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Editorial

A letter from The Front Line

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As we look forward to all of the opportunities for international exchange at the upcoming World Congress in Boston, we have devoted this editorial space to a letter from one of our many colleagues struggling to deal with a current and serious global problem.
Franco A. Carnevale, RN, PhD, Editor

May 3, 2003

Hi Franco,

I was very much looking forward to meeting all of you at the 4th World Congress in Boston. I was invited to speak in one of the sessions. Unfortunately, SARS (severe acute respiratory syndrome) has caught Singapore with fairly great impact and all our Health Care Workers are working extended hours to contain the spread. To date we have had around two hundred probable cases leaving twenty- two dead. Out of the death list, two were doctors, one male nurse and a health attendant. One nurse manager is still very critical and on the verge of death. This crisis had indeed shaken all of us up and never did we ever don in our mind that we could be hit by such a deadly virus.

Fortunately we have a very sound government and health care system that taken the lead in stamping down the spread by putting in strict measures in all areas. Nearly all movements were put to a standstill: schools were closed for two weeks, thermal scan for passengers leaving entry points even in churches, churchgoers were subjected to temperature checks. Staff at wet markets, food courts, hospitals, schools children, taxi drivers, bus drivers...etc... all had to be have their temperature taken. Once they presented with fever symptoms, they are isolated and subjected to medical check at the designated SARS clinics/hospital. Everyone that works in a hospital is subjected to temperature check 3 times a day. Once temperature is recorded at 37.5 degree Celsius, they are directed to the staff clinic. All Health Care Workers strictly don a N95 mask unless they are in an enclosed office away from patient areas. Audit teams from Ministry of Health and hospital carry out daily audits and anyone found breaching infection control measures will be warned or issued with a written warning - and it is strict. Anyone found breaching the home quarantine order could be fined and even jailed. I suppose we may find these rules rather autocratic, nevertheless for the safety of the people we really have to hit hard at those who do not take social responsibility at heart.

For the past two weeks, less cases are seen but we are not out of the wood yet. Likely we will need another 2 or 3 months time to settle. Since March 23rd, we have been on our toes, every health care worker is working real hard and when people start dying from the illness, we saw the feeling of loss on the faces of many. However, I must say that the team spirit of our health care workers of wanting to fight the SARS war remain high and as they continue to brave the battle. It looks like we are seeing light soon and on the verge of winning the SARS war. We have so many unsung heroes and heroines, these are non other than our health care workers from all over the world. My salute for all who are dealing with SARS at the frontline.

I conveyed to Martha (Curley) that I will not be able to avail myself to this exciting meeting (in Boston), however that doesn't mean that we will not meet again. I sincerely look forward to meet all our international colleagues another time. I hope that this coming meeting will be a fruitful and exciting one for everyone.

With Best Regards.

Pang Nguk Lan, Senior Nurse Manager, Deputy Director (Nursing), KK Women's and Children's Hospital/Singapore

Postscript: May 15, 2003

Just some hopeful news to share, two weeks had passed and we have not seen any new cases of SARS. Under WHO (World Health Organization) guidelines, we will be considered SARS free in about a week's time if we continue to be free from SARS cases. One sad news is that the Nurse Manager who succumbed to SARS for 2 months died on Mother's day after seeing her kids on CCTV (closed circuit television) two days before. We thought she could make it as she could smile and scribble a few words to express her love for her kids. Many of us were saddened by her death but her fighting spirit has spurred out strength for many of our nurses to battle on. Geared with such experiences, I believe we can handle such a situation better, indeed it is a very valuable lesson for all healthcare workers around the world as well. How prepared are we to face unseen and unknown biological enemies.
Pang

[note: it turned out that on the final day that Singapore was waiting for WHO recognition for having SARS under control – a new case was reported on that final day]

Evidence-Based Nursing in Pediatric Critical Care

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Abstract
The drive to change pediatric intensive care nursing into a more scientific based nursing originated mainly from academic nurses. However, today's bedside nurses in pediatric critical care are aware that scientific and practical evidence has become widely available and ready for use in practice. Evidence-based nursing is a guide that makes silent academic papers lively in daily practice. The steps described in evidence-based nursing is an approach to define issues or questions in nursing practice, find answers to them, and implement the best solutions into daily practice. The final aim of this approach is to improve nursing care and in the end improve patient outcomes.

Introduction
Since the early days of Florence Nightingale, nursing has been on the move towards a constantly changing profession. Her work in nursing care reform led to today's movement of *evidence-based nursing*, care based on the outcome of patient oriented scientific studies.
For decades, researchers have been writing about the importance of nursing research utilization in order to change nursing practice into a research-based practice. However, so far nursing has failed to achieve this goal (Brown, 1995). Today, nursing practice is still mostly based on traditional experiences instead of scientific outcomes.
A great number of nursing studies have been focused to identify barriers to evidence based practice and strategies to settle these problems. Meanwhile we know that these barriers are related to lack of time, literature access, education, and a nursing environment focused on patient care instead of intellectual knowledge. Some of these barriers are solved in many nursing settings and the path towards implementing research results into practice becomes visible. Therefore, evidence-based nursing gives a structured approach to achieve this goal.

