

2006

Nurses' decision making processes regarding indwelling catheter insertion and removal

Helen Hull
Edith Cowan University

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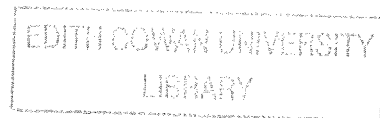
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Nurses' Decision
Making Processes regarding Indwelling
Catheter Insertion and Removal

By

Helen Hull (R.N., Ba. N)

2010481



for

Bachelor of Nursing (Honours)

Edith Cowan University

Supervisor: Mr Jon Mould

9th June 2006

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Helen Hull, R.N., Ba.N.

6th June 2006

Abstract

Urinary catheterisation remains a common procedure conducted by nurses often as a result of autonomous decision making. This research aimed to identify and describe the lived experience of nurses' decision making processes regarding the insertion and removal of urinary catheters. The research was believed to be important as there is a myriad of literature on what is best practice but very little on what is actually taking place in nursing practice. A qualitative phenomenological study design was chosen, where nurse participants were interviewed using open-ended questions. Descriptive phenomenology was the chosen method which follows in Heidegger's tradition that allowed nurses to describe their own lived experiences (Draucker, 1999). Specifically, Colaizzi's (1978) method of thematic analysis was used to analyse the data, including his six procedural steps. The planned sample was ten registered nurses, with at least two years acute care experience. Nurses were recruited from both surgical and medical specialties at Sir Charles Gairdner Hospital. Thematic analysis revealed much homogeneity amongst the nurses with eight common themes identified, including patient assessment, consultation, evidenced based practice, catheter choice, risk of complication, autonomous decision making, patient acuity and comfort, which all indicate that the nurse participants acted holistically when making decisions for patient care. These results may provide educators and practitioners with valuable information regarding the current practices of nurses, which could lead to better education and training, and ultimately better care of patients. Describing the professional practice of nurses, especially where autonomous decision making occurs, can lead to improving the status of the profession.

Acknowledgements

The researcher would like to thank all academic, ethics and research staff at both Sir Charles Gairdner Hospital and Edith Cowan University who so freely gave their time to answer my many questions. Additional thanks goes to my supervisor Mr Jon Mould who answered my many queries, and was so freely available to me.

Thanks also goes to the relevant Nursing Co-Directors from Sir Charles Gairdner Hospital, ward Clinical Nurse Specialists and Staff Development Nurses who so happily allowed staff to participate in the interviews during shift times and who all happily organised participants, venues and suitable times.

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Introduction

This research was conducted in order to describe nurses' decision making processes regarding urinary catheter insertion and removal. Nurses' decision making processes are the way in which information is collected and evaluated in order to make decisions which result in the provision of patient care (White, as cited by Hoffman, Duffield & Donoghue, 2004). The insertion and removal of urinary catheters is a common nursing practice. Nurses are often independent decision makers in providing catheter related care. Interestingly, the phenomenon has not been greatly studied which has led to the conception and completion of this study. Using a qualitative and descriptive focus, the study follows the paradigm of Hermeneutic phenomenology. Ten Registered Nurses from Sir Charles Gairdner Hospital (SCGH) were interviewed and their responses were analysed using Colaizzi's (1978) procedural steps.

This thesis includes the background and significance of the phenomenon, relevant definitions, the study's objectives and a literature review. The methodology section includes the chosen paradigm and method. It also contains details of the analysis techniques used, ethical considerations, procedures and data collection. The setting is described, and the chosen population and sample is included. It finishes with validity and reliability testing. The study's results have been discussed in detail and are reported by thematic analysis, including codes, categories and themes. Demographic data, the study's limitations, implications for nursing and recommendations for future research have also been included.

Significance and Background

Urinary catheters have been in use since ancient times, the Greeks described the process of draining fluid from the body. Early catheterisation used the most basic of tools including reeds, tubes of gold and straws. Many different materials have been used since then, but the main revolution occurred in 1930 when Dr Frederick Foley designed what is now known as the Foley's catheter (Rew, 1999). Since then the use and care of indwelling catheters (IDC's) has evolved and become a common nursing procedure.

This study aims to describe nurses' decision making processes over urinary catheter insertion and removal. Nursing has, and is developing as an autonomous profession with a shift towards independent decision making. As such, nurses now rely heavily on evidenced based practice (Banning, 2005). One such practice is the care, insertion and removal of IDC's.

Significantly IDC's are the chief cause of urinary tract infection (UTI) which is the most common nosocomial infection (Brosnahan, Jull & Tracy, 2004). A large number of patients have an IDC in situ at any one time; many of these develop nosocomial infections (5%) with almost 40% involving the urinary tract (Stevens, 2005, p. 25). In fact IDC's can lead to UTI which can progress to overwhelming bacteraemia, septic shock and death (Sienty & Dawson, 1999). It is, therefore important that nurses' decision making processes are described in relation to urinary catheter insertion and removal.

A plethora of research exists regarding IDC's, with a substantial portion relating to infection (Arbique, 2003; Parker, 1999). Much experimental research exists involving

types, duration and use of catheters with varying conclusions. Literature exists that explains the appropriate use of IDC's, of which many provide guidelines for appropriate insertion and removal of IDC's (Godfrey & Evans, 1999). However little, if any, current research exists on the decision making process that nurses use in actual practice.

Significantly, decision making by nurses is sometimes a controversial topic, which requires more research. Autonomy in practice and decision making for nurses has been and still is, an evolving process. The importance of describing decision making processes of nurses is fundamental if further development of the profession is to occur. Nurses are highly educated and much of that education is at the tertiary level where skills such as critical thinking, problem solving and reflective practice are learnt (Hoffman, Duffield & Donoghue, 2004). Despite this, the role of the nurse as the decision maker is sometimes clouded. Thus detailing of the professional practice of decision making is required and may be essential for future development of practice.

This research will help to identify if any gap exists between theory and practice. Identifying any gaps can lead to further education of nurses and promote the use of evidenced based practice. Improvements in these areas can make a significant improvement to nursing practice. In addition, nurses are becoming more autonomous in their practice and describing their professional decision making processes will help to advance the standing and professionalism of nursing. Segments of theory exist but no whole theory or framework exists and as the research shows homogeny amongst the participants, it may lead to a wider study and the subsequent development of a theory or framework.

Definitions

Bladder scanner - portable ultrasound device used on patient's abdomen over the bladder to measure urine volume (Sparks, Boyer, Garr & Lovett, 2004).

Bladder irrigation – continuous flushing of a double lumen catheter or the filling and emptying of the bladder with fluid to prevent the formation or retention of clots that would otherwise cause obstruction to catheter drainage (Anderson, 1998).

Bladder obstruction – the bladder is blocked by the presence of mineral deposits (calculi) or some congenital or anatomical reason (Ford-Martin, 1999)

Indwelling urinary catheter (IDC) - A catheter that is inserted into the bladder for the purpose of draining urine (Anderson, 1998). Held in position by an inflatable balloon (Wison, 1997 as cited by Parker 1999) usually inserted into the bladder via the urethral opening but is sometimes inserted suprapubically (Parker, 1999).

Intermittent catheter (IMC) – A catheter used to drain urine from the bladder either on a periodic basis, or a one of occurrence, which is not left in place in the bladder. Sometimes called an in/out catheter (Choe, 2004).

Long-term catheter – A catheter used to drain urine from the bladder, left in place for longer than three weeks or permanently in place (Kozier, Erb, Berman & Burke, 2000).

Permanent catheter – A catheter that is left in place on a permanent basis usually due to urinary incontinence or anuria (Choe, 2004).

Short-term Catheter – A catheter used to drain urine from the bladder, left in place in the bladder for short periods of time, usually less than three weeks (Kozier, Erb, Berman & Burke, 2000).

Suprapubic urinary catheter – an IDC that is inserted via the suprapubic route through the abdominal wall approximately 2cm above the pubic bone (Jannings & Kelly, 2001).

Trial of Void – A patient has had an indwelling urinary catheter removed and has been placed on a trial to assess urinary function. Usually involves measuring volumes of urine voided and subsequent residual urine volume within the bladder using a bladder scanner (M. King, personal communication, September 20, 2004).

Urinary tract infection – An infection in one or more of the structures of the urinary tract usually characterised by urinary frequency and burning and pain on micturition (Anderson, 1998).

Objectives

The research aims to identify and describe nurses' decision making processes for the insertion and removal of urinary catheters. The research aims to meet the following objectives:

1. To identify and describe nurses' lived experience of decision making processes over the insertion of intermittent and indwelling urinary catheters.
2. To identify and describe nurses' lived experience of decision making processes over the removal of indwelling urinary catheters.

Literature Review

The literature review aims to describe any similar studies of nurses' decision making processes with particular interest in IDC insertion and removal, to provide a base for this research, and identify any gaps in the literature. Many studies have been undertaken on IDC's, most of which centre their discussion on infections related to IDC use (Arbique, 2003; Parker, 1999) and many describe specific guidelines for the use of IDC's. For example, Godfrey and Evans (1999) describe the management of long term IDC's in order to reduce complications. Many studies exist that describe nurses' clinical decision making (Brockopp, Downey, Powers, Vanderveer, Warden, Ryan & Saleh, 2004; Bakalis & Watson, 2005). In addition, a myriad of literature exists on nurses' ethical decision making (Bunch, 2002). Much research and literature exists where nurses' decision making processes have been detailed on broad terms (Thompson, Mc Caughan, Sheldon & Raynor, 2004; Offredy, 2002; Bakalis & Watson, 2005). There is also literature on the barriers nurses face in decision making (Hoffman, Duffield & Donoghue, 2004). However, no study could be found that identifies nurses' decision making processes that relate directly to the research undertaken.

