly arising from ethical considerations and sensitivity to nurse participants and children/families in the ward settings. In the Preparatory Work these were largely overcome because participants were all volunteers attending the focus groups in their own time. Issues relating to confidentiality and anonymity had to be addressed, however. Although the 'ground rules' for the interviews included these aspects and no individual or workplace was identified, it was not possible to control participants' behaviour outside of this situation. In view of the potentially sensitive nature of the discussions, particularly disclosure of feelings

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about HD care, there was a possibility that confidentiality could have been breached or individuals could have been upset by the proceedings. Despite no previous acquaintance, however, participants were supportive of each other during and after the interviews and I was unaware of any breaches of confidentiality.

Ethics approval for the Main Study placed several constraints on the study, but these were for good reason and did not restrict the fieldwork unduly. The interview schedule submitted as part of the ethics application limited the opportunity to ask questions that deviated from those set out, but it was possible to 'probe' for more details and at times participants' responses allowed for variation in the order in which questions were asked. There were also situations when participant observation was not appropriate, either in accordance with the 'observation guidelines', or because the lack of space or the number of people present precluded this. Where possible and appropriate, such incidents were followed up with the allocated nurse through interview or informal conversation, recorded in field notes.

The study aimed to explore the provision of HD care in children's wards, but the only participants were nurses, thus the focus was on the nursing perspective of HD care provision. The study might have been enhanced if the views of others had been included, but because the focus was on HD care, it would not have been appropriate or ethical to have involved sick children and their families at a time of considerable vulnerability. Moreover, in comparison with other healthcare practitioners, nurses spend most time in direct contact with sick children and their families. However, the involvement of other members of the

multidisciplinary team may have offered greater understanding and a more holistic portrayal of HD care provision.

Findings and interpretations from this study have been shared in various meetings in the three settings and regionally and have received considerable support. However, these limitations might have affected the data collected and thus the findings of the study and so these must be viewed with caution.

8.1.3 Role of the researcher

Despite having undertaken small-scale research projects in the past, the role of researcher in this study was very different and far more extensive than anything previously experienced. It soon became apparent that I was very much a novice in this role and had a considerable amount to learn about conducting a research study, both theoretically and in practice. The encouragement, support and experience provided through supervision were invaluable in this respect and throughout the entire process, but ultimately I had to take responsibility for my own learning.

The researcher role in the Preparatory Work involved organisation and moderation of the focus groups. This role was overt and, although direct involvement introduced some degree of subjectivity and potential bias, the use of a co-moderator for one focus group and establishment of 'ground rules' throughout helped to minimise these problems and the effect of my presence. In the Main Study the role was very different. In accordance with the ethnographic approach, I became a participant observer in the three settings, which inevitably had an influence on what was happening simply from being

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there. Reflexivity was, therefore, crucial throughout the fieldwork time in order to maintain awareness of the researcher role and prevent disruption of the practice or contexts being observed, as discussed below.

8.2 Establishing rigour

As discussed in Chapter 5, a vital aspect of the study was the development of an audit trail to help establish rigour. In qualitative research, rigour or 'trustworthiness' can be assessed using criteria that equate to aspects of reliability and validity in quantitative research – credibility, transferability, dependability and confirmability (Lincoln & Guba, 1985; Sandelowski, 1986). Sandelowski's original discussions about rigour have developed since the 1980s (e.g. Sandelowski, 1993), especially in view of the greater acceptance of qualitative research methods and even the combination of qualitative and quantitative approaches (Sandelowski, 2006, Sandelowski et al, 2007). However, these criteria still offer a practical framework for assessing the rigour of a qualitative study and have, therefore, been used here.

8.2.1 Credibility

Credibility or 'truth value' was achieved through the maintenance of an audit trail, respondent validation by returning to the settings to present interpretations of the findings to participants, analysis of 'negative cases' and triangulation. The use of multiple methods has been recommended by Hammersley & Atkinson (1995) and Brewer (2000) asserted that this was triangulation, recommended for 'completeness' in qualitative research by Sandelowski (1995b) and Shih (1998). Denzin's (1989) description of 'within-method triangulation' corresponds to Hammersley & Atkinson's (1995) 'data-source

triangulation', which involves collecting data about the same phenomenon from different participants, times and locations. A more 'holistic' view of the provision of HD care was gained by following these recommendations and also increased the credibility of the findings. Additionally, regular opportunities for 'data challenge' in supervision sessions enhanced the credibility of the analysis.

8.2.2 Transferability

Transferability or applicability refers to the similarities between contexts and requires those reading or assessing the study to decide whether the findings can be applied to another setting. This requires the maintenance of an audit trail and detailed or 'thick' description (Geertz, 1993) to enable meaningful judgements to be made, which was provided throughout the study.

8.2.3 Dependability

Dependability or consistency relates to the auditability (Sandelowski, 1986) of a study, which requires accuracy and a detailed audit trail (Koch, 1994, 2006). Field notes were systematically recorded and organised using the three types of notes suggested by Burgess (1982, 1984) and interview data were tape-recorded and transcribed verbatim. In the 'analytical notes' (Burgess, 1982), decisions relating directly to fieldwork and data collection and subsequently to the collapsing and 'labelling' of categories and the development of themes and the configurations of the child's 'journey' in each setting at the analysis stage were documented.

8.2.4 Confirmability

According to Lincoln & Guba (1985), in order to demonstrate confirmability the researcher should indicate how interpretations have been reached to ensure these are not subject to researcher bias but derived from the data. Again, this was achieved throughout the study by maintenance of an audit trail (Koch, 1994, 2006) with extracts from field notes, reflective journal and analytical notes featuring in relevant sections. Additionally, reflexivity was a vital strategy that required consideration of both the 'emic' and 'etic' perspectives. 'Methodological notes' (Burgess, 1982, 1984) recorded in the reflective journal assisted in this process, as did regular supervision meetings and 'data challenge' sessions.

8.3 Implications and recommendations

Both stages of this study have highlighted issues that require further development or investigation. Those identified in the Preparatory Work were incorporated into the Main Study and so have been considered with the findings and discussion in Chapters 6 and 7. These implications and recommendations will now be discussed under the headings of practice, education and research.

8.3.1 Implications and recommendations for practice

Although it was evident that HD care was being provided appropriately, this could be at the expense of staff and the quality of care for other children and families in the ward. The relative influence of a range of individual and organisational factors present in each of the settings has been highlighted and the variable configurations of the sick child's journey to HD care also underlined these difficulties and benefits.

Key issues and strategies that need to be addressed include the following:

- Recognising deterioration in children is an essential skill for nurses and doctors, yet concerns were expressed that some staff might be unable to detect significant changes or to report and respond to them appropriately. This apparent deficit needs to be addressed urgently. Relevant strategies include audit of current practices, including skills of observation and the recording of vital signs on charts. These would help to identify local problems, which may then be addressed through training, education, development of skills or opportunities for further experience.

- Having an HDU was seen as a major advantage in both stages of the study, although drawbacks were also identified. The development of more HDUs whilst both conceivable and welcome, requires careful consideration. The issues highlighted in this study, such as size and layout, location, facilities and staffing, need to be taken into account in the planning and construction of HDUs to minimise the problems that can arise.

- Staffing and skillmix difficulties were problematic in all three settings, but especially so in the DGH wards. Local workforce planning that takes account of the differing needs of children in terms of acuity, dependency, speciality (or mixed specialities), communication and family involvement is required, ensuring that children's wards are assessed separately from adult wards.

- The value of collaborative working relationships in terms of communication was highlighted, particularly in the development of PEWs and care

protocols. Further developments of this nature, including clinical guidelines or integrated care pathways, which require a multidisciplinary approach, could be of benefit to children's wards in DGHs, but require robust evaluation.

- The use of audit to assess nurses' ability to recognise deterioration was recommended above. Audit can also be used to evaluate the benefits of PEWS, care protocols and pathways and to appraise the availability and use of specialised equipment, such as CPAP drivers or monitors and interventions such as within-hospital transfer. This can help to identify the need for specific training for staff in children's wards and other hospital departments and the development and maintenance of skills.

- Quality of care is a key issue for practice and management. Variations in the access to and provision of HD care in each setting have been highlighted and these could contribute to inconsistencies in the quality of care provided and received by hospitalised children. The organisational culture and ward contexts were key influences and so strategies to improve services need to be developed locally. The development of a benchmarking group incorporating all local children's wards and units could help to address inconsistencies and would enable the local context to be taken into account.

8.3.2 Implications and recommendations for education

The importance of developing and maintaining relevant knowledge and skills has been alluded to throughout. Various strategies have been discussed, but again the local context has to be taken into account, along with the current

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financial climate in the NHS. The delivery of 'traditional' specialist clinical courses may need to be reconsidered, therefore, and more innovative methods developed.

As a result, implications and recommendations for education include the following:

- Clinical modules and courses in HD care were seen as valuable for both experienced and inexperienced nurses due to the integration and application of theory and practice. These should, therefore, continue to be commissioned. Difficulty in releasing staff to attend courses, financial constraints on services and the commissioning of specialised clinical modules can limit the availability of and access to education, however. Collaborative approaches, such as through the development of 'partnership' modules or the joint delivery of 'stand alone' study days contributing to the development of a portfolio that can be formally assessed and credited may offer the flexibility required to meet practitioners' needs.

- Where staffing levels allow, opportunities for skilled and experienced nurses to take on specialist roles in specific aspects of care, such as respiratory management, can empower individuals and help them to develop expertise. In turn, less experienced nurses can consult them for advice, support, education and current research, as well as working alongside them to gain knowledge and experience. In larger hospitals, especially those with a PICU, members of an outreach team may take on such a role, but this can also be developed within a ward setting with the appropriate managerial support.

- The knowledge and skills deemed essential for optimum provision of care are not only developed once a nurse has qualified. Pre-registration children's nursing programmes need to incorporate theory and practice in acute, high dependency and critical care to ensure that children's nurses are equipped with relevant knowledge and skills when they qualify as RN (Child).

8.3.3 Implications and recommendations for further research

This study addressed the original research questions and many of the findings appeared consistent with existing research, including examples from adult wards and units. However, differences between adults' and children's needs and services have been identified throughout the study, as well as differences in roles and healthcare systems in other countries, which call into question the wider applicability of this evidence. As a result, it is recommended that studies undertaken with adult populations should, where ethical and appropriate, be repeated in paediatric wards and units with children/families and/or children's nurses in the UK. This study has also highlighted issues specific to children's nursing that require additional investigation, including aspects of the original research questions.

Recommendations for further research, therefore, include the following:

- Comparative studies of the differences between the ward contexts and the organisational culture of DGHs and tertiary hospitals and the implications of these, such as the availability of a PICU and outreach team, the organisation, management, facilities and staff used to caring for children, and help from other wards. In this study, nurses in the DGH wards reported

feeling torn when giving HD care, yet this appeared to be provided with minimal impact on the rest of the ward or staff in LCSurg. Other differences were also identified. Comparisons therefore need to be made at both ward and organisational levels to enable all the influencing factors and potential implications to be identified.

- High dependency care was the focus of this study, but specific aspects of this provision require further investigation. This includes the reported perceptions and experiences of nurses providing HD care, including stress, frustration or 'fear', as well as enjoyment, and what influences these feelings, although considerable sensitivity and careful ethical consideration would be required. The benefits and drawbacks associated with having an HDU also warrant further study, and a clear definition of HD care continues to be sought.

- Alongside attempts to improve the quality of care overall, such as through benchmarking and audit as discussed above, studies investigating further the factors that contribute to high quality care, identified in research with adults and also apparent in this study, need to be conducted. These include staffing levels, skillmix, workload, level of collaboration and multidisciplinary teamworking. Additionally, the effects of these on patient outcomes and the applicability of 'failure-to-rescue' in paediatric care need to be explored, possibly with the development of alternative, more relevant outcomes by which to assess care.

- The RN (Child) qualification has been suggested as one factor that may influence the quality and provision of care for sick children. The nursing contribution to patient care, experiences and outcomes is an issue that requires investigation by the profession as a whole. For children's nurses, the retention of separate programmes may depend on producing evidence that this qualification is required to enable better quality and more appropriate child- and family-centred care through the development of specific knowledge and skills.

- Numerous studies have been conducted into the experiences of hospitalised children and their families. Research has also focused on parents' experiences and perceptions of PICU or ICU. With the proliferation of children's HDUs, similar studies need to be undertaken exploring parents' perceptions of this level of care. Additionally, with the increasing number of infants or children requiring specialised surgery now receiving this in tertiary hospital settings, the experiences of families and, where appropriate, children of having care and treatment far from their home and normal social networks need further investigation.

8.4 Summary

In this study, a range of issues pertaining to HD care for children has been explored. The provision of HD care in children's wards was the main focus of the study and all children who required this level of care received it. However, the study methods and findings have also enabled the identification of other factors relating to the context and culture within which children's HD care is

delivered. The contribution of this thesis in terms of knowledge, theory and methods is outlined below.

This thesis contributes to our knowledge and understanding of care for acutely ill children in four main areas. Firstly, the sick child's journey or access to HD care following admission to the ward was identified as problematic. In the DGH wards, although nurses recognised deterioration and alerted medical staff to the presence of a sick child, commencement of HD care could be delayed. This was particularly apparent in the ward with an HDU, despite the unit having been established to enhance HD care delivery. Nurses' communication skills, multi-disciplinary teamworking and innovations such as PEWS and integrated care pathways facilitated a child's arrival at HD care, but the need to negotiate various obstacles, notably the need to move a child physically to the HDU, had the potential to delay this.

Consequently, a second area in which this thesis contributes to knowledge relates to the challenges and benefits of having an HDU for children. Although the presence of an HDU could enhance the provision of HD care, this was not necessarily the case and a number of disadvantages were identified, including additional delays in accessing HD care.

Thirdly, the study findings add to our understanding of the effects of providing HD care on a children's ward. Providing HD care had potentially adverse effects on the quality of care for less acutely ill children and their families in the DGH wards. There were also consequences for nursing staff due to the competing demands of the normal workload and the delivery of HD care.

Finally, factors influencing a sick child's access to and the provision of HD care were identified at the level of individuals, the ward settings and the hospital organisation, with differences between DGHs and a Lead/tertiary centre being particularly apparent. Such differences have not previously been recognised, with children's wards tending to be viewed as more or less the same, regardless of type of hospital. Therefore, the findings from this study contribute to our knowledge and understanding of the potential effects of the social context and organisational culture of a hospital on the provision of care in children's wards.

Although no theory was tested or generated in this study, the findings offer 'building blocks' to the development of theory. Links were identified with symbolic-interpretive theories of organisational culture (Hatch, 1997), specifically the three perspective framework of Meyerson & Martin (1987) and Martin (2002). The 'integration' and 'differentiation' paradigms in this framework contribute to an explanation and understanding of the differences identified between the ward and hospital settings as well as the obstacles and facilitators. Meyerson & Martin's (1987) theory has received limited attention in nursing studies to date, but could provide a framework for further study of the effect of organisational culture on children's services.