Evidence-based nursing
Evidence-based nursing originates from a development in the medical profession where evidence-based medicine has been promoted since the early 1990s. Evidence-based medicine is defined as the integration of best research evidence with clinical expertise and patient values (Sacket, 2000). This approach was developed due to the need for valid information about diagnosis and treatment of patients, the inadequacy of traditional sources for this information, and lack of time to assimilate new evidence.
In conjunction, the nursing profession started to define evidence-based nursing and formulated the definition as: *using the best available evidence from research, along with patient preferences and clinical expertise, when making nursing decisions* (Cullum, 2000).
Evidence-based nursing offers a systematic approach to implement the best published evidence into practice via 5 steps:
Identify areas in nursing with uncertainty.
Formulate searchable questions.
Search for best literature – research studies.
Critically assess the studies.
Change practice if the studies suggest so.
This approach makes visible for nurses how to work toward the improvement of care.

Evidence-based nursing in pediatric critical care

Performing research studies is not easy and can be difficult. Many researchers want to publish their studies to spread their research findings among nursing colleagues. It is, however, the bed-side nurses who need to find and read the research results based on their critical questions. Evidence-based nursing gives the opportunity to work via a structural approach to practical nursing questions to improve care.

The 5 steps of evidence-based nursing are discussed via a practical example.

Step 1: Identify areas in nursing with uncertainty

Within pediatric critical care nursing there are many areas of care, which have not yet been answered, while others have been studied extensively. Identifying uncertainty in critical care starts with critical thinking during practice. Any intervention in pediatric critical care can be an area of uncertainty, from pain management, closed-endotracheal suctioning to stress reduction of parents during transfer from the pediatric intensive care unit (PICU) to the pediatric ward. It is the bedside nurse who must identify the needs of professional care and patient preference.

Step 2: Formulate searchable questions.

In formulating questions, three elements are important: situation, intervention, and outcome (Flemming, 1998). The **situation** is the patient or problem that is involved. Some examples in critical care are:
Children on High Frequency Ventilation (a group of patients with a particular condition).
Teenagers with congenital heart defects (a population with similar demographic condition).
Organization of transfer from PICU to the pediatric ward (managerial aspects of organization).

The **intervention** is the element of interest in nursing care. There are many interventions in pediatric critical care and it is important to identify them in order to specify the corresponding evidence.
Interventions can be:
Therapeutic (e.g., different endotracheal suctioning procedures, open or closed).
Preventive (e.g., different beds to prevent pressure sores).
Diagnostic (e.g., measurement of blood volume via Swan-Ganz catheter).
Managerial (e.g., implementation of a patient data management system).
When searching for interventions, it is important to incorporate a counter intervention. Counter interventions may be standard interventions or nothing at all when none are available.

The **outcome** in a formulated question is the result from a nursing and/or patient perspective. For example reduction of ventilated days may be the outcome of the introduction of protocol-based weaning procedures.

Combining the three elements in a question is vital for the next step, the search for evidence. An example is: *Does closed-endotracheal suctioning in mechanically ventilated children lead to reduced ventilation days?*

To summarize this question the elements are shown in table 1:

Situation	Intervention	Counter intervention	Outcome
Children on mechanical ventilation	Closed-endotracheal suction procedure	Open endotracheal suction procedure	Reduction of ventilation days

Step 3: Search for best literature – studies.

The search for the best evidence-based literature can be time consuming. However, today's information technology has become widely accessible which reduces the time required for the search. The types of information sources available to nurses are textbooks, journals, online databases, and the Internet (McKibbon & Marks, 1998).

Textbooks are limited sources for updated information. Most textbooks are at least two years old when published since preparation of a textbook is time consuming. There are over 400 nursing journals to search for evidence or information, which makes it difficult to choose the right journal. However, when selecting a journal appropriate for the question to be answered some issues might be considered. Is the journal peer reviewed? Is the journal local, national, or

international in scope? Does the journal reflect (research) articles of your specific area of nursing? Although only a few journals are specifically available for pediatric critical care nursing, many pediatric critical care articles can be found in adult critical care journals or even in non-critical care related journals.

Bibliographic databases are easily accessible and provide nurses citations of studies and reviews published in the health care literature. A few important databases for nurses are:

CINAHL (Cumulated Index to Nursing and Allied Health Literature), a database for nurses including over 250.000 articles, some articles dating back to 1940. (www.cinahl.com)

MEDLINE is the largest biomedical research literature database. This database is available at no cost. (www.ncbi.nlm.nih.gov/PubMed)

The Cochrane Library publishes systematic reviews and citations of randomised controlled trails. (www.cochrane.co.uk)

The World Wide Web on the Internet is another possible source of information. However, the lack of quality control of information can make this source unreliable, therefore this is not recommended for an in-depth search for scientific evidence.

Step 4: Critically assess the studies.

In the process of identifying the best research to fit the question, specific research designs will appear. Questions about interventions, treatments, prevention, prognosis, or economics are best answered by quantitative research designs. An example of a question in pediatric critical care is: Does prone positioning in children with ARDS reduce ventilation days?