Parker (1999) emphasised the need for patient assessment and consideration of the risks before the decision is made to catheterise. Some of the literature described aspects of nursing practice undertaken; Sparks, Boyer, Garr & Lovett, (2004) produced a research synthesis discussing the benefits of the bladder scanner while Rew (1999) discussed the use of maintenance solutions for bladder washouts for the long term IDC. However none described the processes behind nurses' decisions in actual practice.

Logan (2003) discussed the UK's National Health Service Integrated Care Pathway Package for Indwelling Catheters (ICPP). The package was developed by a group of specialist nurses in response to lack of continuity amongst nurses in the care of IDC's, along with much variation in clinical practice amongst different regional groups. Importantly, the need for improvement of catheter care provided further motivation for the production of the ICPP. The ICPP included a management pathway algorithm, assessment form, trouble shooting guide and a CD rom which guided care of the IDC. Logan (2003) provided no assessment of the success of the package or to the extent to which the ICPP is being relied upon in actual practice. Potential benefits listed include: continuity of information provided to patients and carers; consistent documentation; reducing inconsistencies in actual practice and placing the focus on patients. The ICPP has the potential to be an excellent tool in practice. Although the ICPP does not describe actual practice, should it be further validated, it may provide a tool for comparison of the nurse participants' actual decision making processes.

Stewart (1999) states that it was essential for practitioners to be aware of the types of catheters available for short, medium or long term use and be able to discern their appropriate usage. In addition, the main indicators for insertion, such as in the post operative period, for acute illness, incontinence or urinary retention were described. Stewart (1999) appropriately proposes that evidenced based practice should be used for patients with an IDC in situ. Furthermore, Stewart (1999) believes using evidenced based practice can reduce the rate of complications. Again this type of literature is in abundance and describes some types of practices that should form the basis of decision making, but does not describe what's happening in actual practice regarding catheterisation.

Similarly, Parker (1999) stated the most common reasons for catheterisation. However she found that health care professionals had poor knowledge of urinary drainage systems. Parker (1999) was critical of nursing care of IDC's and stated that greater consideration needed to be paid to nursing procedures. Moreover, Parker (1999) emphasised that catheter care should have a scientific basis and that the education and training of nurses should also be based on scientific principles.

Sparks, Boyer, Garr and Lovett (2004) demonstrated that the use of bladder scanners as a diagnostic tool to aid the measurement of bladder urine volume, resulted in decreased catheterisation. In addition, the study showed a decrease in catheter irrigation and intermittent catheterisation when the bladder scanner was used as a basis for decisions regarding insertion of IDC's. Reduced levels of UTI's were expected as a result of reduced catheterisation, however, higher levels of UTI were suffered by the participants. The authors attributed the increase in UTI's to the study's small sample size. Despite this, the study found that bladder scanners were useful to accurately measure volumes of urine in the bladder. Furthermore, Sulzbach-Hoke and Schanne (1999) study found that the use of the bladder scanner was a helpful diagnostic tool with a decrease in the use of IDC's. Surprisingly, the authors also found an increase in the number of UTI's during the research period. The increase in UTI's was considered to be a statistical anomaly, as the use of IDC's was so low that only a few cases of UTI would increase the incidence and would therefore not be considered statistically significant. Additionally, the authors speculate that the increase in UTI occurrence may be due to differences in patient acuity levels at the time of data collection.

The author could only find one study that actually described real nursing practice. This was conducted by Smith and Adams (1998) whose comparative descriptive study

surveyed nursing practice on the insertion of IDC's on infants and children. Their concern lay mostly with catheter length in paediatric patients and whether hospital policies specified recommended lengths. Their study revealed that practice varied greatly from hospital to hospital, with only half having written policies. Many written procedures were inadequate and had no scientific base, and alarmingly some policies were so inept that patients were at risk of urethral damage. In addition, some nurses' knowledge of urinary anatomy was insufficient. Here the author's findings could not be generalised for adult patients, however it does demonstrate gaps in theory and practice.

Adams and Cooke (1998) conducted a project entitled "Implementing evidence-based practice for urinary catheterisation". Again the authors found a lack of continuity amongst nurses in the use of IDC's. The aim of their project was to encourage continuity and evidenced based practice amongst nurses in a cardiology unit and design guidelines for decision making regarding short-term IDC's. Overall the authors found that the project's benefits outweighed the financial cost, especially increasing the profile of evidenced based practice.

Several studies have concentrated on time of day of removal of urinary catheters in adult patients. Watt and Lillibridge (1998), found that some catheters were removed at 0600 hours (14%) but most were removed at midnight (61%) (p. 24). Many nurses based their decision on medical orders or ward routine. However, physiologic processes for midnight removal explained that increased bladder filling occurs overnight with subsequent morning micturition. Kelleher (2002) conducted a prospective clinical trial where catheters were removed at midnight in one group of participants and at 0600 for the other; findings indicated a number of advantages to midnight removal over the 0600

hour, with the core advantage being larger voids for the midnight removal along with earlier resumption of normal voiding patterns and reduction in patients' anxiety levels.

Hoffman, Duffield and Donoghue (2004) conducted a study which aimed to determine if nurses in Australia participated in clinical decision making as much as they desired. Using a quantitative study they examined the relationship between the nurses' occupational orientation, education level and area of specialty and decision making. The researchers found that nurses who were more involved in decision making were those that held a professional self worth, as opposed to those nurses who saw themselves in a paramedical role. A higher level of educational achievement did not lead to a greater amount of decision making, but did indicate a desire to participate more in decision making. They found that the extent of decision making varied from hospital to hospital and from unit to unit. Interestingly, nurses working within "medical areas" were found to participate in decision making to a greater degree than nurses working in "surgical areas". Encouragingly, this increase in decision making, led to greater self confidence and autonomy amongst nurses. Nurses who held more senior positions made more clinical decisions than nurses at lower levels and this was seen to be a barrier to decision making. However, most nurses did not make decisions to the extent that they wanted to, which warrants thought by nurses in management positions to consider the need to accommodate nurses' desires to participate more in the decision making process.

Aitken (2003) and Evans (2005) both described nurses use of decision making theories by nurses in critical care and emergency environments (respectively). Aitken (2003) detailed strategies such as Focus Gambling Strategy which was found to be dominant in critical care nurses. Focus Gambling involved the use of 'gambling' in decision making, where the participants who were often experts in their field, used data collected to make

decisions, often using previous experience as a base, and refining and adapting their actions based on results of their interventions (Aitken, 2003). The use of hypotheses was used by all nurse participants in the study as an aid in decision making. In addition, Aitken (2003) also included conservative focusing and simultaneous scanning as theories used for decision making. While Evans (2005), discussed the relevance for nurses in emergency departments of decisions making theory. While discussing a case study the author states that the hypothetico-deductive approach could be ideal for difficult or vague cases and was relevant to the case study discussed. Evans (2005) detailed models of pattern recognition or pattern matching, decision analysis theory, hypothetico-deductive reasoning and intuition as decision making models or theories. Furthermore, Evans (2005) emphasises the need for knowledge of distinct decision making theories and their limitation and that this knowledge may aid nurses to effectively convey their decisions. Evans (2005) felt that professionalism of emergency nurses would be aided by an understanding of how decision making theories are associated with clinical practice and was necessary for professionalism and integrity.

Bakalis and Watson (2005) conducted a quantitative study to identify and compare the decisions that nurses make in medical, surgical and critical care areas. In addition the researcher aimed to identify if different clinical settings made a difference to nurses' clinical decision making. Amongst the specialties studied they found that the many decisions related to direct patient care, providing basic nursing care such as observation was common to all specialties. Providing psychological support and teaching to the patient and family was also dominant. In some cases the nurses' clinical decisions were individualised to the area, with critical care nurses making more decisions, which were often done rapidly in complex situations. Overall, nurses did not make decisions in

extended roles such as decisions to discharge patients or on budgets. No difference in education level impacted on the type of decisions that nurses made in the clinical areas.

This review of the literature shows a lack of reported studies on nurses' actual practice in relation to decision making for IDC insertion and removal. Most supported the use of evidenced based practice as a basis for nursing care. However most felt that current practice was not wholly based on evidenced based practice. Most identified a gap in theory and practice. Decision making by nurses in the broad sense was well documented with much research and suggestion of the significance of decision making theories. Nurses decision making did differ in specialty areas and many indicated a desire for nurses to participate more in the decision making process. In summary, much literature exists on the proper and scientific reasons for IDC care but none described a whole picture of actual nursing care of IDC's. Interestingly no studies were found that focused on nurses' decision making processes. Therefore, the author argues that research is much needed in this area.

Methodology

Paradigm/Methodology

No conceptual or theoretical framework was indicated for this study. However, the overall tone of the research followed the Heideggerian phenomenological approach which allowed for the data to be collected freely and analysed accordingly. Further details follow.