This thesis also makes a contribution in terms of methods, particularly the ethnographic approach, which incorporated fieldwork and observations of clinical practice. Ethnographic studies are not commonly conducted in nursing and there is a paucity of studies using observational methods in children's nursing, possibly due to the ethical considerations involved. This study demonstrates the value of ethnography for uncovering subtle nuances and

variations in the child's journey and also illustrates some of the dynamics between researcher and participants in children's wards.

This was a small-scale, qualitative study and so transferability is limited and further research is required. However, the findings advance our understanding of HD care provision in children's wards and can contribute to the development of future policy and practice.

APPENDIX 1:

PREPARATORY WORK – FOCUS GROUP MATERIAL

1A: Flyer for wards/units

1B: Information sheet for nurses

1C: Consent form for focus groups

1D: Biographical data sheet

1E: Ground rules for focus groups

1F: Topic guide for focus groups

Do you nurse children requiring high dependency care?

Would you be willing to discuss your experiences with other nurses in your area?

If so, please read on:

I am undertaking a research study supervised by the University of Plymouth into nurses' experiences of high dependency care for children especially in ward areas. Part of this involves some group interviews to be held in various parts of the S & W. I am seeking qualified nurses who would be willing to participate.

You would only be asked to take part in **one** group interview which would be held in your area. It is anticipated that this will last for about an hour. Interviews will be conducted away from work, and all responses will be anonymous. A contribution towards your travel and time will be provided.

If you would be willing to participate – or you are just interested – please contact me for further information by letter, phone or email:

Maggie Doman
Senior Lecturer in Children's Nursing
Institute of Health Studies
University of Plymouth
Earl Richards Road North
Exeter
EX2 5PE

Tel: 01392 475144 (Work)
01392 207739 (Home)
(Answer phones on both –
if you leave a message I will
call you back as soon as I can)

Email: mdoman@plymouth.ac.uk

APPENDIX 1B: INFORMATION SHEET FOR NURSES

INFORMATION SHEET

The provision of high dependency care for children

I am currently undertaking a research study to explore the experiences of qualified nurses caring for children requiring high dependency care, especially in children's wards.

For the first part of the study I wish to organise a series of focus group interviews with nurses from a range of hospitals/units in the region. I would like to invite you to participate in a group discussion to share and discuss your experiences of providing high dependency care for children. You would only be asked to take part in one group interview, which is anticipated to last about an hour.

I am seeking volunteers, so no one needs to know that you are interested or have participated in the study unless you choose to tell them. All information given during the interview will be treated in the strictest confidence, and no names of staff, wards or hospitals will be made known to anyone except myself and my study supervisors.

The interview will be conducted away from work, probably in a hotel not too far from where you live. Light refreshments will be available and I will also provide a contribution towards your 'out-of-pocket expenses' for travel and time spent attending.

I enclose a consent form which provides some further information. If you are sure that you are willing to participate, this can be completed and returned to me now. I will then contact you to find suitable dates and times for the interview to take place. If you are unsure, please feel free to contact me for more details and for possible dates of interviews. I am happy to be contacted by telephone at home or work, by letter or email, as below.

Thank you for any assistance you can provide.

Maggie Doman

Maggie Doman	Tel: 01392 475144 (Work)
Senior Lecturer in Children's Nursing	01392 207739 (Home)
Institute of Health Studies	(Answer phones on both –
University of Plymouth	if you leave a message I will
Earl Richards Road North	call you back as soon as I can)
Exeter	
EX2 5PE	**Email:** mdoman@plymouth.ac.uk

APPENDIX 1C: CONSENT FORM FOR FOCUS GROUPS

INSTITUTE OF HEALTH STUDIES
UNIVERSITY OF PLYMOUTH

Investigator: Maggie Doman
               Institute of Health Studies
               University of Plymouth, Earl Richards Road North, Exeter
               Tel: 01392 475144

Supervisors: Professor Christine Webb and Dr Ruth Endacott
               Institute of Health Studies
               University of Plymouth

CONSENT FORM

The provision of high dependency care for children

PURPOSE OF STUDY

I am currently undertaking a research study to explore the experiences of qualified nurses caring for children requiring high dependency care.

PROCEDURES

For the first part of the study I wish to organise a series of focus group interviews with nurses from a range of hospitals/units in the region. I would like to invite you to participate in a group discussion to share and discuss your experiences of providing high dependency care for children.

At the start, you will be provided with a biographical data sheet and requested to complete this. Ground rules will be negotiated at the start of the interview and opportunities for further discussion of the study and/or debriefing will be provided at the end. It is anticipated that this will last for about one hour, and each group interview will be tape recorded to ensure that all views are documented accurately. I will transcribe this as soon afterwards as possible and the results will be analysed thematically with those from the other group interviews.

CONFIDENTIALITY

The information given during the interviews will be treated in the strictest confidence. Any form that requires your name (e.g. this consent form) will be stored separately from the other material. No names of staff, nor any wards, units or hospitals will be identifiable in the final thesis or any associated publications or presentations using the results of the interview. The data collected for the study will not be used for any purposes other than those outlined and will not be accessible to anyone (including your manager) other than the investigator(s) and the study supervisors.

WITHDRAWAL

Please note that your participation in the study is entirely voluntary and you are under no obligation to assist. You are at liberty to refuse to participate without anyone being informed of your decision or giving a reason for this, and to withdraw at any time.

INVITATION TO ASK FURTHER QUESTIONS

Should you have any further questions about the study, or wish to discuss this with me, please feel free to contact me at the above address / telephone number or my home number which is **01392 207739**.

If you are willing to participate, please complete and sign the consent form and return it to me in the envelope provided. I will then contact you to arrange a suitable time for us to meet. Alternatively, this can be brought to the interview if you subsequently decide to participate.

Thank you for your assistance in this matter.

Best wishes

Maggie Doman (Ms)

THIS FORM WILL BE DETACHED AND STORED SEPARATELY FROM OTHER DATA

<u>CONSENT</u>

I give my consent to participate in the study of the experiences of nursing children requiring high dependency care carried out by Ms M Doman under the supervision of the University of Plymouth.

I have read and understand the consent form.

Upon signing below, I will receive a copy of the consent form from the study investigator.

Name (please print)...
and date

Signature ....
and date

Contact address/...
telephone number ....

Investigator..
and date

Biographical Data Sheet

In order to save some time during the group interview, please would you fill in this sheet to provide some details about yourself and your workplace. Please ensure that you have given your name and contact address so I can write to you again after the interview. Thank you.

What type of initial training did you undertake? Please tick in appropriate boxes:

Professional Qualification		Academic Level		Year (please state)
RGN	☐	Certificate	☐	☐
RSCN	☐	Diploma	☐	
RN (Child)	☐	Degree	☐	
EN (G)	☐	Other (please state)	☐	
Other (please state)	☐			

What other professional qualifications do you have? Please give details and year obtained:

What is the grade of your post (e.g. D, E, F etc.)? ☐

How long have you been in your current post? ☐

How many hours do you work per week? ☐

Why did you choose to work in your current ward/unit?

e.g. speciality; range of ages/conditions; geographical area, etc.

Please would you describe the ward/unit in which you work by providing the following details:

Type of hospital:

e.g. Children's hospital, teaching hospital, DGH, specialist centre, etc.

Type of ward/unit/team:

e.g. age range, specialities, number of cots/beds, cubicles/bays, etc.

Please state the TOTAL number of children's beds in your hospital

How many children's WARDS are there in your hospital?

Thank you very much for your time.

If you would like to make any additional comments, you are welcome to do so here.

THIS PAGE WILL BE DETACHED AND THE DETAILS WILL BE STORED SEPARATELY FROM OTHER DATA

Where do you work?   (i.e. name of hospital and ward/unit)

Please give your name and contact address:

APPENDIX 1E: GROUND RULES FOR FOCUS GROUPS

<u>Ground rules</u> **(to be set/agreed before starting)**

Confidentiality of ideas/responses and anonymity outside of group

?Use of letters/numbers rather than names.

No judgement to be made of participants' practice; the focus group is designed to explore various aspects and elicit individual views.

Examples from practice to illustrate points made will be invaluable.

It is important for group members to talk and listen to each other, not necessarily to the moderator (myself).

Please try to talk one at a time!

All comments are important, the aim is not to get agreement or consensus but a range of views.

<u>FOCUS GROUP INTERVIEW – TOPIC GUIDE</u>

<u>Questions</u>

Tell us about your ward/hospital...

Number of children's beds, specialities, ages, children	}	Use to check
Facilities/resources available – for staff	}	recording
for families	}	equipment

What does the term 'high dependency care' mean to you?

Own experiences/ 'formal' definitions
Can you give me some examples...

What happens if a child on your ward needs high dependency care?

Who decides whether a child requires high dependency care? How?
Who looks after them?
Where are they cared for?
What equipment / resources do you have available?
Give examples....

What skills does a nurse need to provide high dependency care for children?

How should these skills be taught / developed?

e.g.   study days / specific courses / training – specific, e.g. equipment
                                                    - general, in-service

What else does a nurse need to provide high dependency care for children?

e.g. equipment, facilities
medical / managerial support, staffing levels

(SUPPLEMENTARY QUESTION FOR INTERVIEWS 2 AND 3:

What effect can the opening of an HDU have?)

THANK YOU VERY MUCH. ARE THERE ANY QUESTIONS YOU WOULD LIKE TO ASK, OR FURTHER COMMENTS YOU WISH TO MAKE?

HAVE WE MISSED ANYTHING?

APPENDIX 2:

MAIN STUDY – ETHICS APPROVAL AND FIELDWORK

MATERIAL

2A: Family information sheet

2B: Staff information sheet

2C: Letter to consultants

2D: Consent form for parent/child

2E: Consent form for nursing staff

2F: Consent form for consultants.

2G: Ethics approval letter DGH/HDU

2H: Ethics approval letter DGHMix

2I: Ethics approval letter LCSurg

2J: Observation guidelines

2K: Interview schedule

FAMILY INFORMATION SHEET

The provision of high dependency care in children's wards

I am currently undertaking research for a PhD to explore the experiences of nurses caring for sick children in children's wards. As a children's nurse I have some understanding of this, but I am particularly interested in finding out what it is like to provide care in [name of hospital]. For a part of my study I will therefore be directly observing nurses working on this ward. I will not be studying children and parents themselves, however you and your child might be there when I am observing the nurses. Therefore, this information sheet tells you about my work.

Please note that any participation in the study is entirely voluntary and you are under no obligation to assist. You and, where possible, your child, will be asked to consent to observation. You are free to refuse permission for this without giving any reason, and to withdraw at any time. Your child's care will not be affected in any way by your decision.

All information gained from my observations will be treated in the strictest confidence. No names of staff, patients or relatives will be known to anyone except myself, and the ward and hospital will only be known to myself, my research supervisors and examiners.

Thank you for any assistance you can provide. If you would like further information about this study please do not hesitate to ask me whilst I am on the ward, or to contact me or my research supervisor at the address/phone numbers below.

Maggie Doman
Senior Lecturer in Children's Nursing
Institute of Health Studies
University of Plymouth
Earl Richards Road North
Exeter   EX2 5PE

Tel: 01392 475144 (Work)
    01392 207739 (Home)
    (Answer phones on both –
    if you leave a message I will
    call you back as soon as I can)
Email: mdoman@plymouth.ac.uk

Research Supervisor:
Professor Christine Webb

Tel: 01392 426321
Email: cwebb@webbc.u-net.com

STAFF INFORMATION SHEET

The provision of high dependency care in children's wards

I am currently undertaking research for a PhD exploring the experiences of nurses caring for children requiring high dependency care, especially in children's wards. As a children's nurse I have some understanding of this, but I am particularly interested in finding out what it is like to provide such care in your ward/unit.

For this phase of the study I will therefore be directly observing, over the next three to four months, the care provided for children on your ward who have 'high dependency' needs. I will also ask some of you who are providing the care if you would be willing to tell me more about your experiences in a tape-recorded interview so that I can understand more clearly what this is like for you. Please note that any participation in the study is entirely voluntary and you are under no obligation to assist. You are at liberty to refuse to participate without anyone being informed of your decision or giving a reason for this, and to withdraw at any time.

All information gained from my observations or given during an interview will be treated in the strictest confidence, and no names of staff, patients, relatives, wards or hospitals will be known to anyone except myself and my research supervisors.

Thank you for any assistance you can provide. If you would like further information about this study please do not hesitate to contact me or my research supervisor at the address/phone numbers below.

Maggie Doman   Tel: 01392 475144 (Work)
Senior Lecturer in Children's Nursing   01392 207739 (Home)
Institute of Health Studies   (Answer phones on both –
University of Plymouth   if you leave a message I will
Earl Richards Road North   call you back as soon as I can)
Exeter   EX2 5PE   Email: mdoman@plymouth.ac.uk

Research Supervisor:

Professor Christine Webb   Tel: 01392 426321
                                                     Email: cwebb@webbc.u-net.com

APPENDIX 2C: LETTER TO CONSULTANTS

2nd May 2002

Dr
Consultant Paediatrician
Paediatric Department
[Name of hospital]

Dear Dr

I am writing to inform you of some research that I am undertaking into the provision of high dependency care for children as part of a PhD study. I am interested in the experiences of nurses providing such care, particularly in children's wards, in the SW region. For the next phase of my study I plan to observe nurses providing care for sick children and to interview them about their experiences.

One of the wards in which I should like to observe care is [name of ward/hospital]. I have discussed this possibility with the Clinical Nurse Manager (Paediatrics) and some of the nursing staff and they are happy to participate in the study. I intend to apply for ethical approval from [named] LREC in June 2002 and to commence observation from about the end of September to Christmas.

As some of the children on the ward whose care I should like to observe may be your patients, I am writing to ask your permission to observe them if appropriate. I have therefore enclosed a copy of my research protocol and a brief CV for your perusal.

If you are willing to grant me your permission to observe the nursing care of some of your patients, I should be grateful if you would sign the attached form and return it to me in the envelope provided.

Thank you for your assistance in this matter. Should you require any further information please do not hesitate to contact me at the above address or the direct line for my office which is: **01392 475144.**

Yours sincerely

Maggie Doman (Ms)
Senior Lecturer in Nursing (Child)

Setting:

CONSENT FORM

Title of study: **The provision of high dependency care in children's wards**

Name of Researcher: Maggie Doman
                              Institute of Health Studies, University of Plymouth

Supervisors: Professor Christine Webb and Dr Morag Prowse

Please initial box

1.   I confirm that I have read and understand the information sheet for the above study and have had the opportunity to ask questions.   ☐

2.   I understand that participation is voluntary and that I am free to withdraw my child at any time, without giving any reason, and that their care will not be affected in any way.   ☐

3.   I agree to my child's care being observed by Ms Maggie Doman as part of the above study.   ☐

Name of parent/guardian/	Date	Signature
Name of researcher	Date	Signature
Name of witness to consent	Date	Signature

1 copy for parent/guardian; 1 copy for researcher

Setting:

CONSENT FORM

Title of study: **The provision of high dependency care in children's wards**

Name of Researcher: Maggie Doman
                             Institute of Health Studies, University of Plymouth

Supervisors: Professor Christine Webb and Dr Morag Prowse

Please initial box

1.   I confirm that I have read and understand the information sheet 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 from the study at any time, without giving any reason.