When questions are related to meaning or experiences of illness, a qualitative design is more appropriate. Examples in pediatric critical care are: What are the experiences of parents when their child is admitted to the ICU? How do parents cope with the grieving process after their child died in the PICU?

Criteria for selection and review of scientific articles has been described, but will not be discussed in this article. Furthermore in the process of assessing the studies, it is important to define the level of evidence. These levels are defined by Goldhill (2000) and used for the assessment of endotracheal suction in infants with an artificial airway (Pollard, 2001).

Levels of Evidence:

I   The 'gold standard' is the prospective randomised controlled trial.

II   One (or more) well designed non-randomised trial(s), cohort or case study, or dramatic results from uncontrolled studies.

III   Limited scientific evidence in the absence of directly applicable studies of good quality, and may include expert opinion.

Step 5: Change practice if the studies suggest so.

After the assessment of the literature and having the level of evidence of the study defined, it is time to implement the results of the search into practice. Since various implementation strategies have been described, it is wise to find the strategy which successfully works within the PICU organization. Pediatric critical care settings may vary by size, culture, demographics, organization, and management. These factors are important to choose the right way of implementing a change concept for successful improvement of patient care.

The approach to change practice

Evidence-based nursing is not a structural approach to change nursing practice from tradition-based to evidence-based. However, having defined the systematic approach, it is the nursing organization in the hospital settings that needs to provide conditions for nurses to work on the improvement of nursing care. Several issues need to be addressed before patient care is improved, via the best available evidence, towards standards related to patient preferences and nursing expertise.

The lack of studies in pediatric intensive care nursing is a major concern. Within pediatric critical care nursing, the scientific output of nursing research started just a few decades ago. One reason is the relative young existence of the specialty of pediatric critical care. Critical care medicine started its rapid development since the 1950s. Thereafter critical care nursing became a speciality within nursing, including the further development of pediatric intensive/critical care

nursing. Today, the number of pediatric critical care studies is increasing rapidly. However, many issues remain unstudied. In the process of evidence-based nursing, using the best available evidence, these unstudied issues can possibly be answered by practice-based knowledge or review articles.

Before pediatric intensive care nurses are ready for changing practice towards evidence-based nursing, many barriers need to be overcome. Changes in education toward more academic qualifications are necessary in order to provide research skills to nurses. These skills need to be focussed on research conduct and utilization, research evaluation, and implementation (Bucknall et al., 2001). Organizational support and management commitment is also important for the development of evidence-based nursing. Time, resources, and a positive attitude toward professional initiatives, can help pediatric intensive care nurses in improving patient outcomes.

Conclusion

The nursing profession has been conducting research since decades and since then also implementing research results into practice. Therefore, evidence-based nursing is not new. Through evidence-based nursing, research becomes more valuable for nursing. Each research design has its purpose, strength, and limitation. However, more randomized controlled trials in nursing are required to achieve the highest level of evidence. To ensure that the question is answered by the right research design is a key issue.

Nurses need to know that evidence-based nursing is an approach to improve clinical practice and that it can have a positive effect for patients and nurses.

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Development of a Sedation Scale for the mechanically ventilated muscle relaxed pediatric critical care patient

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Abstract

This study investigated the usefulness of a Modified Comfort Scale to evaluate adequacy of sedation for muscle relaxed children. The Comfort Scale was modified to address the muscle relaxed child. Parameters of the Comfort Scale that could not be valid in a paralyzed child were replaced with objective measurements of skin perfusion, pupillary size and response and cardiovascular response to auditory and tactile stimulation. Parameters of agitation, alertness, physical movement, respiratory response and muscle movement were removed. The scale was altered from an eight-parameter scale to a six-parameter scale. The Modified Comfort Scale was evaluated with a technique similar to the one described in the original Comfort Scale study. The child was evaluated simultaneously by four raters, two using the Modified Comfort Scale and two using a Likert type Adequacy of Sedation Scale (previously known as Physician Adequacy of Sedation Scale). A comparison was made between the two scales.

Background

There are multiple scales that have been developed to assess sedation and analgesia in the critical care patient. The ideal tool would be descriptive but simple, so that the patient could be assessed quickly by an experienced professional. Such a tool, The Modified Comfort Scale, has been developed at Saint Francis Hospital Pediatric Intensive Care Unit.

The following includes a brief overview of existing sedation scales in the literature. The Ramsay scale has been used as an assessment tool for sedation (Ramsay, Savage, Simpson, & Goodwin, 1974). The Comfort scale has been used with critically ill pediatric patients and found to be valid and reliable (Marx et al, 1994).

There is also a Motor Activity Assessment Scale that was found to be a valid measure of sedation for mechanically ventilated surgical patients (Devlin et. al, 1999). The University of Michigan Sedation Scale was found to have good overall reliability, however the Neurobehavioral Assessment Scale and the Vancouver Sedation Recovery Scale were more discriminating in their depth of sedation (Malviya et al, 2002). Hogg and associates (2001) found the Motor Activity Assessment Scale more reliable than the Luer scale. Using registered nurses, a pharmacist and physicians as data collectors, they simultaneously and independently followed a standardized procedure to rate each patient using the two scales.