Hermeneutic phenomenology was the chosen paradigm for the study. Hermeneutic phenomenology has its foundations in Heideggerian's interpretive philosophy of phenomenology. The goal of Heideggerian phenomenology was to improve one's knowledge of human experiences and practices (Cohen & Omery 1994, as cited in Draucker, 1999). As hermeneutics studies humans based on the philosophy of Heidegger, emphasis was placed on the human experience. Understanding and interpreting the lived human experience can lead to a better understanding of the participants' meanings and practices (Wilson & Hutchinson, 1991). Suitably hermeneutic phenomenology was chosen as it seeks to describe the real life experiences of the nurse participants and the meanings that they attached to their decision making. Furthermore, Donalek (2004) believes that phenomenology provides researchers with a productive means to gain insight necessary for both insightful and effective nursing practice.

Analysis

Data collection, analysis and coding began at the commencement of the study and remained an ongoing process throughout the study as described by Streubert and Carpenter (1995). Analysis was constant throughout the study as new data may have emerged and provided new questions or topics for subsequent interviews. Data was analysed using Colaizzi's (1978) six procedural steps in the typical manner, as follows:

1. All interviews were listened to and transcribed verbatim in order to gain a feel for them. The interviews were read many times over to enable the researcher to develop a sense and understanding for them.
2. Significant statements and phrases that pertain to the experience under investigation were extracted (termed codes). These statements included both phrases and sentences which seemed to fit the study's objectives.
3. Meanings were formulated from these significant statements (termed categories). This process aimed to derive meanings from the extracted significant statements, while remaining congruent with the original phrases and statements.
4. Significant statements were then organised into clusters of themes. This process repeated step three, but on a larger scale. Categories were then organised into eight themes which evolved during the analytic process. Again the derived themes must remain in keeping with the original extracted statements. This was achieved by examining the clusters along with the original

extracted statements to ensure that all themes related to the phrases and statements and that no significant statements were omitted.

5. The themes were used to provide extensive and detailed descriptions of the nurses' experience. This step includes a summary of the description which represents a clear statement of the fundamental structure.

6. The researcher returned the thematic analysis to the participants to comment on the findings. Each participant was asked to read the analysis and comment on whether it was harmonious with the meanings that the nurses had provided or if any omissions had been made. This task aimed to provide validity of the results. In addition, any new data that emerged was worked into the final analysis.

Ethics

Ethics approval was sought and received from Edith Cowan University (ECU), namely The University Human Ethics Faculty Sub-Committee before any recruitment or advertisement of the study was undertaken. The research was designed to meet the universities requirement for the protection of the rights and welfare of the nurse participants (ECU, 2004).

Additionally, ethics approval was also received from Sir Charles Gairdner Hospital, initially from the Nursing Research Scientific Sub-Committee. Once approval was granted from the aforementioned sub-committee, final approval was received from the SCGH Human Research Ethics Committee.

The ethics approval process took a total of three months which set back the researcher's proposed time frame and ultimately delayed production of the final discussion. The author recognises protection of participants as essential; however the researcher found the process frustrating.

Participants were provided with the relevant information in order for them to understand the process and to give informed consent. This included providing information concerning the research. The information informed them of timing and subject content. They were fully informed that their consent was provided freely and they could withdraw at any time (Polit, Beck & Hungler, 2001). Participants were provided with an information sheet (see Appendix one) and a consent form (see Appendix Two).

Confidentiality was essential to the research process. Participants were assured that no personally identifying information would be included in the research paper. Tapes will be coded with numbers and will be erased at the conclusion of the study. Along with confidentiality, privacy was a concern and interviews were conducted in private rooms.

The participants' welfare was of utmost concern and the psychological impact of the research was designed to be minimal. None of the nurses expressed concern over the interview contents. Participants' responses were considered in depth and participants were encouraged to express themselves freely, with the researcher reassuring all participants that no answers were right or wrong. The participants were informed that the study was descriptive in nature and therefore aimed to describe their practice rather than evaluate it. To achieve this, the researcher used bracketing and reassurance with the participants.

Procedures

After ethics approval was obtained, the researcher approached each individual ward's staff development nurse (SDN) and/or clinical nurse specialist (CNS) in order to gain informal approval to conduct the interviews. A flyer was placed in each ward's tea room advertising the study, asking any willing participants to contact the researcher (see Appendix Four). In addition, each CNS was given a letter which asked permission to conduct the study (see Appendix Five). Each request was received well by the individual wards.

Interview dates and times were then organised with the respective SDN's. As no volunteers came forward to participate in the study each SDN was asked to contact prospective registered nurses who met the inclusion criteria, who were rostered on the day set for the interviews.

Data collection

The interviews were between approximately 20-40 minutes duration, were tape recorded and later transcribed. Interviews were loosely structured and consisted of a small number of open-ended questions, however the researcher allowed participants to discuss issues freely and no strict adherence to questioning occurred. The researcher used non-verbal communications, such as reflective listening and nodding in addition to verbal prompts such as 'go on' to elicit more detailed responses from participants. Paraphrasing was used extensively in order to clarify important points and gain more detailed responses from the participating nurses.

An interview guide was compiled (see Appendix Three), however the researcher felt that some of the interview questions were at times, confusing to nurses. As a result, they were refined as the interviews progressed. The researcher felt that it was not until the last two interviews that the open-ended questions used gained the most valuable responses from the nurses.

Setting

Interviews were conducted on the respective nurses' wards at SCGH with varying degrees of success. Some interviews were conducted in quiet offices which allowed for greater concentration by both the researcher and participant. Two interviews in particular were conducted in a private office which was adjacent to a busy thoroughfare and subsequently the researcher had difficulty hearing and transcribing the interviews.

Greater success, (i.e. more detailed responses) were received from nurses who were prearranged to participate in the interviews by the SDN and/or researcher, the nurse participants were less stressed and more responsive. Despite prearranged interview times and reminding some of the SDN's that the researcher was due, some interviews were not prearranged and had to be organised at the time, which led to some frustration on the part of the participants as they had not organised their day's duties to include the interview. In the future the researcher would obtain names of participants and personally contact the nurses prior to interviews, which would lead to better time management by the participants.

Population and Sample

The population includes registered nurses who are employees of SCGH, who have two or more years recent acute care hospital experience in Western Australia. Sampling was purposive in nature, as the researcher aimed to include a diverse range of nurses from both medical and surgical specialties, who were presumed to have experience in autonomous decision making in respect to the insertion and removal of urinary catheters.

The sample included ten registered nurses, two each from the Neurology, Neurosurgical, Acute Medical, General Surgical/Urology and Gastro/Renal wards. The sample was small due to many factors. The large period of time required for data collection, transcription and analysis weighed heavily on the researcher's decision to include only 10 participants. A contributing factor was the time taken out of a busy nurses' day. The researcher was unable to remove nurses from their duties for long periods of time and this impacted on some nurses' descriptions. Unfortunately, time and financial constraints of the health system often result in the aforementioned difficulties, which can be argued as short sighted as research findings may actually save time and contribute to improvements in patient care.

Validity and Reliability

Initial testing of the interview questions was conducted in order to validate the proposed questions. Three practice interviews were conducted which led to some changes in the planned questions. The questions were altered to allow participants to discuss their decision making processes more freely. For example, one question was changed from; 'Would you describe the?', to 'Tell me about.....?', this change allowed the questions to be more open ended and allowed the participants to discuss their practice freely and also reflected the nature of the study with greater accuracy. In addition, the terminology chosen by the researcher was changed from short term and long term catheters to indwelling catheters, as this confused the participants. This change also allowed free discussion and again was a superior open ended question.

Validation of the thematic analysis was conducted according to Colaizzi's (1978) method. Following Colaizzi's (1978) suggested method, the thematic analysis was returned to the participants for evaluation and each nurse was asked to respond to two questions freely which included 'How does the thematic analysis compare with your experiences?' and 'What aspects of your experiences have been omitted' (see Appendix Six). The nurses' response was poor with only 20% of nurses replying despite encouragement from the researcher. In retrospect, the researcher could have made telephone contact with the participants in order to obtain feedback. However, one participant confirmed that the analysis was accurate and represented her experience, but did comment that the decision making did differ depending on the nurse's area of specialty. One nurse's comments strengthened the area of autonomous decisions making, and again the participant was surprised by some of the responses. In addition, a fellow

nurse researcher was asked to review the extraction of statements, coding and thematic analysis which resulted in improvements to the analysis.

On completion of thematic analysis and when a comprehensive description of the phenomena was written, a fellow nurse researcher was asked to review the results. This review led to some suggestions for improvements which the researcher considered and included in the final discussion where pertinent. For example, some of the categories were amalgamated to make them more succinct.

Results

Demographic Data

All nurses were asked to describe the number of years experience they had as a registered nurse. Years of experience varied greatly with one nurse having two years post registration experience, two nurses with three years experience, one with five years, one with six years, one nurse with nine years plus of experience, two nurses with 10 years experience, one nurse with 11 years and one nurse with 22 years experience.

All nurses had the required recent two years acute care experience with all nurses describing a diverse range of clinical experiences. This diversity included specialties from rehabilitation, to aged care, acute care, acute medical, paediatrics, acute surgical, neuroscience, endocrinology, intensive care, gastroenterology, renal, urology, orthopaedics and mental health.