3.   I agree to my nursing activities being observed by Ms Maggie
     Doman as part of the above study.

4.   I agree to participate in a tape-recorded interview with Ms Maggie
     Doman as part of the above study.

_____   _____   _____
Name of staff member   Date   Signature

_____   _____   _____
Name of researcher   Date   Signature

1 copy for staff member; 1 copy for researcher

CONSENT FORM

Title of study: **The provision of high dependency care in children's wards**

Name of Researcher: Maggie Doman
Institute of Health Studies, University of Plymouth

Supervisors: Professor Christine Webb and Dr Morag Prowse

I confirm that I am aware of the above study and am happy for my patients' nursing care to be observed by Ms Maggie Doman.

Name of Consultant	Date	Signature

Name of researcher	Date	Signature

1 copy for Consultant; 1 copy for researcher; 1 copy for LREC

APPENDIX 2G: ETHICS APPROVAL LETTER DGH/HDU

21 May 2002

Ms Maggie Doman
Senior Lecturer in Nursing
Institute of Health Studies
University of Plymouth
Earl Richards Road North
Exeter
EX2 6AS

Dear Ms Doman

Study No 02/07G : The provision of high dependency care in children's wards

Thank you for your letter dated 17 May 2002 the amendments for the above study. I have now reviewed the amendments and will be advising the committee that in my view there is now no objection on ethical grounds to the proposed study. Therefore, I am happy to give you approval on the understanding that you will follow the conditions of the approval set out below. The following documents were reviewed by the committee:-

- LREC application form
- Protocol
- Family Information Sheet
- Staff Information Sheet
- Letter to Consultants
- Signed Consent Forms for Consultants
- Consent Form (Parent/Guardian)
- Consent Form (Staff)
- Interview Schedule
- Curriculum Vitae

a)   It is the responsibility of the investigator to notify the LREC immediately of any information received by him/her, or of which he/she becomes aware which would cast doubt upon, or alter, any information contained in the original application, a later amendment application or verbal resume submitted to the LREC. The committee should be informed immediately if this information would raise questions about the safety and/or continued conduct of the research.

b)   The need to comply with the Data Protection Act 1998.

c) The need to comply with the Research Governance Framework for Health and Social Care (Department of Health 2001). Further information regarding this document can be obtained from . . .   Research & Development Support Unit on t   4.

d) The need to refer proposed amendments to the protocol to the LREC for further review and to obtain LREC approval thereto prior to implementation (except only in cases of emergency where the welfare of the subject is paramount).

e) The requirement to furnish the LREC with details of the progress of the research project periodically (usually annually) and **failure to do this could result in approval to continue with the study being withdrawn.** Please also inform us of the conclusion and outcome of the research project and inform the LREC should the research be discontinued or any subject withdrawn altogether.

f) It is the responsibility of the person conducting any Trial to ensure that all professional staff and management of NHS Trusts involved are notified that it is taking place.

LREC are fully compliant with the International Conference on Harmonisation/ Good Clinical Practice (ICH GCP) Guidelines for the Conduct of Trials Involving the Participation of Human Subjects.

Please indicate your agreement to comply with the requirements outlined in this letter by signing both copies of this letter and returning one to . . .   ,   . Full approval does not commence until the signed copy is returned.

Yours sincerely

[signature]

Chairman   ⌐ LREC

cc   Director of Clinical Strategy

I agree to comply with the requirements outlined in this letter.

_____   22.5.02
Signed   **Date**

APPENDIX 2H: ETHICS APPROVAL LETTERS DGHMIX

4th July 2002

Ms.M.Doman
Senior Lecturer in Nursing (Child)
Institute of Health Studies
University of Plymouth
Earl Richards Road North
Exeter
EX2 5PE

Dear Ms.Doman

Re: The provision of high dependency care in children's wards

Thank you for your letter of the 24th June 2002 with enclosures which was discussed by the Ethics Committee today.

I am pleased to advise you that the Committee has granted you ethical approval to carry out your research provided that the Protocol is followed as presented.

The Committee does require

i) six monthly progress reports
ii) at its conclusion the Final Report or a synopsis thereof
iii) that you should report any serious adverse events

You should not commence the research until you have received approval from Dr.   , Medical Director on behalf of the Trust.

Yours sincerely,

Chairman
         ,y Local Research Ethics Committee

Tel: _ _ _ _ _

9th July 2002

Ms M.Doman
Senior Lecturer in Nursing (Child)
Institute of Health Studies
University of Plymouth
Earl Richards Road North
Exeter
EX2 5PE

Dear Ms.Doman,

Re: The provision of high dependency care in children's wards

I am writing to confirm that you may carry out the above research in this Trust, ethical approval having been granted.

Yours sincerely,

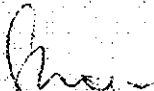Medical Director

APPENDIX 2I: ETHICS APPROVAL LETTER LCSURG

Ms M Doman
Senior Lecturer in Nursing (Child)
Institute of Health Studies
University of Plymouth
Earl Richards Road North
Exeter EX2 6AS

Dear Ms Doman

E5407   The provision of high dependency care in children's wards (RECIPROCAL)

Thank you for your letter dated 2 September 2002 addressing the comments of the Ethics Committee as set out in the letter dated 1/8/02.

Your comments and the revised information sheets have been reviewed by a Sub-Committee of the LREC who are now happy to grant full approval for this study.
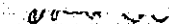
In accordance with Good Clinical Practice Guidelines of the European Community and the standard operating procedures required by NHS(E), the LREC is required to monitor research. The International Conference on Harmonisation Tripartite Guideline requires an annual, as well as end-of-study report. Please complete the enclosed project report at the end of the study or after each year from the beginning of the study and return it to us. Continued approval depends on the receipt of these reports.

This Committee is compliant with ICH/GCP Guidelines except when illness or lack of resources prevent this. Any changes or extensions to the protocol, or investigators should be notified to the Committee for approval. Serious and unexpected adverse events should also be notified.

Investigators who undertake research within the Trust and subsequently leave the Trust are reminded that they must not take with them patient information unless it is anonymised such that individual patients cannot be identified without reference to the Trust.

Reminder: The title will be published in national and Trust registers. It should not contain confidential information that you or any sponsors of this research would not wish published.

Yours sincerely

Chairman to the Research Ethics Committee

APPENDIX 2J: OBSERVATION GUIDELINES

<u>OBSERVATION GUIDELINE</u>

1. Does the Named/Allocated Nurse believe the child/family and situation are appropriate for inclusion in the study?

← NO   YES ↓

2. Has the family been provided with an information sheet about the study?

← NO   YES ↓

3. Has the possibility of observation been discussed with the family? Are they aware that this is voluntary and refusal will not affect the child's care in any way?

← NO   YES ↓

4. Have the family been offered the opportunity to discuss the study in more depth with the investigator?

← NO   YES ↓

5. Has the parent/child given consent to allow the investigator to observe the provision of care?

← NO   YES ↓

6. Have the family had time to consider their decision?

← NO   YES ↓

7. Does the Named/Allocated Nurse feel the situation is still appropriate for the investigator to observe the care provided?

← NO   YES ↓

PROCEED WITH OBSERVATION

8. Has the situation changed during the observation? Have the family or staff asked the investigator to withdraw from the situation?

← YES   NO ↓

CONTINUE OBSERVATION

A B A N D O N

O B S E R V A T I O N

INTERVIEW SCHEDULE

Thank you for agreeing to talk to me about [your experience]. I know that you have received an information sheet about the study and we both have a copy of your signed consent form. Do you have any questions before we start?

I should like to remind you that this interview is being tape recorded. Any information you provide will be treated with the strictest confidence. Neither your name, nor that of the ward/unit/hospital will be identified in any way. If you wish me to stop recording at any time, please say so and I will switch off the machine.

(If appropriate) Could you explain to me what was happening when you [observed event]?

- What were you doing?
- What were you thinking?
- How did you feel?

OR Can you tell me about your experiences of high dependency care on this ward

Can you tell me how you recognised that [the child] was very sick?

What did you do as a result?

e.g. interventions, who was contacted

(If appropriate) On what basis was the decision to transfer [the child] to HDU/ITU/PICU made?

e.g. what criteria were used? Who decided?

How do/did you feel about looking after a child requiring high dependency care?

What does high dependency care mean to you?

333

What impact does a child requiring high dependency care/an admission to HDU have on the rest of the ward?

What skills are needed to provide high dependency care?

How have you acquired your knowledge / skills in high dependency care?

   e.g. formal education, experience, specific training (e.g. specialist equipment, PLS)

How do you think high dependency care could be developed/improved further in this ward/unit?

What difference would an HDU have / has the opening of HDU had?

- On the ward as a whole?
- On the ward staff?

Is there anything you would like to add?

Thank you very much for your time.

APPENDIX 3:

SW AUDIT INFORMATION

3A: Poster for wards/departments including criteria for inclusion – high dependency care

3B: Audit form for high dependency care

SOUTH WEST REGIONAL CRITICALLY ILL CHILDREN'S AUDIT

Please complete an audit form or inform your Audit Nurse if you have children in your department who meet **ANY** of the following criteria:

- ❖ **Bacterial Meningitis**
- ❖ **Meningococcal Septicaemia**
- ❖ **Glasgow Coma Score < 12**
- ❖ **Acute Renal Failure ie: Urine Output < 1ml/kg/hr for more than 6 hours.**
- ❖ **Continuous Seizure for > 20 minutes**
- ❖ **Cardiac Arrhythmia**
- ❖ **4 x apnoeic episodes in 12 hours**
- ❖ **>10% Burns**
- ❖ **Poisoning/substance misuse with the POTENTIAL for significant problems.**

OR require one or more of the following:

- ❖ **FIO2 > 40% for > 6 hours**
- ❖ **Nebulised bronchodilators - more than once an hour for more than 6 hours or IV aminophylline/ salbutamol at any time.**
- ❖ **Nebulised Adrenaline at any time**
- ❖ **Airway intervention/support**
- ❖ **Mechanical ventilatory support (including CPAP)**

- ❖ **Invasive monitoring eg: arterial or CVP/ICP line.**
- ❖ **Intravenous fluid bolus of >10ml/kg at any time.**
- ❖ **Intravenous inotropic support**
- ❖ **Temporary cardiac pacing.**
- ❖ **CPR**
- ❖ **Peritoneal/haemodialysis**
- ❖ **Treatment for severe metabolic and/or electrolyte imbalance. Eg: DKA**

- ❖ **Pre or post operative patients following complex surgery and/or requiring complex fluid/analgesia management.**
- ❖ **The patient with intractable pain eg: acute pancreatitis**

Please inform: .... (Audit nurse)   Tel: ....
Or: Carol Maskrey (Regional Audit Co-ordinator) Tel: 0117 342 8843 or mobile: 0771 569 1120 email: carol.maskrey@ubht.nhs.uk
* PLEASE ENSURE AN AUDIT FORM IS COMPLETED FOR EACH PATIENT WHO MEETS THE CRITERIA WHILST IN YOUR DEPARTMENT *
Return completed forms to the above – DO NOT send with the child!!
Many thanks in anticipation of your co-operation!

AUDIT FORM FOR **WARD/HDU** BASED PAEDIATRIC PATIENTS

PLEASE ENTER 16 digit unique **PATIENT IDENTIFIER**
Form cannot be processed unless this section is completed

[| | | | | | | | | | | | | | | |]

1ˢᵗ 3 letters of **first name**, 1ˢᵗ 3 letters of **surname**, Date of
Birth in 6 digit format, 1ˢᵗ part of **post code** eg:
JOHSMI030995GL2- (Enter a dash (-) if box is blank)

STUDY No. _____

(Office use only)

MALE ☐   FEMALE ☐

DO NOT AFFIX PATIENT STICKERS

NAME OF **HOSPITAL**:..........................THIS WARD/DEPARTMENT AREA..............,,,,......

DATE&TIME OF ADMISSION TO **THIS AREA** ..../............./......... ....:..........HRS

SPECIALITY OF CONSULTANT ....

ADMITTED FROM: HOME ☐   GP ☐   OPD ☐   A&E ☐   HDU ☐   THEATRE ☐

ITU/PICU ☐   WARD ☐   **NAME** OF WARD ....

IF TRANSFERRED FROM ANOTHER HOSPITAL, ENTER NAME+<u>WARD AREA</u> OF OTHER

HOSPITAL .... **TRANSFERRING TEAM:** DGH team ☐   SPECIALIST TEAM ☐

Please indicate with a **TICK** if the child fits any of the following **DIAGNOSTIC/CLINICAL CRITERIA**

DIAGNOSTIC/CLINICAL CRITERIA.	YES
Bacterial Meningitis (Proven or suspected)	
Meningococcal Septicaemia (Clinically diagnosed)	
Glasgow Coma Score < 12	
Acute Renal Failure ie Urine output <1ml/kg/hour for >6 hours	
Prolonged (eg: > 20 minutes) or recurrent convulsions	
Cardiac Arrhythmia – excluding sinus bradycardia/tachycardia	
4 x Apnoeic episodes within 12 hours (requiring stimulation)	
Burns of >10%	
Poisoning/substance misuse with the POTENTIAL for significant problems	

Please indicate with a TICK if the child required any of the following **INTERVENTION and NURSING CRITERIA** (Indicate **ALL** that apply to THIS admission)

INTERVENTION CRITERIA	YES
FIO2 > 40% for >6 hours	
Nebulised bronchodilators >1 per hour, for >6 hours **OR** IV Aminophylline/Salbutamol at any time.	
Nebulised Adrenaline at any time.	
Airway Intervention / Support. Please specify below: a) Naso-pharyngeal or Guedal airway b) ETT c) Tracheostomy **(please circle)**	
Mechanical ventilatory support (including CPAP)	
Invasive Monitoring eg: Arterial line/ CVP line	
Intravenous Fluid Bolus > 10mls/kg at any time	
Intravenous Inotropic Support	
Temporary Cardiac Pacing	
CPR	
Peritoneal Dialysis/Haemodialysis	
Treatment of complicated metabolic alkalosis/acidosis AND/OR severe electrolyte imbalance. eg: DKA	
NURSING CRITERIA	
Pre or post-operative patients following complex surgery (eg: spinal or multi trauma) and/or requiring complex fluid /analgesia management. See explanatory notes.	
The patient with intractable pain eg: acute pancreatitis or oncological conditions	

PLEASE TURN OVER ....

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<u>DIAGNOSTIC DETAILS</u>

Primary diagnosis ....

Secondary diagnosis ....

Operative procedure ....

Co-morbidity ....

<u>DISCHARGE INFORMATION</u>

Was there a delay in discharge? **NO** ☐ **YES** ☐ If **YES**, why? ....

If requested, was ICU admission refused? **YES** ☐ **NO** ☐ **N/A** ☐

If **YES**, why? ....

DATE/TIME of Discharge ..../........../............. ....:......hrs

Discharge **DESTINATION**: ....