The Bispectral Index (BIS) has been studied as an objective tool that can monitor critically ill patients with decreased levels of consciousness. Nasraway and colleagues found no correlation between The Sedation-Agitation-Scale and the BIS scores (2002). However, Simmons and Riker (1999) found a significant correlation between the two scales. The BIS may be a more reliable method of assessing sedation and analgesia because it measures the state of the brain and does not require stimulation for assessment. (Shapiro, 1999). There are other methods of assessing sedation such as elcetroencephologram (EEG) which is more labor intensive and equipment dependent. (Hamill-Ruth & Marohn, 1999). The EEG allows for interpretation of level of consciousness based on waveforms. There is a general problem with electrophysiologic monitoring in the ICU because of the noisy environment and the difficulty of obtaining a good quality waveform (Amarove & White, 1995). Because of the variety of tools and methods currently used to evaluate analgesia and sedation, there is a lack of congruence among intensive care units. In general, the clinical evaluation is the most

widely used method of determining sedation with ICU patients. (Detriche et al, 1999). However, none of the studies cited in this paper address the sedation/analgesia needs of patients who are on continuous muscle blockade.

Assessing analgesia and sedation for a patient on continuous muscle blockade requires the use of assessment parameters that do not involve movement. Changes in heart rate, blood pressure, intracranial pressure and oxygen saturation may indicate the presence of pain especially in patients who are unable to express their discomfort because of age, decreased level of consciousness, or intubation. Other physical manifestations in the sedated, paralyzed and ventilated patient may include diaphoresis, tearing, and pupilary dilation. These conditions represent autonomic responses to pain. (Hamill-Ruth & Marohn, 1999). Skin response and skin plethysmography may represent a sympathetic response to painful stimuli. Payen and colleagues (2001) studied physiologic parameters such as stocking application, central venous catheter dressing change, endotracheal suction and mobilization. There were changes noted in the physiologic variables such as heart rate, blood pressure, respiratory rate, perspiration and pupil size in a response to these actions. Assessments that were completed at rest had a higher percentage of non-response to the blood pressure as opposed to painful procedures, which resulted in significant changes in the blood pressure.

The Richmond Agitation-Sedation Scale (RASS) (Sessler et al, 2002) was found to correlate highly with a visual analogue scale, the Ramsay scale, The Sedation-Agitation Scale, and the Glasgow Coma Scale. The approach was similar to Ramsay with regard to testing the patient's response to voice or physical stimulation. The Sedation-Agitation-Scale and the Motor Activity Assessment Scale require a combination of more than one response and use multiple compound criteria. This study demonstrated the efficacy of visual and sensory stimulation in a sedation/analgesia assessment tool.

Methods

At Saint Francis Hospital Pediatric Intensive Care Unit (PICU), the Modified Comfort Scale was developed in an attempt to measure the comfort level and sedation adequacy of mechanically ventilated, sedated and muscle relaxed patients (see Appendix A). This project was initiated as a quality improvement project to develop a sedation tool for muscle relaxed, critically ill pediatric patients The Comfort Scale was used as a guide. It was modified it to exclude parameters that may not be applicable for the muscle relaxed patient. The indicators evaluated include heart rate, blood pressure changes, skin perfusion, pupil size and response to auditory and tactile stimulation on a 0-30 point range with a target score of 13-20. The setting for the study was a 17-bed PICU in Tulsa, Oklahoma, in the United States. Twenty mechanically ventilated, muscle relaxed, critically ill pediatric patients were included in the study. The Adequacy of Sedation Scale and the Modified Comfort Scale were completed simultaneously on each patient during multi-disciplinary rounds.

The Adequacy of Sedation Scale, a Likert type scale previously known as the Physician Adequacy of Sedation Scale, rates sedation on a scale of 1-5. This scale was utilized in a study by Marx and associates (1994). The name was changed to allow for nurses to evaluate as well as physicians. This scale was utilized simultaneously with the Modified Comfort Scale to examine the correlation between the two scales.

Each child was evaluated simultaneously by four raters, two using the Modified Comfort Scale and two using a Likert type Adequacy of Sedation Scale (previously known as Physician Adequacy of Sedation Scale).

Findings

The scales were not correlated significantly. The mean for the Modified Comfort Scale was 13.13 with a standard deviation of 4.31, the mean score for the Adequacy of Sedation Score was 3.19 with a standard deviation of 0.69. On the descriptive side, the distributions of the scales were similar. Both scales show a relatively similar pattern of distribution but the Modified Scale is more normally distributed. (See Appendix B).

Conclusion

There are many scales that measure sedation and analgesia, but they do not appear useful for the muscle relaxed patient. Muscle relaxed patients have been excluded from previous studies of pain rating instruments. Valid and reliable sedation scales are important for consistent assessment of pain and comfort. Although this was a small sample size, the intent of the project was to determine the usefulness of the tool. The limitations of this project include the small sample size, the variability of ages and neurologic responses to pain, and the paucity of firm data to support the physiologic responses to pain in the muscle relaxed patient. The evaluation of pain in the PICU patient population is challenging. No single tool has emerged that can adequately address pain management. Continued evaluation of sedation/analgesia is recommended to develop simple, accurate, and reliable tools.