Themes, categories and codes

Table 1 – Patient Assessment

Theme One: Patient Assessment	
Category	Codes
Bladder Scanning	<p>We will do bladder scanning to see how much they have left over (urine). We usually do 3 or 4 scans on them post void. They have got a high post void residual, on the bladder scanner. Bladder scan was still showing a lot of urine in there. We'd do a scan. We'd perform a bladder scan. We use the bladder scanner. Using a bladder scanner. Bladder scanning. To assess how many mLs of urine is still in the bladder. It's a tool that we use to help us to gather information before we go doing invasive sort of manoeuvres. Doing regular bladder scans. We use a bladder scanner on the ward.</p>
Fluid Balance	<p>Our 24 hour assessment involves doing a fluid balance chart. Doing a FBC (fluid balance chart), monitoring all their intake, fluid wise and diet wise and measuring all of their urine output. It's helpful to have an accurate urine measure.</p>
Trial of Void (TOV)	<p>They have removed it for a TOV. We'd put them on a TOV. Over a period for a TOV. See how they go and do what we call a TOV. Patient's recently had a TOV. Has failed their TOV. Usually if we are doing a TOV. TOV is when you have taken and IDC out and you want to see how their bladder responds.</p>
Individual Assessment/Care	<p>That's usually a 24 hour process of a bladder assessment. Your stroke patients are very individual. You have got to look at your patient and what's going on with your patient.</p>

	<p>It's very much an individual decision for each patient.</p> <p>It depends on the patient really.</p> <p>It depends on the patient.</p> <p>You make the decision per patient.</p> <p>A three day assessment...as to which path to take.</p> <p>It's a big assessment in making a decision as to what the results are.</p>
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Table 2 – Autonomous Decision Making

Theme Two: Autonomous Decision Making	
Category	Codes
Autonomous Decision Making	<p>Its usually nurse initiated, we will instigate insertion of IDC's and intermittent catheters without necessary consultation.</p> <p>Quite often it's us that instigate.</p> <p>Sometimes it's decided by nurses.</p> <p>I use my own sort of discretion.</p> <p>If I can't see any reason why it can't be removed then I'd take it out.</p> <p>I'd look at the reason they had it and if they didn't need it any longer, I'd remove it straight away.</p>

Table 3 - Patient Acuity

Theme three: Patient Acuity	
Category	Codes
Acute Status	<p>A patient that is not really conscious. Patient in renal failure/cardiac failure. We need to accurately measure every hour to know what their output is, then we titrate the hydration rate. How acute they are. It depends on the patient's conscious level. They are really sick for a couple of weeks or whatever. Raised intracranial pressure. Renal transplant. If they have acute renal failure. They had come down from ICU and they had a catheter in, had been acutely ill. If they have mannitol or dexamethasone running. Acute renal failure....they just want to monitor closely what the urine output is Helps to monitor fluid balance more accurately. You've got to have accurate measurements. They just want to monitor closely what the urine output is.</p>
Improving Condition	<p>Once they have come out of their post-ictal phase. They are with you and they are conscious, talking and they can tell you what's going on. If the patient is mobile you can do without an IDC. No longer on PCA's ...and they're mobilising now. Patient has become better after the post-op period and they're more mobile. If they were being discharged home.</p>
Patient Conditions	<p>Chronic degenerative disease processes.....Parkinson's, MS... When a patient is going to theatre. If they were being discharged home. Mechanical structure problems, urethral stricture, prostate..... To dilate the stricture.</p>

Table 4. - Consultation

Theme Four: Consultation	
Category	Codes
Consultation with Senior Nursing Staff	<p>Talking to our CNS who is also a continence advisor, so is the stroke CNS, so is the continence CNC.</p> <p>We liaise quite closely with the nursing continence advisors.</p> <p>The continence CNC...in consultation with her.</p> <p>We would order some from the continence advisor.</p> <p>If it's recommended by the continence nurse.</p> <p>Go and consult the CNC, continence.</p>
Referral and Adherence to Protocol	<p>I'd usually consult the guidelines.</p> <p>We have a urinary protocol which will help us decide whether it's long or short term.</p> <p>If we follow the assessment protocol.</p> <p>It is recommended by the incontinence people.</p> <p>It's supposed to be over 400mLs.</p> <p>It's usually day 6 post surgery.</p> <p>If we follow the assessment protocol.</p> <p>They can stay in for up to 6 weeks.</p> <p>It's a duration of 6 weeks.</p> <p>As a rule we usually change them every 6 weeks.</p> <p>It's supposed to be over 400mLs you put an IDC.</p> <p>They're supposed to be changed every 6 weeks.</p> <p>They have had over 600mLs in their bladder.</p> <p>Infection control policies.....it's my understanding that every 6 weeks they're changed.</p>

Medical Staff	<p>Usually comes from the doctor, I'd look to the doctors to make that decision. I would go and check with the Doctors. Doctors orders.</p> <p>I wouldn't remove an IDC unless instructed.</p> <p>Sometimes it's a doctors decision.</p> <p>It's usually the surgical part of the team making that decision.</p> <p>Doctors orders.</p> <p>The medical staff usually say..get that out.</p> <p>The medical team indicates you need to put one in.</p>
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Table 5 - Comfort

Theme Five: Comfort	
Category	Codes
Patient Comfort	<p>Really excoriated skin area...an extreme measure, not pleasant for the patient. Sometimes they really feel really uncomfortable.</p> <p>I've had patients that they're in so much discomfort they just want the catheter out. It was causing them a lot of irritation and they're frustrated with it.</p> <p>They are really confused and irritated and the catheter is just something that annoys themtake it out....if its causing them too much distress.</p> <p>We will also take it out if it's hurting them.</p> <p>What the other options are....</p> <p>From a purely comforting point of view is our terminal patients....</p> <p>Not pleasant for the patient.</p>
Nurse comfort	<p>It's more stressful in the night having them up and to the toilet all the time. Because they haven't got the time to continue with intermittent catheters.</p> <p>Some insisted that you need an IDC in because it was just inconvenient.</p>
Family Comfort	<p>Should never be seen as convenience for either ourselves or family.</p> <p>If it was in the best interests the patients, in terms of the patient going home and family looking after them.</p>

Table 6 – Reduce the Risk of Complications

Theme Six: Reduce the Risk of Complications	
Category	Codes
Risk of Infection	<p>Putting IMC's (intermittent catheters) in and out constantly increases the chance of infection.</p> <p>There's a chance you can introduce bacteria.</p> <p>We try to avoid that...risk of infection.</p> <p>Not IDC's because of the risk of infection.</p> <p>If the patient is developing an infection.</p> <p>You are going to reduce the risk of infection by removing the catheter.</p> <p>If they have got an infection.</p> <p>They quite often get infections.</p> <p>You're a dead sitter for infection, bugs love it.</p> <p>To reduce the chance of infection.</p> <p>They end up with a raging UTI.</p> <p>We will take them out if they have got an infection.</p> <p>Most patients with an IDC usually have some sort of infection.</p> <p>Putting IMC's in and out constantly increases the chance of infection.</p> <p>We try to avoid that...reasons being risk of infection.</p> <p>You are going to reduce the risk of infection by removing the catheter.</p> <p>Not IDC's because of the risk of infection.</p>
Risk of Bladder Stretch Injury	<p>So they don't get bladder stretch.</p> <p>We deem that a bladder stretch injury so rather than do the intermittent....we put the IDC just to give it a break.</p> <p>Has had a stretch injury.</p> <p>You've got a stretch injury.</p> <p>IDC's we will only use them if we think there has been a bladder stretch.</p> <p>You've got a stretch injury so you leave it in.</p> <p>The bladder wall gets stretched so those receptors get damaged and they don't work.</p> <p>So they don't get bladder stretch.</p> <p>We don't want them to have their bladder full too much.</p> <p>Because you got an overstretch injury.</p>

Urinary Retention	<p>Then they build up high residuals. The patient is not emptying their bladder If they are in complete urinary retention. If they have got more than 150mLs retained in their bladder we will also do an intermittent. They void some but they still might have 300 mLs say left in their bladder that's where your intermittent catheters come into play. Then they have a high residual. Got a residual that's high enough. They build up high residuals and we have to assist them. If there is a lot of retention.</p>
Catheter Malfunction	<p>Sometimes we need to change them if they are leaking. It appears as though they are not working. You can deflate the balloon and inflate the balloon or give them lignocaine gel. If there is something wrong with the catheter, if it's leaking. If it's leaking or the exterior has deteriorated. The catheters been constantly blocked.</p>
Early Removal of Catheters	<p>We will take it out as soon as possible. I'd remove it straight away. We encourage the removal of catheters as soon as possible. As soon as is feasible. They usually come out quite quickly. I'd remove an IDC as soon as a patient no longer required it. As soon as is feasible. Usually they come out within a couple of days anyway.</p>

Table 7 – Evidenced Based Practice

Theme seven: Evidenced Based practice	
Category	Codes
Restoration of Bladder Function	<p>So we can retrain our patients using intermittent catheters more.</p> <p>So that their body, their bladder, their brain can get used to that stimulation.</p> <p>You're reprogramming the nerve.</p> <p>messages that work that and you can get it back into gear.</p> <p>So the intermittent catheter we're helping their bladder get used to filling and emptying.</p> <p>We would IMC the person, give them a chance for the bladder to get back to normal function.</p> <p>To get the bladder back to its normal function.</p> <p>You might do intermittent catheters to try and retrain the bladder to empty properly.</p>
Urinary Retention	<p>The patient is not empty.</p> <p>Intermittent catheters.....we use them in complete urinary retention.</p> <p>They have got a high post void residual.</p> <p>Maybe if someone was having continual high residuals.</p> <p>High residuals on the bladder scan.</p>
Post-Operative	<p>Especially if they have had an anaesthetic.</p> <p>After surgery by the anaesthetic.</p> <p>Post-op patients that will be in bed for a day or so.</p> <p>People who have had an anaesthetic quite often can't wee after surgery.</p> <p>Most of our post-op patients would have it for three or four days at the most.</p>