Was the patient's condition discussed with BCH PICU at any time? **YES** ☐ **NO** ☐

<u>TRANSFER DETAILS</u> – please complete if child is transferred to another hospital

Transferred by your hospital team? **YES** ☐ **NO** ☐ Retrieval by BCH PICU? **YES** ☐ **NO** ☐

Retrieval by other team? **YES** ☐ **NO** ☐ Name of other PICU retrieval team ....
If **YES**, was this because:

BCH PICU full? ☐   BCH PICU team unavailable? ☐   BCH PICU team not requested? ☐

Other reason ....

<u>OUTCOME</u>: **ALIVE** ☐   **DIED** ☐ Enter date and time of death... ..../......../....
..........:......hrs

Mode of Death: Treatment Withdrawn ☐   Treatment Limited ☐   Failed CPR ☐

Was there a "**Do not Resuscitate**" order in place for this patient? **YES** ☐ **NO** ☐

Please indicate if any of the following were performed:

Brain Stem Death ☐   Tissue/Organ Donation? ☐   Post Mortem? ☐

***To be signed by a **Clinician** to verify the patient required high dependency
care **(form will not be processed unless this section has been signed)**

Signed .... Date

Please ensure that *ALL SECTIONS* of the form have been completed before return and
complete a new form for each admission episode.
DO NOT SEND WITH PATIENT NOTES
THANK YOU FOR YOUR HELP AND CO-OPERATION.

APPENDIX 4:

EXTRACT FROM TYPICAL CODED TRANSCRIPT

APPENDIX 4: EXTRACT FROM TYPICAL CODED TRANSCRIPT

1001   [Date]   Interview 1, DGHMix   E grade Staff Nurse

1002

1003   (MD): Introduction as per schedule.

1004   [Name], can you tell me about your experiences of providing high dependency care on this

1005   ward?

1006   P: OK, um, well we do nurse, um, patients with Aminophylline infusions on the ward

1007   which, they could be situated anywhere really, could be in a cubicle or, or in a bay which is,

1008   sort of quite a long way from the nurses' station, um, and we also for, any of the overdose,

1009   Paracetamol, we do use Parvolex on the ward as well, they do stay on the ward, as far as I

1010   have known, but in some hospital's criteria they, they have those infusions because of the

1011   hourly obs, they do tend to go in HDU.

1012   Um...what else, um, sort of any of the kids that we regularly get really, the special needs

1013   that are requiring oxygenation in the winter, um, especially some of the babies that we have

1014   that have multiple problems, um, sometimes they can, um...have apnoeas and things like

1015   that so they need close observation, um...and even some of the post-ops, sometimes if they

1016   come up and they've been induction downstairs or if there's been a slight, contra-indication

1017   of any drugs or anything then, um, they you know, then they're classed as highly dependent

1018   really. Um, but nothing else so much that I've seen here really...

1019   MD: Is there any recent experience that you can tell me about?

1020   P: Um......well...um......can you just stop for a sec? (points to tape recorder)

1021   (Tape turned off for a moment – asks to talk about a child who had recently died on the

1022   ward).

1023

1024

1048 chest, but um, I think the immunity being low and she came in and she was struggling a

1049 little bit and eventually they did go up to [name of hospital], just for CPAP and, things like

1050 that really.

1051 MD: So what happened to the baby while she was on the ward?

1052 P: (clears throat) Er, well she was in headbox oxygen...um, and she was, I'd actually only

1053 taken over on the shift that she were being transferred so, I wasn't, acutely looking after

1054 them as such but, er, oxygenation was probably about between, 38 and 45% in headbox um,

1055 resps were, anything really from 50 up to sort of 65, um...and, um..basically just, couldn't

1056 establish, couldn't get her off, of, wean her oxygen down any further but also couldn't

1057 establish any feeding so it was a case of, she was getting more and more tired, um, and we

1058 just felt that she needed extra help, um, so she went off, for sort of CPAP and things like

1059 that and eventually came back, she just came for one overnight stay then went home. So er,

1060 it did do the trick, I think she was up there for about 3 or 4 days I'm not sure because I had

1061 days off (clears throat) but, um, but yeah, so, she was (clears throat), I think she was just

1062 tiny as well, she wasn't prem but she was a small baby and, hadn't had a lot of milk in her

1063 to start with before she got poorly first, so then she was on catch-up and I think didn't have

1064 enough strength to be able to get through it on her own really.

1065 MD: So when you came on to look after her (P: yeah) what was it about her that you

1066 noticed, I mean how did you recognise that she was really sick?

1067 P: Um... (clears throat) well all of the sort of respiratory signs were present, she had a, a

1068 quite a, um (gestures to throat) a high tracheal tug she was very tachypnoeic and

1069 tachycardic, um, pulse was running from 165 to 210 which was constant it wasn't sort of

1070 coming down with rest, she was sweating a little bit, um, OK it was humidified oxygen in,

1071 in the er, in the um...headbox but I think some of it was her perspiration she, you know

1072 normal perspiration but she was getting, that waxy sort of, you know with the, with the skin Observation

1073 (clears throat) and, um, she was vomiting back her NG feeds so, we were trying to sort of Clinical

1074 give her small amounts often, um, to see whether that would help but, she just wasn't Scenario

1075 tolerating. Um, um, we just didn't seem to be getting anywhere with her I think that was

1076 the thing, parents were getting very anxious as well, um, and, um we just weren't getting Chparents

1077 anywhere fast and, um, she was just tired, tired out. Um, her skin was quite sort of, Observation

1078 mottled, um, peripheries, um, not shut down but, weren't brilliant, um, just oxygenation I Clinical assessment

1079 think we were pumping quite a lot in and, we weren't maintaining a high enough saturation interaction

1080 and, um, she'd sort of dip and, on the odd occasion and um...what else about her......she Recognising deterioration

1081 didn't have a temperature or anything as much...but I think, yeah, it was just the fact that

1082 you could just see she was generally exhausted really and, um, I think the thought was that, Clinical decision making

1083 she couldn't have gone on much longer on her own. So, I think she'd have gone into some

1084 sort of serious respiratory problems I think (clears throat), so...

1085 MD: So what happened about arranging for transfer and so on?

1086 P: Um, well an ambulance was booked for the afternoon that afternoon and one of the Outcome

1087 registrars actually went up, um we were short on the ward with the ward staff anyway so (transfer)

1088 the registrar actually went up so it wasn't a nurse transfer...

1089 MD: Oh I see, so it was a transfer as opposed to a retrieval.

1090 P: Yeah, yeah, yeah, um...um...and then...

1091 MD: And where did she go?

1092 P: Yeah, I mean, she went to [Lead Centre] um I can't remember the um, respiratory ward

1093 now, is it [ward]? Or is it [ward]?

1094 MD: So it was a ward it wasn't to PICU?

1095   P: No it wasn't to PICU they tried her on CPAP and that first, which I think helped, um, *(handwritten)*

1096   she didn't need to go that one stage further which I think was good, um...so, yeah they

1097   maintained her up there] um and (after sort of two or three days I think, I'm not entirely *(handwritten)*

1098   sure, she came off and just in headbox again and then she was transferred back to us, with a *(handwritten)*

1099   nurse, so...yeah...

1100   MD: Had the decision been made about the transfer before you came on?

1101   P: Yeah, yeah I was literally just sort of sorting out paperwork and making sure she had all *(handwritten)*

1102   the equipment she needed]and, you know things like that really,]making sure mum and dad *(handwritten)*

1103   knew where to go and, um giving them directions and um, and just supporting them

1104   through that really.

1105   MD: Do you know how the decision had been made?

1106   P: Um, I think well it was consultant-led because she was seen on the ward round in the

1107   morning um, and I, I think it was, it was I'm not sure which consultant it was now actually,

1108   can't remember who was on call that day...no, I'm not sure...could have been [name of

1109   paediatrician]-I'm not sure, but, but that had already been, they'd accepted her and when I

1110   came on it was a case of right, she's going up to, at half past three um, and I had an hour

1111   and-a-half to get her sorted and, and get her ready, so...but I think yeah, it was, it was

1112   consultant-round-in-the-morning-and,(they were just like right you know we've given her *(handwritten)*

1113   enough days now, she's not really you know doing anything so um, let's get her up there, *(handwritten)*

1114   give her a break. I don't think she was, I think they did query a retrieval, but the registrar *(handwritten)*

1115   said well I'm happy to go with a paramedic and a technician so, they went up, together and

1116   mum was in the back, dad followed up... because first of all we said we couldn't do it *(handwritten)*

1117   because of staffing levels and couldn't have got anybody in...um, but I'm sure they wanted *(handwritten)*

346

1118   a registrar to go and, anyway, if, we did go then the registrar would have gone anyway and

1119   a yeah, yeah it went quite well smoothly...

1120   MD: How have you acquired your knowledge and skills in high dependency care?

1121   P: Um, well I must admit I was fortunate enough, I trained at a hospital where they had a

1122   high HDU um, and when I qualified we did a rotation, system so I worked, we had two

1123   wards I worked in a general, um medical ward, um with oncology and sorry no, the other

1124   way round medical ward with a HDU, surgical had the oncology on there so, I did a

1125   rotation of 6 months but I did 3 months in HDU. Um, and my mentor actually during my

1126   training was the HDU F grade so I was in there quite a bit doing, a few bits and she was

1127   good, she was a very good teacher, she was excellent, um...and we had a four-

1128   bedded...um, large bay which had its own double doors which then the nurses' station was

1129   opposite (gestures), which was a fast track ward, um, and you had your bays down that side

1130   and cubicles down that side (gestures) so it was all very central which was good. The doors

1131   would be open, um......if there was somebody in there, just because then the nurse, further

1132   in the nurses' station in the centre and then the two beds were either side with this, this area

1133   here (gestures) of equipment with trolleys that went under the workbenches and stuff. Um,

1134   and um everything was sort of built into the wall, behind the beds which was really nice,

1135   um, and even though we didn't really, we we allowed parents to stay, we allowed them to

1136   stay on the, reclining chairs, next to, sometimes we left to see whether we could put them

1137   elsewhere, we did have a parent flat on the ward so parents could stay and that, um, but

1138   sometimes in the winter it would be full, the whole HDU would be full so, but we used to,

1139   take our bronchiolitis from the cubicle and admit them into HDU if they went through

1140   certain criteria, if they were topping, sort of oxygenation, oxygenation levels were high

1141   and, and I think there were so many different criteria that somebody could be moved in.

1142   We used to have, um, anything really all our Aminophylline, Parvolex used to go in there,

1143   um, anybody that was requiring, um, anything from half hourly to hourly obs but that

1144   wasn't your general post-operative, people, um…head injuries and anything that had come

1145   through A & E really that needed, close observation and the ODs, um…and the meningitic

1146   children…um, we used to sometimes have a special needs boy as well who, it probably

1147   wasn't the right place for him but, basically he used the ward as respite, and he had a brain

1148   stem tumour removed when he was young, um, when he was fit enough to have surgery

1149   from birth, which left him without the mechanism in the brain to, um, keep his oxygenation

1150   going, his breathing mechanism, so he'd go on a 'Nippy' so many times a day, um, what's

1151   it called, forced negative pressure, something, it's a bit like a CPAP isn't it but its not, its,

1152   um, but anyway he'd go on that but he unfortunately died at the age of three, so…but he, he

1153   generally had, more, chest infection after chest infection after chest infection and he was he

1154   wasn't going the right way really, um…so he used to come in quite a bit (laughs).

1155   Um, but yeah generally it would be, if we had an admission for HDU or somebody that

1156   qualified for HDU then we would, the nurse would go in there, open it up, open the bed

1157   space, um, and er, we used to have boxes behind each bed which was, filled with, with

1158   different kinds of um, sizes of cuffs and leads and, all that sort of thing which should all be

1159   in plastic bags with literally, all washed we could take it out and plug it in the monitors, get

1160   the bed space ready. And we'd have a board behind each bed with the child's name on it

1161   and their weight so all the maintenance and all the, um, emergency drugs would be worked

1162   out, all ready in case they were needed. Um…

1163   MD: So were you learning along the way?

1164   P: Yeah, yeah, that's right that's where my experiences are coming from really, um, I was

1165   just very fortunate, but I had a good teacher as well, I mean she was excellent, very pro sort

1166   of high dependency care and she'd, um, worked for, alongside the paediatric consultant

1167   who was officially for HDUs, [name of doctor], do you know her? She's quite sort of big

1168   in the south east area, um, and um, basically it was run, sort of doctor and nurse-led

1169   together as a multi-team instead of just, sort of directorate team if you like, which was

1170   really good because, she was very pro-nursing and you know it was, it was good,

1171   really...um...

1172   MD: And what else have you done to learn about high dependency care?

1173   P: Oh yes (laughs) I also commenced the high dependency course in September, um,

1174   which unfortunately due to sickness, um I ran the assessment period on, on the, got an

1175   extension on, due to complete, um...so that's given me, its, its, I've done it the other way

1176   round really, I had the practice before my theory but its nice to be able to tie it all up now

1177   and especially if we do get, a HDU on [name of ward] then, I'll be able to, sort of put

1178   everything into practice that I've learned, again, because, I don't want to lose the skills but

1179   I also well I haven't been able to underpin the practice with the knowledge yet, because I

1180   didn't have my knowledge to start with so, it, it was more sort of practical knowledge that's

1181   been taught by a mentor really, so it'll be good to um, maybe get a bit more practice in and

1182   hopefully be involved in setting one up so...

1183   MD: How do you think high dependency care could be developed or improved further?

1184   P: Um, well we can't change the geographics of the ward too much unfortunately, we do

1185   tend to try and keep, a few cubicles at least one cot and one bed available near the nurses'

1186   station if possible for any, potential emergencies, um... we're very aware at the moment

1187   that we do nurse kids anywhere on the ward if we can't...especially, we don't have a set,

1188   we have emergency protocol, protocols but we don't, yet have one set down for,

1189   recognising a highly dependent child, nursing on a general ward, so as I say the Parvolex

349

1190   infusion could be, in 2D which is right down the bottom of the ward/which, its up to that

1191   nurse that's looking after them to, to prioritise and keep their workload. you know as um,

1192   which, I don't think helps, the nurse really, um, I mean sometimes you can't put them

1193   anywhere else, but I, I do think, having had a bit of knowledge before, that...these are

1194   children that even if we haven't got an HDU we could be recognising them as high

1195   dependent and they could be labelled in such a way that, they you know, because

1196   unfortunately we're taking them as any other patient at the moment and, even though

1197   you've got a highly dependent child that doesn't always come into context when

1198   allocation's being done, on the board so you could still have the same amount of patients as

1199   anybody else, and that's just a bit worrying, but I mean that's, that's for the individual

1200   person to speak up and say so, which I think some people do so...um...but yeah certainly

1201   where they're planning to have it, I think is a good idea, I just hope that us nurses are going

1202   to be, given...the nurses on the ground floor if you like are going to be given more of an

1203   opportunity to be able to put their views forward, um, and I hope they listen to people that

1204   have got experience, um..but I think research is the main thing, finding out what other

1205   people do, good or bad, um, we're never going to get it right first time but, maybe, if we

1206   can sort of do a bit of background reading and research then that can sort of help us on our

1207   way. Um, because the main thing we want to do is not to, you know to have it open and

1208   then not being able to use it, you know which I know has happened elsewhere because of

1209   staffing, so I think, but I think our current, Directorate Manager is, especially as we've lost

1210   so many staff, we should have extras, which we need to plan for, I think loads of different

1211   sort of variables come into account and I think once we've got all those, up and we've got

1212   paper, paperwork to be able to produce, um, to say look we've done this research and we

1213   think this would be the best way and I think equipment research, we need to have

1214   interviews with some reps and I think we need to do, that type of thing, we need to update

1215   some of our equipment as well, we've got a lot of, because um, some of our, um, cardiac

1216   monitors are, rather old with, um, the old um, oh, buttons on the front, the um dial buttons

1217   on the front instead of any kind of digital system really (laughs) um, so I think, there's a lot

1218   of work to be done first before we can even think about getting anything into practice but I

1219   think once we've got the, we've had meetings of our, clinical governance group we'll be

1220   able to, move forward with it a bit more really. Um, we've just been allocated a new doctor

1221   to start in our group so, a registrar that's just started here so he doesn't know what's going

1222   on here at the moment so we need to have a meeting but its trying to find people that are on

1223   the same shifts now, or people that are willing to come in to do it, so, hopefully it won't be

1224   long...