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PICU MODIFIED COMFORT SCALE FOR THE MUSCLE RELAXED PATIENT	
BLOOD PRESSURE (MAP) BASELINE _____	
Blood Pressure below baseline	1
Blood Pressure consistently at baseline	2
Infrequent (1-3) elevations of 15% or more	3
Frequent (more than 3) elevations of 15% or more	4
Sustained elevations = of > 15%	5
HEART RATE BASELINE _____	
Heart Rate below baseline	1
Heart Rate consistently at baseline	2
Infrequent (1-3) elevations of 15% or more	3
Frequent (more than 3) elevations of 15% or more	4
Sustained elevations = or > 15%	5
SKIN PERFUSION_____	
Hands and feet warm, strong SpO2 pleth visible	1
Hands and feet cool, legs and arms warm, SpO2 pleth visible	2
Extremities cool to elbows or knees, SpO2 pleth visible	3
Extremities cool to trunk, SpO2 pleth visible	4
Extremities cool to trunk, SpO2 pleth absent or inconsistent, facial flushing	5
PUPIL SIZE/REACTIVITY	
Pupils constricted < 2mm	1
Pupils 2-3mm sluggishly reactive	2
Pupils 2-3 mm briskly reactive	3
Pupils 4-5 mm briskly reactive	4
Pupils >6mm briskly reactive	5
RESPONSE TO AUDITORY STIMULATION	
Unchanged heart rate and blood pressure	1
Increase in heart rate and blood pressure < 15%, tears absent	2
Increase in heart rate and blood pressure< 15%, tears present	3
Increase in heart rate and blood pressure > 15%, tears absent	4
Increase in heart rate and blood pressure > 15%, tears present	5
RESPONSE TO TACTILE STIMULATION (suctioning)	
Unchanged heart rate and blood pressure	1
Increase in heart rate and blood pressure < 15%, tears absent	2
Increase in heart rate and blood pressure< 15%, tears present	3
Increase in heart rate and blood pressure > 15%, tears absent	4
Increase in heart rate and blood pressure > 15%, tears present	5
TOTAL SCORE	

K. Clarke & I. Razmus 2000

Directions: While observing the patient during a 5 minute time period, observe for the above behaviors and score the patient in each category. Add up the scores to determine the total score.

Appendix B

Correlations

		NEWSCALE	OLDSCALE
NEWSCALE	Pearson Correlation	1.000	.026
	Sig. (2-tailed)	.	.875
	N	39	39
OLDSCALE	Pearson Correlation	.026	1.000
	Sig. (2-tailed)	.875	.
	N	39	39

OLDSCALE

Std. Dev = .70
Mean = 3.2
N = 39.00

NEWSCALE

Std. Dev = 4.37
Mean = 13.1
N = 39.00

OLDSCALE
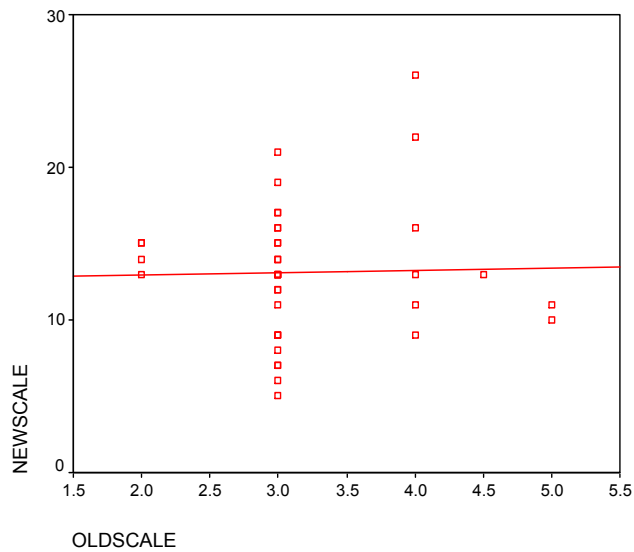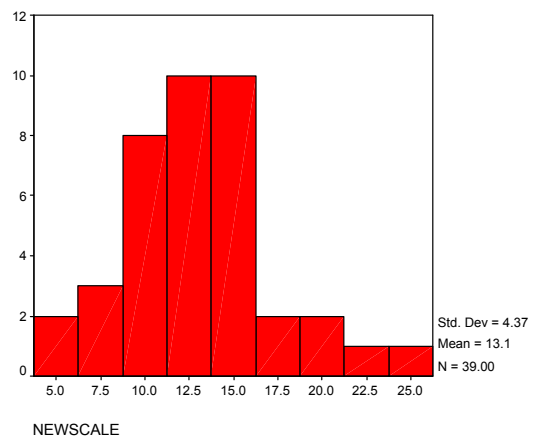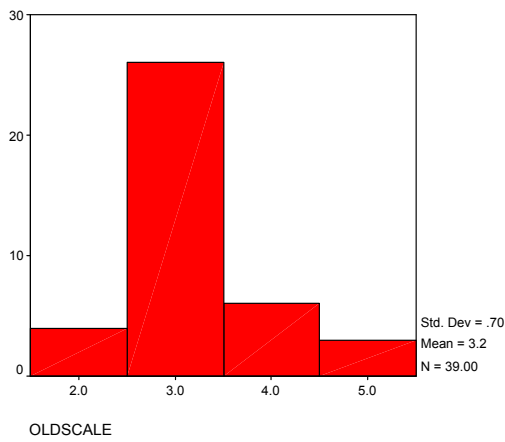
A Virtual PICU Orientation Program: A Solution to Scarce Education Resources that Exceeds Expectations!