Table 8 – Catheter Choice

Theme eight: Catheter choice	
Category	Codes
Choice of Catheter Available	<p>Most times decide to use an in and out catheter.</p> <p>We have long and short term catheters.</p> <p>Long term IDC's</p> <p>Intermittent catheters.</p> <p>Foleys long term.</p> <p>Intermittent catheters.</p> <p>We use the Foley's IDC's and just the IMC catheters.</p> <p>We do IMC's but mostly IDC's.</p> <p>Foley's and we have the in and out catheters.</p> <p>Foley's catheters and sometimes we do intermittent ones.</p> <p>Mostly the IDC but we sometimes do intermittent catheterisation.</p> <p>We do intermittent catheters or we do IDC's.</p> <p>We have long and short term catheters.</p>
Intermittent Catheterisation	<p>We use them more often than IDC's</p> <p>If it showed over 400mLs in their bladder ...we'd do an intermittent catheter.</p> <p>Say if its 400mLs or more....then an intermittent catheter.</p> <p>If they have got more than 450mLs...we will do an intermittent catheter.</p> <p>If it showed over 400mLs in their bladder and still unable to p-u (pass urine) we'd do an intermittent catheter.</p> <p>If there are still retaining up to 500 then you might do intermittent catheters.</p> <p>Say they have 300mLs say left in their bladder, that's where your intermittent catheters come into play.</p> <p>I'd put an IMC inhaving difficulty voiding andit's supposed to be over 400mLs.</p> <p>An IMC would be maybe 3 to 400mLs etc... plus.</p>
Indwelling Catheterisation	<p>Someone has a post void scan over 500mLs, their still unable to void put an IDC in.</p> <p>If it's over 500... so that's an IDC.</p> <p>Put an IDC back in around the 600ml mark.</p> <p>If it's over 500 we'd leave it in, so that's an IDC.</p>

	<p>If they have got a bladder of 800mls, 750, 900mls, then we will do an IDC.</p> <p>We try to avoid that on our ward.</p> <p>Failed a TOV.....we have to go back to the IDC.</p> <p>Having done an IMC and having to continue to do so and the patient continuing not to be able to void.</p> <p>They tend to go for the IDC rather than persist on doing the intermittent catheters.</p> <p>If someone might have a really large bladder.</p> <p>Over a period of time...they have had over 600mls in their bladder.</p> <p>TOV it may fail and we return to the IDC.</p>
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Discussion

This section highlights the decision making processes used by the nurses in relation to catheter care, namely, their decision making processes which led to the insertion and removal of urinary catheters. The discussion centres on the eight themes identified from the analysis of the categories and codes. The strongest theme identified was patient assessment, which related strongly to all other themes (see table 9, page 56). All eight themes identified will be discussed and specific examples of the nurses' responses, which were rich in content and showed much congruency, are given.

Theme One - Patient Assessment

Patient assessment was the dominant theme identified from the participants' responses. Patient assessment was seen as essential by Parker (1999) prior to any decision to catheterise a patient was made and appropriately all nurses expressed strong reliance on patient assessment to aid in their decision making. In fact, patient assessment was the basis for all decision making and all other themes identified are directly related to patient assessment (see table 9, page 56). Patient assessment did not only include the function of the bladder and related care, it was an overall assessment of patients' health status, including their acuity and comfort levels. For example all nurses chose to use the ultrasonic bladder scanner to assess their patients' urinary function. Assessments also led to aiding the nurses' choices in regards to which type of urinary catheter to use. The nurses' assessments gave them reason to consider evidence based practice to aid in their decision making. In addition, their assessments led nurses to make decisions in order to reduce the risk of complications. Lastly, most nurses were able to use the results of their assessments in order to make autonomous decisions.

All ten nurses expressed frequently using the ultrasonic bladder scanner to assess the volume of urine in the bladder, which then directed their decision making towards or away from catheterisation. The use of the bladder scanner was in keeping with Sparks, Boyer, Garr and Lovett's (2004) study which found the bladder scanner was useful when used as a decisions making tool. The nurse participants would analyse the results of the bladder scanner along with their individual patient's circumstances such as an analysis of fluid balance assessments, in order to aid in the process of decision making. This information and analysis often led to autonomous decision making.

All nurses expressed their reliance on a trial of void (TOV). This process is when the IDC has been removed and the nurse assesses their patients for return to normal urinary function. All nurses used the bladder scanner to assess their patient's urinary function. The readings from the bladder scan contributed toward a successful return to normal urinary patterns or aided the participants' decision making in respect to re-catheterisation. Most nurses (90%) were self directed with their decision making when conducting a TOV. Also, most expressed reliance on the results of their assessments surrounding a TOV to make autonomous decisions. The results of fluid balance assessments were also used to aid in the participants' decision making process. Often these results were analysed in conjunction with TOV outcomes to produce independent decision making. All nurses expressed confidence with their responses when discussing the aforementioned methods of assessment which, the author argues, demonstrates a sound knowledge and therefore an another example of evidenced based practice.

Despite using the aforementioned assessments, the nurses remained focused on adjusting their decision making to each individual patient's needs and individual circumstances, whereby providing holistic care. Specific examples included "it's very much an individual decision" and "you make the decisions per patient".

Theme Two - Autonomous Decision Making

Autonomous decision making was the feature of theme two. Autonomous decision making was not expressed as a feature by all nurses, approximately 60% of the nurses expressed their autonomy in decision making and in doing so felt professional pride in their own expertise and knowledge, whereby demonstrating evidenced based practice. Hoffman, Duffield and Donoghue's (2004) study on nurses' decision making desires also found that nurses who participated in decision making to a greater degree than their colleagues felt a greater degree of self confidence and professionalism. For example one nurse stated that her decision making was "without necessary consultation". The researcher was surprised that one nurse expressed a heavy reliance on medical staff to direct her decision making. However, the author did feel that all the nurses did demonstrate autonomy in decision making without overt expression of it. This was demonstrated by all nurses stating through their decision making, across all categories with comments such as "I would...." and "I would use my own, sort of, discretion" and "I'd remove an IDC, as soon as possible". The author interprets this as the nurses using their experience and expertise in their decisions making. When the analysis was returned to the nurse participants for validity testing, one nurse who had previously not expressed detailed or specific autonomous decision making made an unequivocal statement expressing that her decision making was

indeed self directed. Again, Hoffman, Duffield and Donoghue (2004) study revealed participation in decision making lead to greater autonomy amongst the nurse participants.

Theme Three - Patient Acuity

Theme three was patient acuity. Most nurses based many of their decisions to both insert and remove indwelling and intermittent catheters on patient acuity. Congruence between the nurses was found in patients who were seriously or acutely ill and had needed the insertion of an IDC. Additionally, where patients required accurate fluid balance assessment (examples given include patients in acute renal failure) weighed heavily on their decisions to insert an IDC.

Alternatively, procedures and medications may have been reasons to insert an IDC, examples given include medications such as sodium mannitol which result in a large urine output, or for radiological procedures. Conversely, patients whose condition was improving gave nurses reason to remove an IDC. Nurses gave examples of patients that had been previously immobile and who were now ambulating, patients who were post an acute condition such as epilepsy or were improving post surgery. Anatomical abnormalities such as urethral strictures also gave reason for nurses to insert an IDC. This demonstration of an ability to rationalise their decision making was considered important, according to Evans (2005) as it demonstrates accountability.

Theme Four - Consultation

Most of the participant nurses also expressed the need to consult either expert nursing, medical staff or hospital protocols to aid in their decision making. Many

nurses felt that, when decision making was difficult, unique or treatment regimes were unsuccessful then referral to a continence advisor, especially the hospitals' clinical nurse consultant (continence) was appropriate. Referral was made independently with most nurses expressing a team work approach. For example one nurse commented "we liaise quite closely with the continence advisor" and another expressed that the decision may be made "in consultation with her".

Again most of the nurses followed or consulted hospital protocols or ward based guidelines. However, these were an aid in their decision making but did not necessarily direct their decision making, but rather was a guide that was used in conjunction with the other themes identified for decision making processes. Some examples given included, removal of catheters at particular intervals post surgery and following recommendations for either intermittent or indwelling catheterisation for patients in urinary retention. This referral to written protocols relates to theme seven – Evidenced Based Practice (see table 9, page 56), where the hospital and specialty based policies are devised as a result of demonstrated best practice (M. King, personal communication, September 20, 2004).

One nurse participant expressed a reliance on medical staff to make decisions regarding the removal of an IDC. However, most approached medical staff to discuss the care, rather than for instruction. Some of the nurses expressed partial reliance on medical staff for decision making. Whilst some expressed joint decision making. Again a minority of participants stated at times they simply follow medical orders. This fact appears as a contradiction to theme two- Autonomous Decision Making. Accordingly, one participant made no definitive

expression of autonomous decision making. In fact, some nurses would follow medical instructions, as part of their practice. However, no expression that medical instructions were in contradiction or were a barrier to their decision making was made, but rather was in addition to their decisions.