1225   MD: Anything you'd like to add?

1226   P: Um, only just summarising really but um, I think, um, I think the quality of care is

1227   excellent on the ward anyway but I just think the quality of care could be tightened up a

1228   little bit further if we do have, some kind of recognised protocol to follow for, nursing a

1229   highly dependent child on the ward. It doesn't have to be an HDU but, I think, if we can

1230   set that up something that says, OK, this child is, is now a, a category blue if you like, or

1231   something then, you know that can be put on the board, colour coded, um, and the patients

1232   so, people are aware of, of what we've got on the ward because we might only have four

1233   patients but three of those could be highly dependent, and the bed manager coming up to

1234   the ward will look at the board and go, oh, lovely, you've got lots of room thank you, we'll

1235   admit all the 17 and 18 year olds we can to keep the pressure off the adult wards and, and

1236   sometimes it doesn't always, its quality sometimes and not quantity. So I think that would

1237   be, something that we could develop in the short term definitely, so...

GLOSSARY OF TERMS AND ABBREVIATIONS

TERM OR ABBREVIATION	DEFINITION OR MEANING IN THIS STUDY
A & E	Accident and Emergency Department (See also ED)
'Adult'	Used to describe services/departments, e.g. surgeons, ITU, who provide care/treatment for children, but whose main client group is adults
APLS	Advanced Paediatric Life Support, a 3-day accredited course undertaken by medical and nursing staff
BLS	Basic life support
BPA	British Paediatric Association, now known as the Royal College of Paediatrics and Child Health
Children's nurse	Registered Nurse on Part 8 (RSCN) or 15 (RN Child) of the Professional Register.
CPAP	Continuous positive airway pressure, a form of non-invasive ventilation
DGH	District General Hospital. According to the DH (1997a), a DGH provides high dependency care and is able to establish Level 2 care prior to transfer to an appropriate paediatric intensive care or specialist unit. See also Major Acute General Hospital
DGH/HDU	One of the study settings, a children's medical ward in a DGH with a 2-bedded HDU attached to the ward
DGHMix	One of the study settings, a children's ward in a DGH offering care to acutely ill children, the only children's ward in the hospital
ED	Emergency Department, sometimes referred to as A & E
EWS	Early Warning System, originally devised for use with adults at risk of deterioration (see PEW/S)
FG	Focus group
Grade D	Registered Nurse working as a staff nurse, usually newly qualified or inexperienced
Grade E	Registered Nurse working as a staff nurse with more experience and responsibility than a Grade D nurse
Grade F	Registered Nurse, usually working as a sister/charge nurse
Grade G	Registered Nurse, usually a ward manager or nurse specialist
HCA	Health care assistant
HD	High dependency (level 1)
ICP	Integrated care pathway
ICU	Intensive Care Unit (see also ITU)
ITU	Intensive Therapy Unit (see also ICU)
LC	Lead Centre. According to the DH (1997a), usually a children's hospital or a large DGH/teaching hospital which provides general and emergency Level 3 and most Level 2 care and the retrieval service.

LCSurg	One of the study settings, a children's surgical ward in a Lead Centre.
Level 1 (High dependency care)	'This describes care provided to a child who may require closer observation and monitoring than is usually available on an ordinary children's ward, though much of this care is already provided, with higher staffing levels than usual, in such locations. For example the child may need continuous monitoring of the heart rate, non-invasive blood pressure monitoring, or single organ support (but not respiratory support). The child may, for example, be suffering from moderately severe croup, suspected intestinal obstruction or suspected poisoning.' (DH 1997a, p7).
Level 2 (Intensive care)	'These children will always need continuous nursing supervision. They may need ventilatory support, or support for two or more organ systems. Sometimes the child will have one organ system needing support and one other suffering from chronic failure. Usually children receiving level 2 care are intubated to assist breathing.' (DH 1997a, p7).
Level 3 (or above) (Intensive care)	'Children with two or more organ systems needing technological support, including advanced respiratory support, will need intensive nursing supervision at all times and will be undergoing complex monitoring and/or therapeutic procedures. They would, for example, include ventilated children undergoing advanced renal support, those who have suffered multiple trauma in major road accidents, or those who have undergone very complex major surgery.' (DH 1997a, p7).
MAGH	Major Acute General Hospital. According to the DH (1997a), a DGH with a large general (adult) ICU and paediatric provision. Provides a considerable amount of level 2 care and able to initiate Level 3 care.
MD	Maggie Doman, author of this thesis
NSF	National Service Framework
PALS	Paediatric Advanced Life Support, a 2-day course undertaken by nurses
PEW(S)	Paediatric Early Warning (System). Criteria for recognising children at risk of deterioration and used to inform medical staff/adult ICU/PICU of a child's potential need for urgent assessment/intervention and/or a higher level of care
PHDCSGNW	Paediatric High Dependency Care Sub-Group (North West)
PIC	Paediatric intensive care (level 2 or 3)
PICS	Paediatric Intensive Care Society
PICU	Paediatric Intensive Care Unit
PLS	Paediatric life support, a 1-day course for nurses
RCN	Royal College of Nursing
RN	Registered Nurse
RN (Child)	Registered Nurse (Child) (See Children's nurse)

RSCN	Registered Sick Children's Nurse (See Children's nurse)
SH	Specialist Hospital. According to the DH (1997a), this provides paediatric intensive care (levels 2 and 3) in association with the speciality (e.g. burns, neuro).
SHO	Senior House Officer, a junior doctor grade (F2)
SW Audit	SW Audit of Critically Ill Children. Data are collected for this audit on all children admitted to hospital in the SW region who meet certain diagnostic, intervention or nursing criteria (See Appendix 3)
SW	South West region of England
UK	United Kingdom

REFERENCES

Adams A & Bond S (2003a) Staffing in acute hospital wards: part 1. The relationship between number of nurses and ward organizational environment. **Journal of Nursing Management** 11: 287-292

Adams A & Bond S (2003b) Staffing in acute hospital wards: part 2. Relationships between grade mix, staff stability and features of ward organizational environment. **Journal of Nursing Management** 11: 293-298

Aiken LH, Havens DS & Sloane DM (2000) Magnet nursing services recognition programme. **Nursing Standard** 14 (25): 41-46

Aiken LH, Clarke SP, Sloane DM, Sochalski JA, Busse R, Clarke H, Giovanetti P, Hunt J, Rafferty AM & Shamian J (2001) Nurses' reports on hospital care in five countries. **Health Affairs** 20 (3): 43-53

Aiken LH, Clarke SP & Sloane DM (2002) Hospital staffing, organization, and quality of care: cross-national findings. **International Journal for Quality in Health Care** 14 (1): 5-13

Aldridge MD (2005) Decreasing parental stress in the Pediatric Intensive Care Unit: one unit's experience. **Critical Care Nurse** 25 (6): 40-50

Andrews T & Waterman H (2005) Packaging: a grounded theory of how to report physiological deterioration effectively. **Journal of Advanced Nursing** 52 (5): 473-481

Armon K, MacFaul R, Hemingway P, Werneke U & Stephenson T (2004) The impact of presenting problem based guidelines for children with medical problems in an accident and emergency department. **Archives of Disease in Childhood** 89 (2): 159-164

Armstrong K, Young J, Hayburn A, Irish B & Nikoletti S (2003) Evaluating the impact of a new high dependency unit. **International Journal of Nursing Practice** 9 (5): 285-293

Arul GS & Spicer RD (1998) Where should paediatric surgery be performed? **Archives of Disease in Childhood** 79 (1): 65-72

Atkinson P (1981) **The Clinical Experience: the Construction and Reconstruction of Medical Reality.** Farnborough, Gower

Atkinson P (1990) **The Ethnographic Imagination.** London, Routledge

Atkinson P (1995) **Medical Talk and Medical Work.** London, Sage Publications

Attree M (2001a) A study of the criteria used by healthcare professionals, managers and patients to represent and evaluate quality care. **Journal of Nursing Management** 9: 67-78

Attree M (2001b) Patients' and relatives' experiences and perspectives of 'Good' and 'Not so Good' quality care. **Journal of Advanced Nursing** 33 (4): 456-466

Audit Commission (1999) **Critical to Success: the Place of Efficient & Effective Critical Care Services within the Acute Hospital.** London, Audit Commission

Audit Commission (2001) **Hidden Talents: education, training and development for healthcare staff in NHS Trusts.** London, Audit Commission

Aveyard H (2002) Implied consent prior to nursing care procedures. **Journal of Advanced Nursing** 39 (2): 201-207

Baillie L (1995) Ethnography & nursing research: a critical appraisal. **Nurse Researcher** 3 (2): 5-21

Ball C, Kirkby M, 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 (7422): 1014-1016

Barbour RS (2005) Making sense of focus groups. **Medical Education** 39: 742-750

Begley C (1996) Using triangulation in nursing research. **Journal of Advanced Nursing** 24 (1): 122-128

Beil-Hildebrand MB (2002) Theorising culture and culture in context: institutional excellence and control. **Nursing Inquiry** 9 (4): 257-274

Benner P (1984) **From Novice to Expert: Excellence and Power in Clinical Nursing Practice.** Menlo Park, Addison-Wesley

Benner P, Tanner CA & Chesla CA (1996) **Expertise in Nursing Practice: Caring, Clinical Judgement and Ethics.** New York, Springer

Benner P, Hooper-Kyriakidis P & Stannard D (1999) **Clinical Wisdom and Interventions in Critical Care: A Thinking-in-Action Approach.** Philadelphia, WB Saunders Company

Bloor M, Frankland J, Thomas M & Robson K (2001) **Focus Groups in Social Research.** London, Sage Publications

Board R & Ryan-Wenger N (2003) Stressors and stress symptoms of mothers with children in the PICU. **Journal of Pediatric Nursing** 18 (3): 195-202

Bonner A (2003) Recognition of expertise: An important concept in the acquisition of nephrology nursing expertise. **Nursing and Health Sciences** 5: 123-131

Bonner A & Greenwood J (2006) The acquisition and exercise of nephrology nursing expertise: a grounded theory study. **Journal of Clinical Nursing** 15 (4): 480-489

Bonner A & Tolhurst G (2002) Insider-outsider perspectives of participant observation. **Nurse Researcher** 9 (4): 7-19

Bouve LR, Rozmus CL & Giordano P (1999) Preparing parents for their child's transfer from the PICU to the pediatric floor. **Applied Nursing Research** 12 (3): 114-120

Boyle JS (1994) Styles of ethnography. *In* **Critical Issues in Qualitative Research Methods** (Morse JM, Ed) Thousand Oaks, Sage Publications, pp159-185

Boyle SM (2004) Nursing unit characteristics and patient outcomes. **Nursing Economics** 22 (3): 111-119, 123

Bradley S (1995) Methodological triangulation in healthcare research. **Nurse Researcher** 3 (2): 81-89

Braithwaite J, Westbrook MT, Iedema R, Mallock NA, Forsyth R & Zhang K (2005) A tale of two hospitals: assessing cultural landscapes and compositions. **Social Science and Medicine** 60: 1149-1162

Breakwell G M (1995) Interviewing. *In* **Research Methods in Psychology** (Breakwell GM, Hammond S & Fife-Schaw C, Eds) London, Sage Publications, pp 230-242

Brewer JD (2000) **Ethnography.** Buckingham, Open University Press

British Paediatric Association (1993) **The Care of Critically Ill Children.** London, British Paediatric Association

British Thoracic Society/Scottish Intercollegiate Guideline Network [online] (2005) **British Guideline on the Management of Asthma: A national clinical guideline.** Available from: http://www.enterpriseportal2.co.uk/filestore/bts/asthmaupdatenov05.pdf (Accessed January 2006)

Brown A (1998) **Organisational culture.** (2nd Edition) London, Pitman Publishing

Buckingham CD & Adams A (2000a) Classifying clinical decision making: a unifying approach. **Journal of Advanced Nursing** 32 (4): 981-989

Buckingham CD & Adams A (2000b) Classifying clinical decision making: interpreting nursing intuition, heuristics and medical diagnosis. **Journal of Advanced Nursing** 32 (4): 990-998

Bucknall TK (2000) Critical care nurses' decision-making activities in the natural setting. **Journal of Clinical Nursing** 9: 25-36

Bucknall T (2003) The clinical landscape of critical care: nurses' decision-making. **Journal of Advanced Nursing** 43 (3): 310-319

Burgess RG (1982) Some role problems in field research *In* **Field Research: a Sourcebook and Field Manual** (Burgess RG, Ed) London, Routledge, pp 45-49

Burgess RG (1984) **In the Field: An Introduction to Field Research.** London, Routledge

Burgess RG (Ed) (1985) **Strategies of Educational Research: Qualitative Methods.** Lewes, Falmer

Burnard P (1998) Qualitative data analysis: using a word processor to categorize qualitative data in social science research. **Social Sciences in Health** 4 (1): 55-61

Byrne G & Heyman R (1997) Understanding nurses' communication with patients in accident & emergency departments using a symbolic interactionist perspective. **Journal of Advanced Nursing** 26 (1): 93-100

Cahill H (1997) What should nurse teachers be doing? A preliminary study. **Journal of Advanced Nursing** 26 (1): 146-153

Callery P (1997) Caring for parents of hospitalized children: a hidden area of nursing work. **Journal of Advanced Nursing** 26 (5): 992-998

Carey M A (1994) The group effect in focus groups: planning, implementing and interpreting focus group research. *In* **Critical Issues in Qualitative Health Research.** (Morse JM, Ed) London, Sage Publications, pp 225-241.

Carnevale F (1990) A description of stressors and coping strategies among parents of critically ill children – a preliminary study. **Intensive Care Nursing** 6: 4-11

Carter B, Lambrenos K & Thursfield J (2002) A pain workshop: an approach to eliciting the views of young people with chronic pain. **Journal of Clinical Nursing** 11 (6): 753-762

Chaboyer WP & Patterson E (2001) Australian hospital generalist and critical care nurses' perceptions of doctor-nurse collaboration. **Nursing and Health Sciences** 3: 73-79

Chase SK (1995) The social context of critical care clinical judgement. **Heart & Lung: Journal of Critical Care** 24 (2): 154-162

Chatterjee MT, Moon JC, Murphy R & McCrea D (2005) The "OBS" chart: an evidence based approach to re-design of the patient observation chart in a district general hospital setting. **Postgraduate Medical Journal** 81: 663-666

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

Children's Surgical Forum (2007) **Surgery for Children: Delivering a First Class Service.** London, Royal College of Surgeons of England.