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Abstract

Until the Spring of 2000, a competency-based orientation program for new nursing staff to the Pediatric Intensive Care Unit (PICU) at the Izaak Walton Killam Health Centre (IWK) in Halifax, Nova Scotia, Canada, had been coordinated for 20 years by a Nurse Educator. The eight week orientation program consisted of paper-based self-directed learning modules, combined with classroom lectures delivered by the Educator and a preceptored clinical experience with an experienced PICU nurse. The sudden departure of the Educator, as a result of hospital downsizing, left behind a solid framework for new learners, but posed an immediate gap in the administration, coordination and delivery of this Instructor-centred orientation program. The Preceptor Group of staff nurses valiantly took over the lectures to deliver course content, but it was quickly apparent that a long term sustainable solution needed to be found. That solution came in the form of the utilization of web-based instructional technology to transform a traditional paper-based, classroom delivered model into a dynamic and interactive orientation program delivered asynchronously via the internet using the Web Course Tools (WebCT) platform. This learner-centered model has not only been an evolutionary change in the delivery of the PICU orientation program, but it has been revolutionary in its outcome of the delivery of a high quality, high tech orientation program which far exceeds the expectations of learners, while ensuring the long-term sustainability of the PICU orientation program.

Introduction

Until the Spring of 2000, a competency-based orientation program for new nursing staff to the Pediatric Intensive Care Unit (PICU) at the Izaak Walton Killam Health Centre (IWK) in Halifax, Nova Scotia, Canada, had been coordinated by a Nursing Educator who had developed an orientation program which was based on the Benner (1984) "From Novice to Expert" model. The IWK is a tertiary care pediatric centre serving three provinces on the east coast of Canada. The orientation program consisted of a combination of paper-based self-directed learning modules, didactic teaching by the Educator in a traditional classroom setting and a preceptored clinical experience. The length of the orientation was adapted to the new staff member after completion of a learning needs assessment. The orientation period was divided into a Level One experience in the first six to eight weeks after hiring and an additional two to three week Level Two experience, approximately six to nine months after hiring. The Educator had to plan for four to five separate orientation periods each year, while the Nursing Manager had to coordinate hiring to coincide with the timing of the start of each orientation program.

In the Spring of 2000, as a result of hospital downsizing, the Educator who had coordinated this program for the past 20 years left the institution, leaving behind a solid framework for orientation, but an immediate gap in administration, coordination and delivery of the orientation program since all these functions had been centred in her. New Educators, called Professional Development Coordinators (PDC's),with a much broader institutional mandate did not have the content knowledge of the PICU, creating an immediate dependency on the Preceptor Group of staff nurses to fill this gap. Under the tremendous leadership and enthusiasm

of this group of staff nurses the didactic portion of the orientation program continued to be delivered with new staff receiving the classroom teaching by the staff nurses. This increased time commitment and burden on the preceptors to prepare and deliver the classroom teaching, in addition to their regular responsibilities of assisting new learners in application of the knowledge and skills at the bedside, was not only an onerous and stressful responsibility, but was also costly in delivery. Costly because the preceptors had to be relieved from bedside duties and replaced to deliver the lectures. Resources were being stretched to meet both orientation hours required by new staff and the preceptors, as well as the ability to staff the PICU adequately without the need for overtime by the remaining staff to replace the preceptors. In addition, the paper-based bound learning modules were in desperate need of revision and updating. It was apparent that these static methods of delivery needed to change to maintain a long-term viable and sustainable orientation program in PICU.

With these realities and learning needs in mind, an alternative solution was sought and found in the use of an instructional technology which would enable the orientation program to be transformed into an asynchronous web-based learning model. This solution would meet the information and learning needs of new staff, without requiring classroom instruction by the preceptors and complex coordination of hiring by the manager, with delivery of the orientation program. In addition it would enable the preceptors to use their clinical expertise to concentrate on their role in assisting a new staff member in application of the knowledge at the bedside. In essence this transformation from a traditional classroom-based delivery model to a "virtual classroom" was not only evolutionary but it was revolutionary in meeting the learning needs of new staff.

Literature Review

According to Franck and Langenkamp (2000), "learner time is usually the most expensive component of the education process" (p.158), while a "lecture-based delivery involves much presenter and participant time and is usually not effective because learners become passive observers" (Gianella, 1996, as cited in Franck and Langenkamp, 2000, p. 158). In fact, according to Boyer (1999), this two-dimensional style of traditional classroom instruction encourages the learners to be dependent on the instructor while lecture based teaching styles only address a minority of learners` learning styles. Jaffe (1998) describes the classroom institution as one that has historically centralized power and influence in the hands of the instructor. In a classroom setting learning does not start until the instructor enters and knowledge is centered in the instructor while students are influenced by how the faculty communicates. He further describes how control is determined by the instructor in what will be taught, who will speak and when, what is a correct or an incorrect answer and finally when learning will stop when the instructor leaves the classroom. In contrast, in an asynchronous learning network (ALN), Jaffe describes a considerable shift in the amount of power, authority, and control from the faculty to the students.