Theme Five - Comfort

Theme five indicated that nurses were practicing holistically by including patient and family comfort levels in their decision making. A patient, who may be experiencing discomfort with an IDC, led most nurses to decide to remove an IDC. While one nurse stated that an IDC may be inserted for patients in terminal conditions for comfort of both the family and patient. Only a small number of the nurses stated that they decided to insert an IDC for ease of providing nursing care. One nurse stated her frustration of other nurses who would insert an IDC over using intermittent catheters to save time or for convenience. While another nurse felt that removing an IDC at night would be too difficult for night time care and patient comfort. The objection of the participant who expressed extreme frustration over the decision making which allowed nurse comfort to override best practice is an encouraging feature. Conversely, the small number of participants who expressed that their decision making may be affected by a need to save time or be difficult for care can be seen as a negative consequence of autonomous decision making, in view of the fact that a strong argument for increasing autonomy is that the result is improving the status of nurses and providing quality care. However, along with this argument, the researcher must consider the pressure placed on nursing staff with the financial and staffing constraints faced

by most nurses and therefore the author is not surprised by the comments, nevertheless is frustrated by them as this indicated substandard care.

Theme Six – Reduce the Risk of Complications

The risk of complications was another major concern of the nurses when considering the insertion or removal of IDC's and the use of intermittent urinary catheters. All nurses expressed concern for the risk of infection when deciding to intervene with intermittent or indwelling catheters or when considering removal of an IDC. Examples given included reducing the risk of infection by removal of an IDC. Many nurses commented that they would try to avoid using an IDC for the high risk of infection. While some nurses commented that constantly using intermittent catheters also increases the risk of infection. This category relates directly to theme seven - Evidenced Based Practice (see table 9, page 56.), as nurses were steadfast in the knowledge that the use of urinary catheters greatly increased a patient's risk of infection. The concern showed by the nurses over the risk of infection was accurate as IDC's are the most common cause of nosocomial infection (Brosnahan, Jull & Tracy, 2004). In addition, Stewart (1999) asserted that the use of evidenced based practice could reduce the risk of complications.

In addition, nurses who worried about the risk of a bladder stretch injury, chose to intervene to prevent or treat the problem. Intermittent catheters were chosen to prevent the risk of bladder stretch injury. However, if a stretch injury was thought to have occurred, then an IDC was chosen. Again, this decision making process shows a reliance on evidenced based practice as participants were convincing in their expression that their practice was sound and based on proven practice or

experience. Other complications that weighed heavily on the minds of nurses when making decisions for use of urinary catheters included catheter malfunction. Catheters which were leaking, not draining or had deteriorated led nurses to change or remove an IDC. Almost all nurses expressed the desire to remove IDC's as soon as was indicated in order to prevent complications. These forthright expressions of decision making indicate to the researcher a well honed level of practice that relies on evidenced based practice, analysis and experience to direct decision making which may lead to decreased levels of complications for patients.

Theme Seven - Evidenced Based Practice

Evidenced based practice was the accord of theme seven. The use of evidenced based practice is seen by many as essential in nursing practice, especially with the use of IDC's (Stewart, 1999; Adams & Cooke, 1998). Accordingly, nurses relied on proven practice to aid in their decision making. Categories which included the need to restore a patient's bladder function, to treat urinary retention and in the post operative period were dominant. Most nurses were categorical with their descriptions of the reasons for their decisions that resulted in insertion or removal of intermittent or indwelling catheter for the aforementioned reasons. Nurses that were from the Neurosurgical, Neurology or Medical wards were more definite when describing their decisions and practice which were the direct result of proven or evidenced based practice. For example, these participants directed their decision making in order to return patients to normal urinary function and to prevent injury.

Evidence based practice was demonstrated across many of the themes and an interrelationship exists (see table 9, page 56). For example most nurses expressed a need to consult expert staff which indicates to the researcher that the nurses believed these experts were up to date with the latest proven practice. The use of evidenced based practice also shows a strong relationship with autonomous decisions making and also with theme six (Risk of Complications), which was demonstrated by the nurses stating “You are going to reduce the risk of infection by removing the catheter”. Catheter choice (theme eight) again showed a strong relationship with this theme as all nurses expressed strong reliance on proven practice in order to make decisions regarding catheter choice.

Theme eight- Catheter Choice

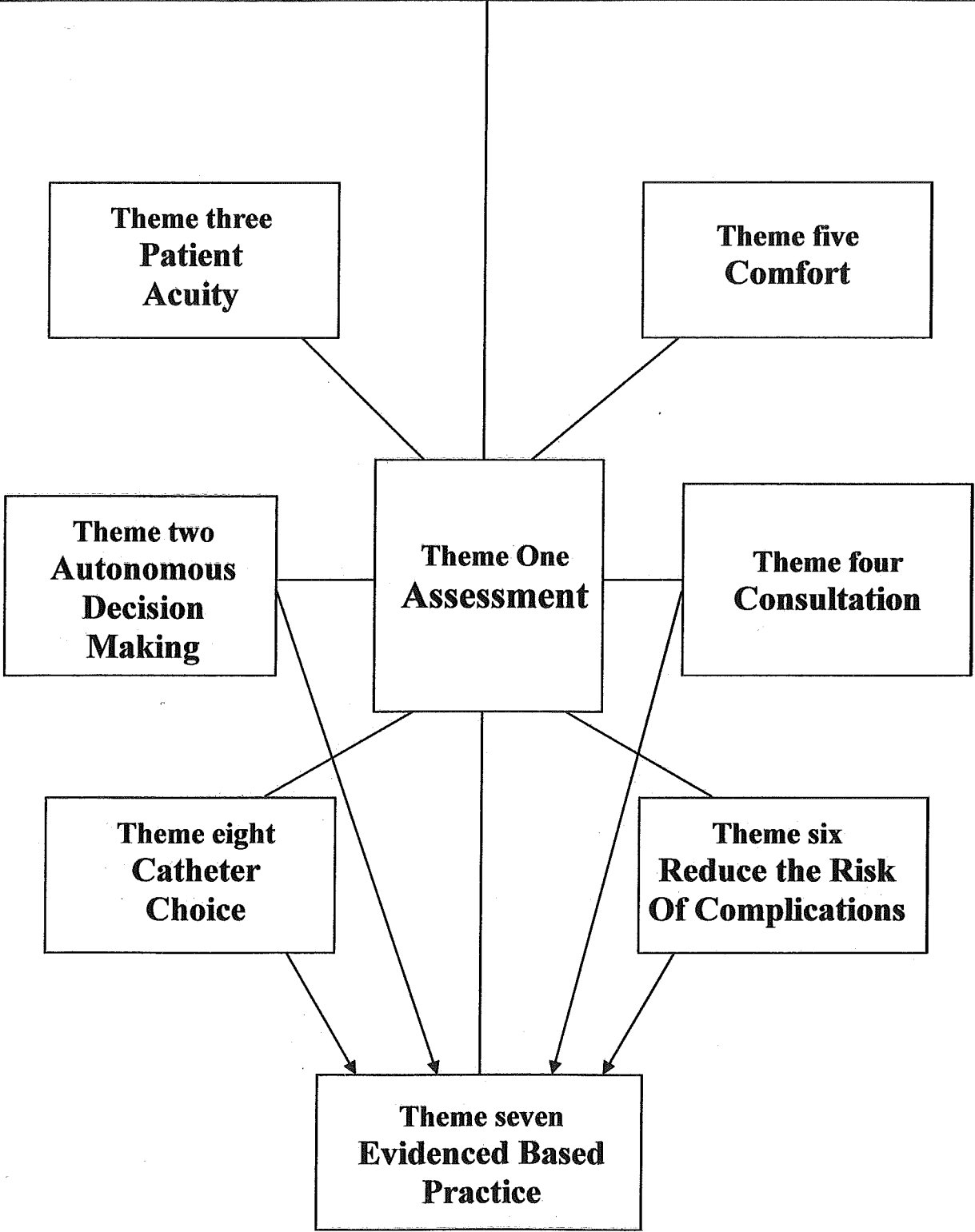
Lastly, theme eight described catheter choice. Nurses would consider catheter choice before embarking on a decision to insert a particular catheter. A majority of nurses stated a choice between short and long term IDC’s and of using an intermittent or in/out catheter. Although varying slightly most nurses would insert an intermittent catheter if a patient was having difficulty voiding or had a post void residual of 300 to 500mLs. Their decisions to use an IDC was indicated if a patient had a post void residual or a bladder scan of over 500 to 600 mLs. This theme ties heavily in with theme one, assessment, where nurses relied heavily on the ultrasonic bladder scanner to aid in their decision making. In addition this theme also relates to theme seven where evidenced based practice formed part of the reasons behind the nurses’ decision making (see table 9, page 56.). These findings were in keeping with Stewarts (1999) assertion that the use of evidenced based practice together with a knowledge of the types of catheters

available and an ability to discern their appropriate usage was essential.

Furthermore Stewart (1999) believed that this knowledge would reduce the rate of complications with IDC usage.

In summary nurses', decision making processes were based on patient assessment with a desire to provide holistic care. A relationship was demonstrated by the strongest theme patient assessment and all other themes. Additionally evidenced based practice also showed an interrelationship with many of the other themes. Accessing expert nursing staff and written protocols, evidenced based practice, considering patient acuity, preventing complications, treating patient conditions and providing patient comfort all impacted on the participants' decision making. Autonomous decision making was an encouraging feature, although not strong amongst all the participants. Some reliance on medical staff to make decisions was demonstrated which showed a lack of autonomy by a minority of participants. Again, only a minority of nurses expressed that some decision making was made in order to provide for easier nursing care. These statements diminish the nursing profession but should not detract from the professionalism displayed by all participants in a majority of their illustrations, but rather be noted in order to provide improvements to practice. Lastly, providing individual, professional and holistic care was a feature by all the nurses which demonstrates sound and meticulous practice.