Christensen M & Hewitt-Taylor J (2006) From expert to tasks, expert practice redefined? **Journal of Clinical Nursing** 15 (12): 1531-1539

Chumbley GM, Hall GM & Salmon P (2002) Patient-controlled analgesia: what information does the patient want? **Journal of Advanced Nursing** 39 (5): 459–471

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 & Lung The Journal of Acute and Critical Care** 29 (4): 262-268

Clarke D (2002) The case for a children's nursing skills laboratory. **Paediatric Nursing** 14 (7): 36-39

Clayton RAE, Henderson J, McCracken SE, Wigmore SJ & Paterson-Brown S (2005) Practical experience and confidence in managing emergencies among preregistration house officers. **Postgraduate Medical Journal** 81: 396-400

Clothier C, MacDonald CA & Shaw DA (1994) **The Allitt Inquiry: Independent inquiry relating to deaths and injuries on the children's ward at Grantham and Kesteven Hospital during the period February to April 1991.** London, HMSO

Coggins RP (2000) Delivery of surgical care in a district general hospital without high dependency unit facilities. **Postgraduate Medical Journal** 76 (894): 223-226

Conway JE (1998) Evolution of the species 'expert nurse'. An examination of the practical knowledge held by expert nurses. **Journal of Clinical Nursing** 7 (1): 75-82

Coombs M (2003) Power and conflict in intensive care decision making. **Intensive and Critical Care Nursing** 19: 125-135

Coombs M & Dillon A (2002) Crossing boundaries, redefining care: the role of the critical care outreach team. **Journal of Clinical Nursing** 11: 387-393

Coombs M & Ersser SJ (2004) Medical hegemony in decision-making – a barrier to interdisciplinary working in intensive care? **Journal of Advanced Nursing** 46 (3): 245-252

Corr M (2000) Reducing occupational stress in intensive care. **Nursing in Critical Care** 5 (2): 76-81

Coté CJ, Notterman DA, Karl HW, Weinberg JA & McCloskey C (2000) Adverse sedation events in pediatrics: a critical incident analysis of contributing factors. **Pediatrics** 105 (4 Part 1): 805-14

Coyne IT (1995) Partnership in care: parents' views of participation in their hospitalised child's care. **Journal of Clinical Nursing** 4: 71-79

Coyne I & Cowley S (2007) Challenging the philosophy of partnership with parents: a grounded theory study. **International Journal of Nursing Studies** 44 (6): 893-904

Crabtree BJ, Yanoshik MK, Miller WL & O'Connor PJ (1993) Selecting individual or group interviews. *In* **Successful Focus Groups: Advancing the State of the Art.** (Morgan DL, Ed) London, Sage Publications, pp 137-149

Crabtree I (2001) 'A Bridge to the Future': Impact on high dependency and intensive care. **Journal of Child Health Care** 5 (4): 150-154

Creswell JW (1998) **Qualitative Inquiry and Research Design: Choosing among the Five Traditions.** Thousand Oaks, Sage Publications

Cribb A (1994) Linking the parts: an exemplar of philosophical and practical issues in holistic nursing. **Journal of Advanced Nursing** 20 (2): 233-238

Crickmore R (1987) A review of stress in the critical care unit. **Intensive Care Nursing** 3 (11): 19-27

Crossan F & Ferguson D (2005) Exploring nursing skill mix: a review. **Journal of Nursing Management** 13: 356-362

Cullen DJ, Civetta JM, Briggs BA & Ferrara LC (1974) Therapeutic intervention scoring system: a method for quantitative comparison of patient care. **Critical Care Medicine** 2 (2): 57-60

Currie V, Harvey G, West E, McKenna H & Keeney S (2005) Relationship between quality of care, staffing levels, skill mix and nurse autonomy: literature review. **Journal of Advanced Nursing** 51 (1): 73-82

Cutcliffe JR & McKenna HP (2004) Expert qualitative researchers and the use of audit trails. **Journal of Advanced Nursing** 45 (2): 126-133

Darbyshire P (1994) **Living with a Sick Child in Hospital: the Experiences of Parents and Nurses.** London, Chapman & Hall

Datt C & Robinson K (2007) Improving paediatric high dependency provision at a district general hospital. **Paediatric Nursing** 19 (7): 23-27

Davies J, Tibby SM & Murdoch IA (2005) Should parents accompany critically ill children during inter-hospital transport? **Archives of Disease in Childhood** 90 (5): 1270-1273

Day H, Allen Z & Llewellyn L (2005) High dependency care: a model for development. **Paediatric Nursing** 17 (3): 24-28

Denscombe M (1998) **The Good Research Guide.** Buckingham, Open University Press

Denzin NK (1989) **The Research Act** (3rd edition) London, Prentice-Hall Ltd.

Department of Health (1991) **Welfare of Children and Young People in Hospital.** London, HMSO

Department of Health (1997a) **Paediatric Intensive Care 'A Framework for the Future'** London, Department of Health

Department of Health (1997b) **A Bridge to the Future: Nursing Standards, Education and Workforce Planning in Paediatric Intensive Care.** London, Department of Health

Department of Health (1997c) **The New NHS, Modern, Dependable.** London, Department of Health

Department of Health (1998) **A First Class Service: Quality in the New NHS.** London, Department of Health

Department of Health (1999) **Making a Difference.** London, Department of Health

Department of Health (2000a) **Critical care services for children receives a £15m boost.** Press release. Reference number 2000/0525 Published 20/9/2000

Department of Health (2000b) **Comprehensive Critical Care – a Review of Adult Critical Care Services.** London, Department of Health

Department of Health (2000c) **The NHS Plan: a plan for investment, a plan for reform.** London, Department of Health

Department of Health (2001a) **Learning from Bristol: The Report of the Public Inquiry into Children's Heart Surgery at the Bristol Royal Infirmary 1984 – 1995.** Chair, Ian Kennedy. London, Stationery Office

Department of Health (2001b) **Research Governance Framework for Health and Social Care.** London, Department of Health

Department of Health (2001c) **Shifting the Balance of Power.** London, Department of Health

Department of Health (2002) **High Dependency Care for Children – Report of an Expert Advisory Group for Department of Health 2001.** Available from:
http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolic yAndGuidance/DH_4010058

Department of Health (2003) **Getting the Right Start: National Service Framework for Children Standard for Hospital Services.** London, Department of Health

Department of Health (2004) **National Service Framework for Children, Young People and Maternity Services.** London, Department of Health

Department of Health (2006) **The acutely or critically sick or injured child in the district general hospital: A team response.** London, Department of Health

Department of Health (2008) **Care of the acutely ill patient in hospital – Competency Framework (Consultation Document) Gateway Ref: 9633** London, Department of Health

Department of Health and Modernisation Agency (2003) **Critical Care Outreach 2003: Progress in Developing Services.** London, Department of Health and Modernisation Agency.

De Silva RJ, Anderson A, Tempest H, Ridley S (2001) Sequential organ scoring as a measure of effectiveness of care in the high-dependency unit. **Anaesthesia** 56 (9): 850-854

Dhond G, Ridley S & Palmer M (1998) The impact of a high-dependency unit on the workload of an intensive care unit. **Anaesthesia** 53 (9): 841-847

Dickinson K & Jackson K (1999) Staffing levels on children's wards: a snapshot survey. **Journal of Child Health Care** 3 (4): 5-11

Doman MJ (1997) Exploring stress in children's nurses. **Journal of Child Health Care** 1 (3): 110-116

Doman M (1998) Nursing children in a range of hospital settings. **Paediatric Nursing** 10 (1): 10-11

Doman M & Browning R (2001) Gap? What gap? Celebrating collaboration between education and practice. **Paediatric Nursing** 13 (9): 34-37

Donabedian A (1966) Evaluating the quality of medical care. **Milbank Memorial Fund Quarterly** 44 (3): Pt 2, 166-203

Donabedian A (1969) Some issues in evaluating the quality of nursing care. **American Journal of Public Health** 59 (10): 1833-1836

Donabedian A (1988) The quality of care. **Journal of American Medical Association** 260 (12): 1743-1748

Easton KL, McComish JF & Greenberg R (2000) Avoiding common pitfalls in qualitative data collection and transcription. **Qualitative Health Research** 10 (5): 703-707

Edbrooke DL, Stevens VG, Hibbert CL, Kingsley JM, Mann AJ & Wilson AJ (1997) High dependency units in England – the lack of provision and the cost of addressing the shortfall. **Care of the Critically Ill** 13 (6): 216-219

Effken JA ((2001) Informational basis for expert intuition. **Journal of Advanced Nursing** 34 (2): 246-255

Ellis J (1999) Benchmarking: our stamp and its effects. **Journal of Child Health Care** 3 (2): 33-35

Ellis J (2000) Sharing the evidence: clinical practice benchmarking to improve continuously the quality of care **Journal of Advanced Nursing** 32 (1): 215-225

Ellis J & Chapman S (2006) Nurse staffing requirements. **Nursing Management** 13 (4): 20-23

Emerson RM, Fretz RI & Shaw LL (2001) Participant observation and fieldnotes *In* **Handbook of Ethnography** (Atkinson et al., Eds) London, Sage Publications, pp 352-368

Endacott R (1994) Objectivity in observation. **Nurse Researcher** 2 (2): 30-40

Endacott R (1999) Roles of the allocated nurse and shift leader in the intensive care unit: findings of an ethnographic study. **Intensive and Critical Care Nursing** 15: 10-18 .

Endacott R & Chaboyer W (2006) The nursing role in ICU outreach: an international exploratory study. **Nursing in Critical Care** 11 (2): 94-102

English National Board for Nursing, Midwifery and Health Visiting (1991) **A survey to identify progress towards meeting the requirement of ENB circular 1988/53/RMHLV – supervision of students gaining nursing experience in children's wards.** London, English National Board

English National Board for Nursing, Midwifery and Health Visiting (1993) **Guidelines relating to the minimum requirements for high dependency and intensive care nursing experience in courses leading to Parts 8 and 15 of the Professional Register.** (Circular 1993/03/TS: January 1993) London, English National Board

Ersser SJ (1997) **Nursing as a Therapeutic Activity: an Ethnography.** Aldershot, Avebury

Ersser SJ & Tutton E (Eds) (1991) **Primary Nursing in Perspective.** Harrow, Scutari

Estabrooks CA, Rutakumwa W, O'Leary KA, Profetto-McGrath J, Milner M, Levers MJ & Scott-Findlay S (2005) Sources of practice knowledge among nurses. **Qualitative Health Research** 15 (4): 460-476

Fairfield G (1997) **Yorkshire Paediatric Intensive and High Dependency Care Study.** Leeds, Nuffield Institute for Health, University of Leeds

Field DE (2004) Moving from novice to expert – the value of learning in clinical practice: a literature review. **Nurse Education Today** 24: 560-565

Field PA (1983) An ethnography: four public health nurses' perspectives of nursing. **Journal of Advanced Nursing** 8: 3-12

Fielding NG & Fielding JL (1986) **Linking Data.** London, Sage Publications

Flick U (1998) **An Introduction to Qualitative Research.** London, Sage Publications

Forrest S, Brown N & Pollock L (1996) The clinical role of the nurse teacher: an exploratory study of the nurse teacher's present and ideal role in the clinical area. **Journal of Advanced Nursing** 24 (6): 1257-1264

Foster R (1997) Addressing epistemological and practical issues in multi-method research: a procedure for conceptual triangulation. **Advances in Nursing Science** 20 (2): 1-12

Fox AJ, Owen-Smith O & Spiers P (1999) The immediate impact of opening an adult high dependency unit on intensive care unit occupancy. **Anaesthesia** 54 (3): 280-283

Fraser J & Maskrey C (2003) A working paper for the planning of Paediatric High Dependency provision in South West England (unpublished)

Freeman T (2006) 'Best practice' in focus group research: making sense of different views. **Journal of Advanced Nursing** 56 (5): 491-497

Frost PJ, Moore LF, Louis MR, Lundberg CC & Martin J (1991) Thinking about organizational culture. *In* **Reframing Organizational Culture.** (Frost PJ, Moore LF, Louis MR, Lundberg CC & Martin J, Eds) London, Sage Publications, pp 7-10

Galvin J & Goldstone LA (1988) **Junior Monitor: An index of the Quality of Nursing Care for Junior Citizens on Hospital Wards.** Newcastle upon Tyne, Polytechnic Products Ltd.

Garbett R, Hardy S, Manley K, Titchen A, McCormack B (2007) Developing a qualitative approach to 360-degree feedback to aid understanding and development of clinical expertise. **Journal of Nursing Management** 15 (3): 342-347

Geertz C (1993) **The Interpretation of Cultures: selected essays.** London, Fontana

Gerrish K (1997) Being a 'marginal native': dilemmas of the participant observer. **Nurse Researcher** 5 (1): 25-34

Gibson F, Fletcher M & Casey A (2003) Classifying general and specialist children's nursing competencies. **Journal of Advanced Nursing** 44 (6): 591-602

Gillespie M (2002) Student-teacher connection in clinical nursing education. **Journal of Advanced Nursing** 37 (6): 566-576

Gold R (1958) Roles in sociological field observation. **Social Forces** 36 (3): 217-223

Goldhill DR & Sumner A (1998) Outcome of intensive care patients in a group of British intensive care units. **Critical Care Medicine** 26 (8): 1337-1345

Goldhill DR, White SA & Sumner A (1999) Physiological values and procedures in the 24-hours before ICU admission from the ward. **Anaesthesia** 54: 529-534

Greenbaum TL (2000) **Moderating Focus Groups. A Practical Guide for Group Facilitation.** Thousand Oaks, Sage Publications

Greenwood J & King M (1995) Some surprising similarities in the clinical reasoning of 'expert' and 'novice' orthopaedic nurses: report of a study using verbal protocols and protocol analyses. **Journal of Advanced Nursing** 22 (5): 907-913

Haines C (2005) Acutely ill children within ward areas – care provision and possible development strategies. **Nursing in Critical Care** 10 (2): 98-104

Haines C, Perrott M & Weir P (2006) Promoting care for acutely ill children – development and evaluation of a Paediatric Early Warning Tool. **Intensive & Critical Care Nursing** 22: 73-81

Hammersley M (1990) **Classroom Ethnography: Empirical and Methodological Essays.** Milton Keynes, Open University Press

Hammersley M & Atkinson P (1995) **Ethnography: Principles in Practice (2nd Edition)** London, Tavistock

Hardy S, Garbett R, Titchen A & Manley K (2002) Exploring nursing expertise: nurses talk nursing. **Nursing Inquiry** 9 (3): 196-202

Hatch M (1997) **Organisation theory: Modern, symbolic and post-modern perspectives.** Oxford, Open University Press

Hazinski MF (1992) **Nursing Care of the Critically Ill Child.** (2nd Edition) St Louis, Mosby.