In contrast, computer assisted instruction (CAI) when combined with an ALN can nicely tap into the characteristics of adult learners (Knowles, 1990). Driscoll (1998) used this framework to describe adults learners as ones who:
-have real life experiences
-prefer problem-centered learning
-are continuous learners
-have varied learning styles
-have responsibilities beyond the training situation
-expect learning to be meaningful
-prefer to manage their own learning. (p.14).

The dynamic nature of CAI when delivered in a web-based ALN creates the environment for shared learning in which the learner plays a very active role in the integration of course content while receiving prompt feedback and teaching from "content experts" who are their preceptors. According to Boyer (1999), " the advantages of interactive learning include learning gains (50% greater); consistency of learning (60% greater); delivery variance (20-40 % greater); training compression (38-70% greater); learning curve (60% faster); and content retention (25-50% higher)" (p.118). This position is supported by Rouse (1999)

who states that "learners retain knowledge better if they see, hear and act in the learning process" (p.171) She further states that research indicates that "learners retain 20% of what they hear, 40% of what they see and 75% of what they see, hear, and do"(p.171).She goes on further to say that "computer-assisted instruction supports this learning process by incorporating graphics, animation, photography, audio, video, learner interaction and control and simulated experiences."

From this, it is evident that combining computer assisted instructiuon with an asynchronous learning network, utilizing an instructional technology such as the Web Course Tools (WebCT) platform would be particularly suited to adult learners. It was with this knowledge and evidence that the PICU Professional Development Coordinators, manager and preceptors chose WebCT as the tool to transform the orientation program from an instructor-centered model to a learner-centered model.

The WebCT Platform

WebCT, created by Murray Goldberg, a professor at the University of British Columbia, Canada, in 1995, is an integrated set of tools for developing and delivering interactive courses or course components over the internet. It allows an instructor to easily organize and distribute course materials and grades in a secure environment. It also facilitates discussion between instructor/preceptors and learners and encourages student to student discussion. Buhmann (2000) emphasizes that despite the sophistication of the tool it has an easy-to-manage graphical user interface. The software resides on a Web browser such as Internet Explorer or Netscape Navigator, allowing learners to easily access courses.

The Transformation Begins

The Professional Development Coordinators became the course designers. They were able to use the existing paper-based self-directed learning modules and convert them to Hypertext Markup Language (HTML) to load on to the WebCT server. In WebCT, the "file manager" allows the course designer complete freedom to organize course materials, update files, add and delete information as required, edit materials and preview the course design, albeit images, text files, audio or video files. The Preceptors were the "content experts" or the writers in a sense, providing the PDC with updated course material to be covered in the orientation program, while the PDC was the artist, creating an attractive course design.

The Learner Interface

Learners need a working knowledge of the World Wide Web and if not familiar with such, additional orientation time is required to introduce this to them. However since the PICU environment is a high technology area, learners are generally comfortable with internet use. Once a new staff member has accepted a position in the PICU, they are provided a password immediately, in order to access the website. They are provided instructions in their letter of offer on how to access the website from home where they are asked to complete a learning needs assessment which is submitted to the PDC electronically prior to their first day of orientation. The preceptor is provided this assessment so she/he may review the preceptee's experience and learning needs to begin to plan for a bedside experience that will best meet this. A face to face meeting on the first day of unit-specific orientation allows the preceptor to meet the new learner and together review and discuss the learning needs assessment document. Learning styles are discussed and agreed upon. The preceptor then reviews the course outline and timeline expectations for completion of the on-line learning modules and answers any questions on the use of WebCT the learner may have. As the weeks progress, the learner proceeds through the modules in a self-paced manner, able to repeat content areas as required to further their understanding. They can receive feedback on-line from the PDC, the preceptor or the manager, asynchronously through a variety of communication tools available on WebCT, as they complete learning modules. Through this discussion the preceptor is able to "see" how well the learner is grasping the knowledge. This enables them to guide, instruct and provide remedial action if the learner is not applying the knowledge correctly. In this asynchronous dialogue, they begin to "know" one another long before they work side by side,

something that would never happen in the instructor-based mode of classroom delivery. A serendipitous benefit is that the preceptor can also refresh his/her knowledge by reviewing the same modules at any time, which has reduced the stress of the preceptors concerned that they may not remember everything taught to them in the past.

Experience to Date

The transformation of the orientation program began in December, 2000 and the first modules were delivered in the Spring of 2001. As the first learners completed modules, their feedback was solicited through evaluation tools, and design changes made to enhance both accessibility and satisfaction. Preceptors were also provided with inservices on principles of adult learning as well as the practical needs they had to develop a comfort level with this instructional technology. Over the following two years, more than 12 new staff have been orientated via this method. There has been overwhelming support for this method of learning for orientation.