Table 9.
Nurses’ Decision Making Processes
regarding IDC Insertion and Removal
Themes and Relationships



Limitations

The size of the study may have limited the responses. The researcher approached five different wards to gain a cross-section of nurses from different specialties to gain rich responses. Despite the obvious benefits of nurses from different specialties, this in itself limited the responses in terms of finding conformity amongst the participants. Using just two Nurses from the five specialties led in some cases limited responses, where it was presumed that other participants from the same ward may have provided more valuable responses. Perhaps including five nurses from a medical specialty and five nurses from a surgical specialty may have led to more conclusive analysis.

As previously mentioned, the setting for some of the interviews may have improved the responses from the participants. Arranging a quiet room for all the interviews or arranging the interviews for outside of working hours may have found the nurse participants to be more receptive and responsive. In addition, pre-arranging the interviews with participants by means of a phone call or reminder letter may have improved the willingness of some of the participants.

The nurses themselves seemed to feel as though they were being tested, despite reassurances from the researcher. In hindsight, the information letter could have contained more details which may have allayed the fears of the nurses. Alternatively, the researcher could have taken more time to explain the nature of the research at the beginning of the interviews. At times the participants would respond with “Is that right?” and appeared quite nervous, despite the relaxed nature of the interviews. In addition, two of the interviews were difficult to transcribe due to noise, which may have led to the omission of valuable statements. A quieter setting away from the day to day business of

the wards may have helped to alleviate this problem. Here, the ward CNS or SDN's may not have understood the value of the study or its proposed benefits. The researcher could have impressed upon the ward hierarchy the importance of the study with more vigor.

Although convenient to both the researcher and participants to conduct interviews during shift times, the researcher would choose a better venue or perhaps arrange for only single interviews to be conducted to allow for more time to conduct interviews. The researcher felt that some nurses were stressed due to their busy workloads and perhaps conducting interviews outside of working hours may have led to more detailed responses from some of the participants.

Although, the interview questions were briefly tested and found to produce detailed responses, the researcher felt that the most valuable responses were not received until the last few interviews. In one interview, the participant seemed to veer off the line of questioning and although gave detailed answers did not always provide valuable answers. The researcher is a novice researcher and further experience in this area will help with any future interviews.

Implications for Nursing

The reliance upon many resources (e.g. assessment, senior staff, bio-medical equipment, protocols, etc) for decision making by the nurse participants seems to indicate that nurses practice were well informed. Most participants confidently described their practice which they demonstrated as being evidenced based. They also described empathy with their patients, autonomous decision making by most of the nurses and holistic care of their patients. Although the study was small, the nurses came from a diverse range of specialties, therefore, it is expected that expanding the study would yield similar results, indicating sound and quality care of patients at SCGH and professionalism of the participants.

Some nurses displayed a reliance on medical staff for decision making, which did indicate a lack of confidence on the part of a small number of participants. This in itself can be a sound practice, where nurses feel that consultation is required, but may indicate a lack of confidence in decision making. This may indicate that further education on current best practice for some nurses is required. Improving the knowledge base of nurses may lead to greater confidence in their decision making. Nursing Managers must be aware of the lack of confidence displayed and provide avenues for nurses to be more autonomous in their practice, which can only lead to greater professionalism.

Information gained from the study may help to form the part of the education of nurses both at the undergraduate and postgraduate levels. For example SCGH's continence study days, acute care nursing seminars and various nursing practice guidelines and ward based protocols may be improved with the results of the study. Undergraduate courses contain a great deal of teaching regarding urination and results of the study could be used to assist academic staff in providing updated practice to nursing students. Postgraduate courses

could also be enhanced by providing examples of current practice, whereby enhancing the courses and improving autonomous decision making, along with a reliance on evidenced based practice.

These results may provide all practitioners with valuable information regarding the current practices of nurses, which could lead to better education and training, and ultimately better care of patients. Describing the professional practice of nurses, especially where autonomous decision making occurs, can lead to improving the status of the profession.

Recommendations for Future Research

As there was homogeneity found with many of the participants' responses, future research in this area may lead to a more detailed description of what's happening in actual practice. The study may be expanded to include more nurses from different specialties and nurses from other hospitals and health care institutions across Western Australia. This expansion would also include nurse experts in various fields who could be interviewed in order to describe current best practice. An analysis of current literature would also be obtained and included in any future research. This combination of describing the real practice of nurses in real situations and with the latest evidenced based practice, may lead to the formulation of a grounded theory and theoretical framework.

Conclusion

Nurses' decision making processes have not been detailed widely in any fields of nursing, including decision making on the insertion and removal of urinary catheters. This study used was underpinned by Heideggerian phenomenology where the descriptive nature of the study aimed to identify and describe the lived experience of nurses' decision making processes over urinary catheter insertion and removal, which led to a thorough description. Colaizzi's method of analysis was employed successfully to analyse and discuss the results.

Eight themes were identified with the strongest being patient assessment which showed a relationship with all other themes. Nurses also used expert nursing and medical staff and hospital protocols to aid in their decision making processes. Evidenced based practice was a strong feature with all nurses demonstrating congruity with their statements. Patient comfort and acuity also impacted on the nurses decisions. The prevention of complications and treatment of patient conditions also gave rise to decision making. Lastly, most of the nurses were autonomous in their decision making. A relationship existed between many of the themes especially with evidenced based practice. In conclusion, the nurse participants' decision making processes were aimed at providing holistic, evidenced based and professional care.

Limitations of the study included the studies small number and logistical difficulties such as interview locations which impacted on the quality of the responses. The researcher was a novice researcher and this has impacted on some aspects of the research. Nursing can only benefit from this type of research where describing the professional practice of nurses can lead to improving the status of the profession. Lack of autonomous decision

making amongst some of the nurses indicates a need for nursing management to continue education and training in this area and provide the means for nurses to be self confident in their decision making. Results of the study may be used to enhance the education of nurses and nursing students and improve care of patients. Future research in this area is indicated and if conducted on a wider scale may lead to the production of a theoretical framework.

References

- Adams, F., & Cooke, M. (1998). Implementing evidence-based practice for urinary catheterisation. *British Journal of Nursing*, 7(22), 1393-1400.
- Aitken, L.M. (2003). Critical care nurses' use of decision-making strategies. *Journal of Clinical Nursing*, (12), 476-483.
- Anderson, K.N. (1998). *Mosby's medical, nursing & allied health dictionary* (5th ed.). Sydney: Mosby.
- Arbique, J.C. (2003). Stop UTI's in their tracts. *Nursing*, 33(6), 32H1.
- Bakalis, N.A., & Watson, R. (2005). Nurses' decision-making in clinical practice. *Nursing Standard*, 19(23), 33-39.
- Banning, M. (2005). Conceptions of evidence, evidenced based medicine, evidenced-based practice and their use in nursing: independent nurse prescribers views. [Electronic version]. *Journal of Clinical Nursing*, 14(4), 411-417.
- Brockopp, D.Y., Downey, E., Powers, P., Vanderveer, S., Ryan, P., & Saleh, U. (2004). Nurses clinical decision making regarding the management of pain. [Electronic version]. *International Journal of Nursing Studies*, 41(6), 631-636.
- Brosnahan, J., Jull, A., & Tracy, C. (2004). Types of urethral catheters for management of short-term voiding problems in hospitalised adults [Electronic version]. *The Cochrane Library*, 3(2), 1-3.
- Bunch, E.H. (2002). High technology and nursing: Ethical dilemmas nurses and physicians face on high-technology units in Norway. *Nursing Inquiry*, (9)3, 187-195.
- Choe, J.M. (2004). *Incontinence, urinary: Nonsurgical therapies*. Retrieved November 20, 2005, from <http://www.eMedicine.com>

- Colaizzi, P.F. (1978). Psychological research as the phenomenologist views it. In R.S. Valle & M. King (Eds.), *Existential-phenomenological alternatives for psychology*, (pp. 48 -71). New York: Oxford University Press.
- Donalek, J.G. (2004). Phenomenology as a qualitative research method. *Urologic Nursing*, 24(6), 516-517.
- Draucker, C.B. (1999). The critique of Heideggerian hermeneutical nursing research. *Journal of Advanced Nursing*, 30(2), 360-373.
- Edith Cowan University. (2004). *What you need to know about ethics approval*. Retrieved October 12, 2004, from www.research.ethics@ecu.edu.au
- Evans, C. (2005). Clinical decision making theories: Patient assessment in A & E. *Emergency Nurse*, 13(5), 16-19.
- Ford-Martin, P.A. (1999). *Urinary catheterization*. Retrieved February 25, 2005 from http://www.findarticles.com/cf_dls/g2601/0014/2601001428/pl/article.jhtml
- Godfrey, H., & Evans, A. (1999). Management of long-term urethral catheters: Minimizing complications. *British Journal of Nursing*, 9(2), 74-81.
- Hoffmann, K., Duffield, C., & Donoghue, J. (2004). Barriers to clinical decision-making in nurses in Australia. *Australian Journal of Advanced Nursing*, 21(3), 8-13.
- Jannings, W., & Kelly, M. (2001). Difficulty in removing suprapubic urinary catheters in home based patients: A comparative descriptive study. *Australian Journal of Advanced Nursing*, 19(2), 20-25.
- Kelleher, M.M.B. (2002). Removal of urinary catheters: Midnight vs 0600 hours. *British Journal of Nursing*, 11(2), 84-91.