Hazinski MF (1999) **Manual of Pediatric Critical Care.** St Louis, Mosby

Healthcare Commission (2007) **Improving Services for Children in Hospital.** London, Healthcare Commission

Henderson AJW, Garland L, Warne S, Bailey L & Weir PM (1999) **A Prospective Study of Paediatric Intensive Care for Critically Ill Children in the South West Region.** Bristol, SW R & D Directorate, NHS Executive

Henderson AJ, Garland L, Warne S, Bailey L, Weir P & Edees S (2002) Risk adjusted mortality of critical illness in a defined geographical region. **Archives of Disease in Childhood** 86: 194-199

Henneman E, Lee J & Cohen J (1995) Collaboration: a concept analysis. **Journal of Advanced Nursing** 21: 103-109

Heuer L (1993) Parental stressors in a paediatric intensive care unit. **Pediatric Nursing** 19 (2): 128-131

Heward Y (2003) Transfer from ward to PICU: a standard. **Paediatric Nursing** 15 (1): Critical Care supplement XI–XIII

Hewitt-Taylor J (2001) Use of constant comparative analysis in qualitative research. **Nursing Standard** 15 (42): 39-42

Hewitt-Taylor J (2003) Evidence for practice. **Intensive & Critical Care Nursing** 19 (2): 85-91

Heyl BS (2001) Ethnographic interviewing *In* **Handbook of Ethnography** (Atkinson et al, Eds) London, Sage Publications, pp 369-383

Higson J & Hawkins G (2001) Measuring quality in a paediatric day case unit. **Nursing Times** 97 (10): 32-33

Hill YW (1996) Children in intensive care: can nurse-parent partnership enable the child and family to cope more effectively? **Intensive & Critical Care Nursing** 12: 155-160

Hillman K, Bristow PJ, Chey T, Daffurn K, Jacques T, Norman SL, Bishop GF & Simmons G (2002) Duration of life-threatening antecedents prior to intensive care admission. **Intensive Care Medicine** 28: 1629-1634

Hinshelwood RD & Skogstad W (2000a) The dynamics of health care institutions *In* **Observing Organisations: Anxiety, defence and culture in health care.** (Hinshelwood RD & Skogstad W, Eds) London, Routledge, pp 3-16

Hinshelwood RD & Skogstad W (2000b) The method of observing organisations *In* **Observing Organisations: Anxiety, defence and culture in health care.** (Hinshelwood RD & Skogstad W, Eds) London, Routledge, pp 17–26

Hochschild AR (1983) **The Managed Heart: Commercialisation of Human Feeling.** Berkeley, University of California Press

Hodgson I (2001) Engaging with cultures: reflections on entering the ethnographic field. **Nurse Researcher** 9 (1): 41-51

Hogston R (1995) Quality nursing care: a qualitative enquiry. **Journal of Advanced Nursing** 21: 116-124

Holloway I & Wheeler S (1996) **Qualitative Research for Nurses.** Oxford, Blackwell Science

Holloway I (1997) **Basic Concepts for Qualitative Research.** Oxford, Blackwell Science

Huberman AM & Miles MB (1998) Data management and analysis methods. *In* **Collecting and Interpreting Qualitative Materials** (Denzin NK & Lincoln YS, Eds) Thousand Oaks, Sage Publications, pp 179– 210

Hurst K [online] (2002) **Selecting and Applying Methods for Estimating the Size and Mix of Nursing Teams.** A systematic review of the literature commissioned by the Department of Health, April 2002. Available from: http://www.nuffield.leeds.ac.uk/downloads/nursing_teams.pdf (Accessed December 2003)

Hutchfield K (1999) Family-centred care: a concept analysis. **Journal of Advanced Nursing** 29 (5): 1178-1187

Idvall E & Rooke L (1998) Important aspects of nursing care in surgical wards as expressed by nurses. **Journal of Clinical Nursing** 7 (6): 512-520

Jackson K (2000) Support following discharge: service audit. **Paediatric Nursing** 12 (5): 37-38

Jackson P (1998) Focus group interviews as a methodology. **Nurse Researcher** 6 (1): 72-84

Jarvie IC (1982) The problem of ethical integrity in participant observation *In* **Field Research: a Sourcebook and Field Manual** (Burgess RG, Ed) London, Routledge, pp 68-72

Jolley S (1995) Nursing and stressful environments. **Paediatric Nursing** 7 (5): 28-30

Jones AM (2003) Changes in practice at the nurse-doctor interface. Using focus groups to explore the perceptions of first level nurses working in an acute setting. **Journal of Clinical Nursing** 12 (1): 124-131

Jones HJ, Coggins R, Lafuente J, de Cossart L (1999) Value of a surgical high-dependency unit. **British Journal of Surgery** 86 (12): 1578-1582

Keane A, Ducette J & Adler DC (1985) Stress in ICU and non-ICU nurses. **Nursing Research** 34 (4): 231-236

Kenny G (2003) Skills or skilled? Children's nursing in the context of the current debate around nursing skills. **Journal of Child Health Care** 7 (2): 113-122

Keogh S (2001) Parents' experiences of the transfer of their child from the PICU to the ward: a phenomenological study. **Nursing in Critical Care** 6 (1): 7-13

Kevern J & Webb C (2001) Focus groups as a tool for critical social research in nurse education. **Nurse Education Today** 21: 323-333

Kimchi J, Polivka B & Stevenson JS (1991) Triangulation: operational definitions. **Nursing Research** 40 (6): 364-366

Kincey J, Pratt D, Slater R & Dixon M (2003) A survey of patterns and sources of stress among medical and nursing staff in an intensive care unit setting. **Care of the Critically Ill** 19 (3): 83-87

King L & Macleod Clark J (2002) Intuition and the development of expertise in surgical ward and intensive care nurses. **Journal of Advanced Nursing** 37 (4): 322–329

Kitzinger J (1994) The methodology of focus groups: the importance of interaction between research participants. **Sociology of Health and Illness** 16 (1): 103-121

Kitzinger J & Barbour RS (1999) Introduction: the challenge and promise of focus groups. *In* **Developing Focus Group Research: Politics, Theory and Practice.** (Barbour RS & Kitzinger J, Eds) London, Sage Publications, pp 1-20

Kitzinger J & Farquhar C (1999) The analytical potential of 'sensitive moments' in focus group discussions. *In* **Developing Focus Group Research: Politics, Theory and Practice.** (Barbour RS & Kitzinger J, Eds) London, Sage Publications, pp 156-172

Knafl KA & Breitmayer BJ (1989) Triangulation in qualitative research: issues of conceptual clarity and purpose. *In* **Qualitative Nursing Research** (Morse JM, Ed) Rockville, Aspen, pp 209-220

Koch T (1994) Establishing rigour in qualitative research: the decision trail. **Journal of Advanced Nursing** 19: 976-986

Koch T (2004) Expert researchers and audit trails (Commentary) **Journal of Advanced Nursing** 45 (2): 134-135

Koch T (2006) Establishing rigour in qualitative research: the decision trail. **Journal of Advanced Nursing** 53 (1): 91-103

Krueger R A (1994) **Focus Groups: a Practical Guide for Applied Research.** (2nd Edition) London, Sage Publications.

Krueger R A (1998a) **Developing Questions for Focus Groups.** (Focus Group Kit, Vol 3) London, Sage Publications.

Krueger R A (1998b) **Moderating Focus Groups.** (Focus Group Kit, Vol 4) London, Sage Publications.

LaMontagne L, Johnson B & Hepworth J (1995) Evolution of parental stress and coping processes: a framework for critical care practice. **Journal of Pediatric Nursing** 10 (4): 212-218

LaMontagne L & Pawlak R (1990) Stress and coping of parents in a pediatric intensive care unit. **Heart & Lung** 19: 416-421

Lankshear AJ (1993) The use of focus groups in a study of attitudes to student nurse assessment. **Journal of Advanced Nursing** 18: 1986-1989

Lankshear AJ, Sheldon T & Maynard A (2005) Nurse staffing and healthcare outcomes. A systematic review of the international research literature. **Advances in Nursing Science** 28 (2): 163-174

Laugharne C (1995) Ethnography: research method or philosophy? **Nurse Researcher** 3 (2): 45-54

Lauri S & Salanterä S (1998) Decision-making models in different fields of nursing. **Research in Nursing & Health** 21: 443-452

Lee P (2002) Clinical placement exchanges for pre-registration nursing students: maximising opportunities. **Nurse Education in Practice** 2: 119-124

Leininger MM (Ed) (1985) **Qualitative Research Methods in Nursing.** Orlando, Grune & Stratton

Lincoln Y & Guba E (1985) **Naturalistic Inquiry.** London, Sage Publications

Litva A & Jacoby A (2002) Qualitative methods and evidence-based practice. *In* **The Evidence-Based Practice Manual for Nurses.** (Craig JV & Smyth RL, Eds) Edinburgh, Churchill Livingstone, pp 136-163

Lofland J & Lofland LH (1995) **Analyzing Social Settings: a Guide to Qualitative Observation and Analysis.** Wadsworth Publishing

MacKenzie AE (1992) Learning from experience in the community: an ethnographic study of district nurse students. **Journal of Advanced Nursing** 17: 682-691

Macleod Clark J, Maben J & Jones K (1996) The use of focus group interviews in nursing research. **NT Research** 1 (2): 143-153

Manias E & Street A (2000) Legitimation of nurses' knowledge through policies and protocols in clinical practice. **Journal of Advanced Nursing** 32 (6): 1467-1475

Manias E & Street A (2001) Nurse-doctor interactions during critical care ward rounds. **Journal of Clinical Nursing** 10: 442-450

Manley K (2000) Organisational culture and consultant nurse outcomes: part 1 Organisational outcomes. **Nursing Standard** 14 (36): 34-38

Manley K & Garbett R (2000) Paying Peter and Paul: reconciling concepts of expertise with competency for a clinical career structure. **Journal of Clinical Nursing** 9: 347-359

Martin J (2002) **Organizational culture: Mapping the terrain.** Thousand Oaks, Sage Publications

Maskrey C (2001) personal correspondence (unpublished)

Mason J (2002) **Qualitative Researching.** (2nd Edition) London, Sage Publications

Maybloom B, Chapple J & Davidson LL (2002) Admissions for critically ill children: where and why? **Intensive and Critical Care Nursing** 18: 151-161

McCutcheon H & Pincombe J (2001) Intuition: an important tool in the practice of nursing. **Journal of Advanced Nursing** 35 (3): 342-348

McDonagh L (1996) personal correspondence (unpublished)

McQueen ACH (2004) Emotional intelligence in nursing work. **Journal of Advanced Nursing** 47 (1): 101-108

McQuillan P, Pilkington S, Allan A, Taylor B, Short A, Morgan G, Nielsen M, Barrett D & Smith G (1998) Confidential Inquiry into quality of care before admission to intensive care. **British Medical Journal** 316: 1853-1858

Meek VL (1988) Organizational culture: Origins and weaknesses. **Organization Studies** 9 (4): 453-473

Melia KM (2001) Ethical issues and the importance of consensus for the intensive care team. **Social Science & Medicine** 53: 707-719

Melnyk BM & Alpert-Gillis LJ (1998) The COPE program: a strategy to improve outcomes of critically ill children and their parents: Creating Opportunities for Parent Empowerment. **Pediatric Nursing** 24 (6): 521-527

Meyerson D & Martin J (1987) Cultural change: An integration of three different views. **Journal of Management Studies** 24: 623-647

Millar B, Maggs C, Warner V & Whale Z (1996) Creating consensus about nursing outcomes I: An exploration of focus group methodology. **Journal of Clinical Nursing** 5 (3): 193-197

Millward LJ (1995) Focus Groups. *In* **Research Methods in Psychology** (Breakwell GM, Hammond S & Fife-Schaw C, Eds) London, Sage Publications, pp 274-292

Ministry of Health (1959) **The Welfare of Children in Hospital.** (Platt Report) London, Ministry of Health

Miranda DR, Rijk A & Schaufeli W (1996) Simplified Therapeutic Intervention Scoring System. The TISS 28 item – results from a multi-centre study. **Critical Care Medicine** 24 (1): 64-73

Monaghan A (2005) Detecting and managing deterioration in children. **Paediatric Nursing** 17 (1): 32-35

Morgan DL (1988) **Focus Groups as Qualitative Research.** London, Sage Publications

Morgan DL (Ed) (1993) **Successful Focus Groups: Advancing the State of the Art.** London, Sage Publications

Morgan DL & Krueger RA (1993) When to use focus groups and why. *In* **Successful Focus Groups: Advancing the State of the Art.** (Morgan DL, Ed) London, Sage Publications, pp 3-19

Morison M & Moir J (1998) The role of computer software in the analysis of qualitative data: efficient clerk, research assistant or Trojan horse? **Journal of Advanced Nursing** 28 (1): 106-116

Morse JM (1991) Approaches to qualitative-quantitative methodological triangulation. **Nursing Research** 40 (1): 120-123

Morse JM & Field PA (1996) **Nursing Research: the Application of Qualitative Approaches.** (2nd Edition) Cheltenham, Stanley Thornes

Morse JM & Richards L (2002) **Readme First for a User's Guide to Qualitative Methods.** Thousand Oaks, Sage Publications

Moss SJ, Embleton ND & Fenton AC (2005) Towards safer neonatal transfer: the importance of critical incident review. **Archives of Disease in Childhood** 90 (7): 729-732

Murray R (2002) **How to Write a Thesis.** Buckingham, Open University Press

National Collaborating Centre for Women's and Children's Health (Commissioned by NICE) [online] (2004) **Type 1 diabetes: diagnosis and management of type 1 diabetes in children and young people.** Available from: http://www.nice.org.uk/nicemedia/pdf/CG015childrenfullguideline.pdf (Accessed September 2005)

National Institute for Health and Clinical Excellence [online] (2007) **Acutely ill patients in hospital: recognition of and response to acute illness in adults in hospital (NICE guideline no. 50)** Available from: http://www.nice.org.uk/nicemedia/pdf/CG50FullGuidance.pdf (Accessed July 2008)

Needleman J, Buerhaus P, Mattke S, Stewart M & Zelevinsky K (2002) Nurse-staffing levels and the quality of care in hospitals. **New England Journal of Medicine** 346 (22): 1715-1722

Neill C & Hughes U (2004) Improving inter-hospital transfer. **Paediatric Nursing** 16 (7): 24-27

NHS Executive NW (1996) **Inquiry into the Care and Treatment of Nicholas Geldard.** NW, NHS Executive

NHS Executive (2001) **NHS National Nursing Leadership Project** Available from: http://www.nursingleadership.co.uk/rcn_leo/leo_info.htm (Accessed October 2008)

Noyes J (1998) A critique of studies exploring the experiences and needs of parents of children admitted to paediatric intensive care units. **Journal of Advanced Nursing** 28 (1): 134-141

Noyes J (1999) The impact of knowing your child is critically ill: a qualitative study of mothers' experiences. **Journal of Advanced Nursing** 29 (2): 427-435

Nursing & Midwifery Council (2008) **The Code: Standards of conduct, performance and ethics.** London, Nursing & Midwifery Council