- Kozier, B., Erb, G., Berman, A.J., & Burke, K. (2000). *Fundamentals of nursing* (6th ed.). Prentice-Hall: New Jersey.
- Logan, K. (2003). Indwelling catheters: Developing an integrated care pathway package. *Nursing Times*, 99(44), 49-52.
- Offredy, M. (2002). Decision-making in primary care: Outcomes from a study using patient scenarios. *Journal of Advanced Nursing*, 40(5), 532-541.
- Parker, L.J. (1999). Urinary catheter management: Minimizing the risk of infection. *British Journal of Nursing*, 8(9), 563-574.
- Polit, D.F., Beck, C.T., & Hungler, B.P. (2001). *Essentials of nursing research: Methods, appraisal, and utilization* (5th ed.). Philadelphia: Lippincott.
- Rew, M. (1999). Use of catheter maintenance solutions for long-term catheters. *British Journal of Nursing*, 8(11), 708-714.
- Sienty, M.K., & Dawson, N. (1999). Preventing urosepsis from indwelling urinary catheters. *American Journal of Nursing*, 99(1), 24C-24H.
- Sparks, A., Boyer, D., Garr, L., & Lovett, M. (2004). The clinical benefits of the bladder scanner: A research synthesis [Electronic version]. *Journal of Nursing Quality Care*, 19(3), 188.
- Smith, A.B., & Adams, L.L. (1998). Insertion of indwelling urethral catheters in infants and children: A survey of current nursing practice [Electronic version]. *Pediatric Nursing*, 24(5), 229-235.
- Streubert, H.J., & Carpenter, D.R. (1995). *Qualitative research in nursing: Advancing the humanistic imperative* (2nd ed.). Philadelphia: Lippincott.
- Stevens, E. (2005). Bladder ultrasound: Avoiding unnecessary catheterizations. *MedSurg Nursing* 14(4), 249-254.

Stewart, E. (1999). Urinary catheters: Selection, maintenance and nursing care. *British Journal of Nursing*, 7(19), 1152-1161.

Sulzbach-Hoke, L.M., & Schanne, L.C. (1999). Using a portable ultrasound bladder scanner in the cardiac care unit. *Critical Care Nurse*, 19(6), 35-39.

Thompson, C., McCaughan, D., Sheldon, T., & Raynor, P. (2004). *Evidenced Based Nursing*, 7, 68-72.

Wilson, H.S., & Hutchinson, S.A. (1991). Triangulation of qualitative methods: Heideggerian hermeneutics and grounded theory. *Qualitative Health Research*, 1(2), (263-276).

Watt, E., & Lillibridge, J. (1998). Time of day urinary catheters are removed: A study of current practices. *Urologic Nursing*, 18(1), 23-25.

Appendices

Appendix One



DESCRIPTIVE STUDY OF THE LIVED EXPERIENCE OF NURSES' DECISION MAKING PROCESSES OVER INDWELLING URINARY CATHETER INSERTION AND REMOVAL INFORMATION SHEET

You are invited to participate in this project, which is being conducted as part of a Bachelor of Nursing (Honours). Details are given below:

Researcher: Helen Hull
 Supervisor: Mr Jon Mould
 School: Nursing and Public Health, Edith Cowan University
 Contact details j.mould@ecu.edu.au

The purpose of the project is to identify and describe nurses' decision making processes over indwelling urinary catheter insertion and removal.

If you choose to participate in this project you will be asked to:

- participate in an interview, and
- review the study's findings

Interviews will take approximately 30 minutes. Interviews will be taped and later transcribed. No identifying information will be kept. Tapes will be erased after approximately 12 months.

Results may be published within a professional arena/journal. Any personal information given for this study will be kept confidential. You will not be identified in any presentation of the results of this project.

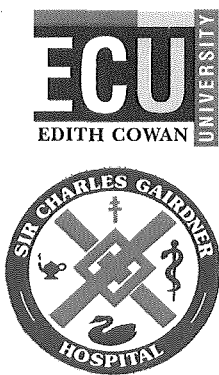
Participation in this project is voluntary. If you choose to participate, you are free to withdraw from further participation at any time without giving a reason and with no negative consequences. You are also free to ask for any information which identifies you to be withdrawn from the study.

If you have any questions or require any further information about the research project, please contact:

Mr Jon Mould (Supervisor)

Helen Hull (Researcher)
 9346 3333 or 0400 156 971

Appendix Two



DESCRIPTIVE STUDY OF NURSES’ DECISION MAKING PROCESSES OVER
INDWELLING URINARY CATHETER INSERTION AND REMOVAL
CONSENT FORM

I have been provided with a copy of the Information Letter, explaining the project. I have read and understood the information provided. I have been given the opportunity to ask questions and any questions have been answered to my satisfaction. If I have any additional questions I am free to contact the researcher at any time.

- I understand that participation in the research project will involve:
- participation in an interview
 - review the studies findings

Interviews will be of approximately 30 minutes in duration. Interviews will be recorded on tape. Tapes will be erased on completion of the research (approximately 11 months).

I understand that any personal or identifying information provided will be kept confidential, will only be used for the purposes of the research and I will not be identified in any presentation of the results of this project. I understand that I am free to withdraw from further participation at any time, without explanation or penalty.

I freely agree to participate in the project.

.....
Name

.....
Signature

.....
Date

Interview Questions

1. Could you describe how long you have worked as a registered nurse in Western Australia?
2. Could you about briefly describe your nursing experience?
3. Tell me about the type of IDC's used on your ward?
4. Tell me about your experience with intermittent catheters? Or...
5. Tell me about your reasons for your decisions to insert an intermittent (can be in/out) catheter?
6. Tell me about your reasons for your decisions to insert and IDC? Or.....
7. Tell me about what leads you to decide to insert and IDC?
8. Tell me about your reasons for your decisions to change a long-term IDC?
9. Tell me about your reasons for your decisions to remove an IDC?
10. Tell me about your experience with suprapubic catheters?

Interview Prompts

Go on...

Before you said.....what did you mean by that?

Could you explain that further?

Tell me more.....



‘Nurses Decision Making Processes over Indwelling Catheter Insertion and Removal’

Urinary catheterisation remains a common procedure conducted by nurses often as a result of autonomous decision making. The research seeks to identify and describe the lived experience of nurses’ decision making processes over the insertion and removal of indwelling urinary catheters.

Seeking

Registered nurses with 2 or more years recent experience in an acute care hospital.

DETAILS

Interviews of approximately 20-40 minutes at SCGH (during shift time).

Participation is voluntary.

Participants may withdraw from the process at any time.

Confidentiality is assured.

Participants will be provided with an information sheet and consent form.
Analysis of the data collected will be used to complete the requirements of the Bachelor of Nursing (Honours).

Should you wish to participate
please contact:

Helen Hull (R.N) (Researcher) (G42)

9448 1635

0400 156 971



Dear Clinical Nurse Specialist,

My name is Helen Hull and I currently completing the Bachelor of Nursing (Honours) at Edith Cowan University (ECU). In order to complete the requirement of the course I am undertaking the following research:

**‘Nurses Decision Making Processes over Indwelling
Catheter Insertion and Removal’**

I have received approval to conduct the study from the Nursing Research Scientific Sub-Committee and the Human Research Ethics Committee at SCGH. I have also received approval to conduct the study from the Human Research Ethics Committee at ECU. As part of this process, approval was granted from the relevant Nursing Co-Directors. I wish to conduct the study on wards G52, G61, G63, G66, and G74, as such, I seek your permission to conduct part of the study on your ward.

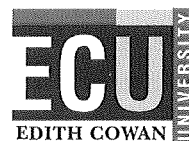
The research which is phenomenological in nature will involve two interviews with registered nurses. Participation is voluntary and it is envisaged that the interviews will take approximately 20-40 minutes. Confidentiality of the participants will be assured and the ethical requirements of the study will be maintained.

Should you have any questions I can be contacted on 9448 1635, 0400 156 971 or via G42. I will contact relevant Staff Development Nurses from each ward to arrange a suitable time to conduct the interviews.

Yours faithfully,

Helen Hull (R.N.)

Appendix Six



Dear Research Participant,

Thank you again for participating in the Honours research project: Nurses Decision Making Processes over Indwelling Catheter Insertion and Removal.

Analysis has been completed and as discussed it is requested that you review the analysis and make comment if desired.

Thematic analysis has been completed which means that specific codes (significant statements) were organised into categories and then into themes. Please read the analysis and make comment on the form provided.

Please remember that the information contained in the analysis remains private and confidential and all documents must be returned to the researcher in the envelope provided by Friday 10th of February 2006.

Some of the analysis may not pertain to the comments that you made but may reflect other participants' comments, so please limit your comments to the themes, categories and code which reflect your responses.

Please do not hesitate to contact me if you have any questions.

Thanking you in advance,

Helen Hull
Registered Nurse
G42
Ext 1642
0400 156 971

How does the thematic analysis compare with your experiences?

What aspects of your experiences have been omitted?

Please return to Helen Hull, G42 by Friday 10th February 2006, in the envelope provided.