Nyamathi A & Schuler P (1990) Focus group interview: a research technique for informed nursing practice. **Journal of Advanced Nursing** 15: 1281-1288

Oppenheim AN (1992) **Questionnaire Design, Interviewing and Attitude Measurement.** (New edition) London, Pinter Publishers

Ormrod S (2003) Organisational culture in health service policy and research: 'third-way' political fad or policy development? **Policy & Politics** 31 (2): 227-237

Paediatric High Dependency Care Sub-Group (NW) (2000) **A specification for the provision of Paediatric High Dependency Care.** North West, NHS Executive

Pappachan JV, Millar BW, Barrett DJ & Smith GB (1999) Analysis of intensive care populations to select possible candidates for high dependency care. **Journal of Accident & Emergency Medicine** 16 (1): 13-17

Patton MQ (1990) **Qualitative Evaluation and Research Methods.** (2nd Edition) Newbury Park, Sage Publications

Peters T & Waterman R (1982) **In Search of Excellence: Lessons from America's best-run companies.** New York, Harper Collins

Pheysey DC (1993) **Organizational Cultures: Types and Transformations.** London, Routledge

Phillips L & Arnold J (2001) Improving practices with limited resources. **Nursing Times** 97 (36): 43

Pollack MM, Patel KM & Ruttiman UE (1996) PRISM III: an updated Pediatric Risk of Mortality score. **Critical Care Medicine** 24 (5): 743-752

Porter S (1995) **Nursing's relationship with medicine: a critical realist ethnography.** Aldershot, Avebury

Porter S & Ryan S (1996) Breaking the boundaries between nursing and sociology: a critical realist ethnography of the theory-practice gap. **Journal of Advanced Nursing** 24 (2): 413-420

Price B (2002) Laddered questions and qualitative data research interviews. **Journal of Advanced Nursing** 37 (3): 273-281

Priestley G, Watson W, Rashidian A, Mozley C, Russell D, Wilson J, Cope J, Hart D, Kay D, Cowley K & Pateraki J (2004) Introducing critical care outreach: a ward-randomised trial of phased introduction in a general hospital. **Intensive Care Medicine** 30(4): 1398-1404

Prowse M & Lyne PA (2000) Clinical effectiveness in the post-anaesthetic care unit: how nursing knowledge contributes to achieving intended patient outcomes. **Journal of Advanced Nursing** 31 (5): 1115-1124

Pugh J, Mitchell M & Brooks F (2000) Insider/outsider partnerships in an ethnographic study of shared governance. **Nursing Standard** 14 (27): 43-44

Rafferty AM, Clarke SP, Coles J, Ball J, James P, McKee M & Aiken LH (2007) Outcomes of variation in hospital nurse staffing in English hospitals: Cross-sectional analysis of survey data and discharge records. **International Journal of Nursing Studies** 44 (2): 175-182

Redfern SJ & Norman IJ (1994) Validity through triangulation. **Nurse Researcher** 2 (2): 41-56

Reed J & Payton VR (1997) Focus groups: issues of analysis and interpretation. **Journal of Advanced Nursing** 26 (4): 765-771

Richards L (2004) **Handling Qualitative Data: a Practical Guide.** London, Sage Publications

Richardson A, Burnand V, Colley H & Coulter C (2004) Ward nurses' evaluation of critical care outreach. **Nursing in Critical Care** 9 (1): 28-33

Ridley SA (1998) Intermediate care. **Anaesthesia** 53 (7): 654-664

Roberts P (1997) Planning and running a focus group. **Nurse Researcher** 4 (4): 78-82

Robinson N (1999) The use of focus group methodology – with selected examples from sexual health research. **Journal of Advanced Nursing** 29 (4): 905-913

Rodgers BL & Cowles KV (1993) The qualitative research audit trail: a complex collection of documentation. **Research in Nursing & Health** 16: 219-226

Roper JM & Shapira J (2000) **Ethnography in Nursing Research.** Thousand Oaks, Sage Publications

Rosenthal SL, Schmid KD & Black MM (1989) Stress and coping in a NICU. **Research in Nursing and Health** 12 (4): 257-265

Royal College of Nursing (1999) **Skillmix and staffing in children's wards and departments.** London, Royal College of Nursing

Royal College of Nursing (2003) **Defining staffing levels for children's and young people's services.** London, Royal College of Nursing

Royal College of Nursing (2004) **Services for children and young people: preparing nurses for future roles.** London, Royal College of Nursing

Royal College of Paediatrics and Child Health (2004) **Commissioning Tertiary and Specialised Services for Children and Young People**. London, Royal College of Paediatrics and Child Health

Royal College of Surgeons of England Paediatric Forum (2000) **Children's Surgery: A First Class Service**. London, Royal College of Surgeons of England

Rushforth K (2006) **A Study of Paediatric High Dependency Care in West, North and East Yorkshire. A Report of Paediatric Staffing and Patient Activity. January – December 2005.** Leeds, University of Leeds. ISBN: 0 85316 171 0

Ryan DW, Bayly PJ, Weldon OG & Jingree M (1997) A prospective two-month audit of the lack of provision of a high-dependency unit and its impact on intensive care. **Anaesthesia** 52 (3): 265-270

Sandelowski M (1986) The problem of rigor in qualitative research. **Advances in Nursing Science** 8 (3): 27-37

Sandelowski M (1993) Rigor or rigor mortis: the problem of rigor in qualitative research revisited. **Advances in Nursing Science** 16 (2): 1-8

Sandelowski M (1995a) Focus on qualitative methods: sample size in qualitative research. **Research in Nursing and Health** 18: 179-183

Sandelowski M (1995b) Triangles and crystals: on the geometry of qualitative research **Research in Nursing & Health** 18: 569-574

Sandelowski M (2006) "Meta-Jeopardy": the crisis of representation in qualitative metasynthesis. **Nursing Outlook** 54 (1): 10-16

Sandelowski M, Barroso J & Voils CI (2007) Using qualitative metasummary to synthesize qualitative and quantitative descriptive findings. **Research in Nursing and Health** 30 (1): 99-111

Savage J (2000) The culture of 'culture' in National Health Service policy implementation. **Nursing Inquiry** 7 (4): 230-238

Schein EH (1991) What is culture? *In* **Reframing Organizational Culture.** (Frost PJ, Moore LF, Louis MR, Lundberg CC & Martin J, Eds) London, Sage Publications, pp 243-253

Schein E (1992) **Corporate Culture and Leadership.** San Francisco, Jossey Bass

Scott-Findlay S & Estabrooks CA (2006) Mapping the organizational culture research in nursing: a literature review. **Journal of Advanced Nursing** 56 (5): 498-513

Seago JA, Williamson A & Atwood C (2006) Longitudinal analyses of nurse staffing and patient outcomes: more about failure to rescue. **Journal of Nursing Administration** 36 (1): 13-21

Sedman A, Harris JM II, Schulz K, Schwalenstocker E, Remus D, Scanlon M & Bahl V (2005) Relevance of the Agency for Healthcare Research and Quality Patient Safety Indicators for Children's Hospitals. **Pediatrics** 115 (1): 135-145

Shann F, Pearson G, Slater A & Wilkinson K (1997) Paediatric Index of Mortality: a mortality prediction model for children in intensive care. **Intensive Care Medicine** 23 (2): 201-207

Sharpley JT & Holden JC (2004) Introducing an early warning scoring system in a district general hospital. **Nursing in Critical Care** 9 (4): 98-103

Shih F-J (1998) Triangulation in nursing research: issues of conceptual clarity and purpose. **Journal of Advanced Nursing** 28 (3): 631-641

Shudy M, de Almeida ML, Ly S, Landon C, Groft S, Jenkins TL & Nicholson CE (2006) Impact of pediatric critical illness and injury on families: a systematic literature review. **Pediatrics** 118: Supplement 3: S203-218

Silverman D (2000) **Doing Qualitative Research: a Practical Handbook.** London, Sage Publications

Silverman D (2001) **Interpreting Qualitative Data: Methods for Analysing Talk, Text and Interaction.** (2nd Edition) London, Sage Publications

Sim J (1998) Collecting and analysing qualitative data: issues raised by the focus group. **Journal of Advanced Nursing** 28 (2): 345-352

Sim J & Sharp K (1998) A critical appraisal of the role of triangulation in nursing research. **International Journal of Nursing Studies** 35 (1/2): 23-31

Singer M, Myers S, Hall G, Cohen SL & Armstrong RF (1994) The cost of intensive care: a comparison on one unit between 1988 and 1991. **Intensive Care Medicine** 20 (8): 542-549

Smircich L (1983) Concepts of culture and organizational analysis. **Administrative Science Quarterly** 28: 339-358

Smith A, Goodwin D, Mort M & Pope C (2003) Expertise in practice: an ethnographic study exploring acquisition and use of knowledge in anaesthesia. **British Journal of Anaesthesia** 91 (3): 319-328

Smith GB & Poplett N (2002) Knowledge of aspects of acute care in trainee doctors. **Postgraduate Medical Journal** 78: 335-338

Smith J & Long T (2002) Confusing rhetoric with reality: achieving a balanced skill mix of nurses working with children. **Journal of Advanced Nursing** 40 (3): 258-266

Smith P (1992) **The Emotional Labour of Nursing: How Nurses Care.** Basingstoke, Macmillan

Smith P (2001) Emotional labour of nursing revisited: caring and learning 2000. **Nurse Education in Practice** 1 (1): 42-49

Sørlie V, Jansson L & Norberg A (2003) The meaning of being in ethically difficult care situations in paediatric care as narrated by female Registered Nurses. **Scandinavian Journal of Nursing Science** 17: 285-292

Sorrell JM & Redmond G (1995) Interviews in qualitative nursing research: differing approaches for ethnographic and phenomenological studies. **Journal of Advanced Nursing** 21 (6): 1117-1122

Spence K & Lau C (2006) Measuring nursing unit culture as an empirical basis for implementing a model of practice in a neonatal intensive care unit. **Journal of Neonatal Nursing** 12: 20-28

Spilsbury K & Meyer J (2001) Defining the nursing contribution to patient outcome: lessons from a review of the literature examining nursing outcomes, skill mix and changing roles. **Journal of Clinical Nursing** 10: 3-14

Spradley JP (1980) **Participant Observation.** New York, Holt, Rhinehart & Winston

Staden H (1998) Alertness to the needs of others: a study of the emotional labour of caring. **Journal of Advanced Nursing** 27 (1): 147-156

Stanley D (2006a) In command of care: clinical nurse leadership explored. **Journal of Research in Nursing** 11 (1): 20-39

Stanley D (2006b) In command of care: Towards the theory of congruent leadership. **Journal of Research in Nursing** 11 (2): 132-144

Strauss A & Corbin J (1998) **Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory.** (2nd edition) Thousand Oaks, Sage Publications

Streubert HJ & Carpenter DR (1999) **Qualitative Research in Nursing: Advancing the Humanistic Imperative** (2nd Edition). Philadelphia, Lippincott

Subbe CP, Davies RG, Williams E, Rutherford P & Gemmell L (2003) Effects of introducing the Modified Early Warning score on clinical outcomes, cardio-pulmonary arrests and intensive care utilisation in acute medical admissions. **Anaesthesia** 58 (8): 797-802

Syers S (1998) personal correspondence (unpublished)

Taylor JS (1996) Collaborative practice within the intensive care unit: a deconstruction. **Intensive and Critical Care Nursing** 12: 64-70

Thompson FJ & Singer M (1995) High dependency units in the UK: variable size, variable character, few in number. **Postgraduate Medical Journal** 71 (834): 217-221

Thompson H & Spiers P (1998) Occupancy of a teaching hospital adult intensive care unit by high dependency patients. **Anaesthesia** 53 (6): 589-592

Thyer G (2003) Dare to be different: transformational leadership may hold the key to reducing the nursing shortage. **Journal of Nursing Management** 11: 73-79

Tobin GA & Begley CM (2004) Methodological rigour within a qualitative framework. **Journal of Advanced Nursing** 48 (4): 388-396

Torn A & McNichol E (1998) A qualitative study utilising a focus group to explore the role and concept of the nurse practitioner. **Journal of Advanced Nursing** 27 (6): 1202-1211

Tume L (2005) A 3-year review of emergency PICU admissions from the ward in a specialist cardio-respiratory centre. **Care of the Critically Ill** 21 (1): 4-7

Tume L (2007) The deterioration of children in ward areas in a specialist children's hospital. **Nursing in Critical Care** 12 (1): 12-19

Tume L & Bullock I (2004) Early warning tools to identify children at risk of deterioration: a discussion. **Paediatric Nursing** 16 (8): 20-23

Turner M, McFarlane HJ & Krukowski ZH (1999) Prospective study of high dependency requirements and provision. **Journal of the Royal College of Surgeons of Edinburgh** 44 (1): 19-23

Twycross A & Powls L (2006) How do children's nurses make decisions? Two preliminary studies. **Journal of Clinical Nursing** 15: 1324-1335

Tyler PA & Ellison RN (1994) Sources of stress and psychological well-being in high-dependency nursing. **Journal of Advanced Nursing** 19: 469-476

Wade K (2002) Paediatric high dependency provision: a case for urgent review in the United Kingdom. **Journal of Child Health Care** 18 (2): 109-117

Warne S, Garland L, Bailey L, Edees S, Weir P & Henderson J (2000) The critically ill children study: a prospective study of the provision and outcome of paediatric intensive care in the South West. *In* **Evidence-based Child Health Care: Challenges for Practice.** (Glasper EA & Ireland L, Eds) Basingstoke, MacMillan pp 224-243

Webb C (1999) Analysing qualitative data: computerized and other approaches. **Journal of Advanced Nursing** 29 (2): 323-330

Webb C & Kevern J (2001) Focus groups as a research method: a critique of their use in nursing research. **Journal of Advanced Nursing** 33: 798-805

Welford C (2002) Matching theory to practice. **Nursing Management** 9 (4): 7-11

Whyte WF (1993) **Street Corner Society: the Social Structure of an Italian Slum.** (4th Edition) Chicago, University of Chicago Press

Wilkinson S (1998) Focus groups in feminist research: power, interaction and the co-construction of meaning. **Women's Studies International Forum** 21 (1): 111-125

Williams AM (1998) The delivery of quality nursing care: a grounded theory study of the nurse's perspective. **Journal of Advanced Nursing** 27: 808-816

Williamson GR & Webb C (2001) Supporting students in practice. **Journal of Clinical Nursing** 10 (2): 284-292

Wilson VJ, McCormack BG & Ives G (2005) Understanding the workplace culture of a special care nursery. **Journal of Advanced Nursing** 50 (1): 27-38

Wolcott HF (1995) **The Art of Fieldwork.** London, Sage Publications

Yeh TS, Pollack MM, Holbrook PR, Fields AI & Ruttiman U (1982) Assessment of pediatric intensive care – application of the Therapeutic Intervention Scoring System. **Critical Care Medicine** 10 (8): 497-500

Yeh TS, Pollack MM, Ruttiman U, Holbrook PR & Fields AI (1984) Evaluation of pediatric intensive care. **Critical Care Medicine** 12 (4): 376-383