Where to From Here?

The use of WebCT has evolved from the orientation program in the PICU to adding a component aimed at reaching the continuing education needs of staff through modules designed to meet the advanced knowledge needs of experienced PICU nurses. In addition, the web site has been made accessible to the Pediatric Resident Physicians who identified many of the same learning needs as the new and experienced PICU nurses during their rotation in the unit. Interdisciplinary learning has occurred through the use of shared learning modules for the patient population served in the PICU. Linkages with the inpatient units and Emergency Department for learning and communication have improved relationships between staff through shared understandings, knowledge and on-line discussion. We are now about to implement a community based linkage to provide access to our learning materials to regional and community health care institutions who provide pediatric care, thus fulfilling our hospital mission of advocacy for pediatric care. The success of a web-based orientation program, driven by a need to fill a gap as a result of organizational downsizing, has not only been evolutionary, but it has been revolutionary!

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Send your proposed papers directly to Franco Carnevale (Editor):
frank.carnevale@muhc.mcgill.ca

In Their Own Words:
Paediatric Intensive Care Nurses' Experiences Of Withdrawal Of Treatment
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Abstract

Introduction: The ability to provide extraordinary life sustaining therapy and the ability of paediatric nurses to care for children with these technologies have made defining the limits of paediatric intensive care even more problematic. In the author's experience, much tension and conflict surrounds the decision making process during the withdrawal of treatment.

Purpose: The purpose of this study was to create a detailed and faithful interpretive account of nurses' experiences during their involvement with the withdrawal of treatment from the critically ill child in paediatric intensive care. A hermeneutic phenomenological approach was used to study how nurses interpret their lives and make meaning of what they experience. In depth conversations with five nurses were carried out and data collection and analysis was guided by human science research as proposed by van Manen.

Results: The research illuminated four main themes: 1. Wanting to care and develop relationships; 2. Emotional labour: being surrounded by grief and sorrow; 3. Consolation when a human being suffers, and 4. Making sense of the situation (I can see clearly now, sometimes). When these themes were explored it became apparent that the nurses' experiences where highly complex and emotional. Withdrawal of treatment was not seen as a purely physical act of removing life sustaining treatment, but had complex temporal, visual and contextual aspects to it. For many nurses great personal relationships developed between themselves, the child, and parents which had a physical and emotional impact on the nurse. These nurses described highly skilled nursing expertise which came from their seniority and time spent in the speciality of intensive care.

Background

It is commonly believed that members of the child's health team and parents share a common purpose of restoring health and sustaining life of the child (Department Of Health, 1991). However the American Academy Of Pediatrics Committee On Bioethics (1994) questions this view because medical technology within the paediatric intensive care environment has developed with great momentum. These technological advances have therefore enhanced the potential of care to increase positive outcomes and consequently the expectations of staff and parents also increase (Tasker & Balfour-Lynn, 1996). This ability to provide extraordinary life-sustaining therapy and the ability of paediatric nurses to care for children with these technologies has made defining the limits of paediatric intensive care even more problematic (Hylton Rushton & Hogue, 1993).

Although the literature has extensively focussed on how the decision to withdraw life support is made (Hylton Rushton, 1994; Libbus & Russell 1995) there is a paucity of literature addressing the process of withdrawal, once that important decision has been made (Pronger et al., 1995). The Royal College Of Paediatrics & Child Health (1997) has published a framework to help health care workers make better informed decisions about withdrawing treatment. This document alludes to pertinent issues including ethics, legal frameworks and the decision making process. Whilst reviewing the literature, it became evident to the author that much tension and conflict surrounds the decision making process during the time of withdrawing treatment (Pronger et al., 1995). In the author's experience in clinical practice when this occurs, particularly if the nurse or parent disagrees with the decision to withdraw, the quality of this very intimate caring process was somehow affected. The ability to value and execute the apparent simplicities of providing comfort and support to the child and family appeared to be compromised by the

doctor's withdrawal from the situation, especially if the use of highly invasive life saving technology continued (Bradshaw, 1997). Part of the tension appears to stem from a different perception of events. This assumption is demonstrated in medical research undertaken by McHaffie et al. (2001) who established that doctors sometimes referred to a sense of failure when babies did not survive, whereas nursing staff saw an opportunity to extend their nurturing role to provide a good experience of dying. What had started out as a clinical decision making process had become an ethical one fraught with questions about euthanasia, the best interests of the child, futility of treatment and the application of palliative care in an environment which has an overriding philosophy to aggressively save life.

Purpose And Aims Of the Study

The purpose of this study was to create a detailed and faithful interpretive account of nurses experiences during their involvement with the withdrawal of treatment from the critically ill/dying child in the paediatric intensive care environment. A hermeneutic phenomenological approach was used to study how nurses interpret their lives and make meaning of what they experience (Van Manen, 1997a). Interpretive phenomenology involves knowing or experiencing the world of being through language, temporality and history. A fundamental component of hermeneutic phenomenology is the hermeneutic circle. In the hermeneutic circle, the researcher and the participant share meaning through language (Geanellos, 1998a; Geanellos, 1998b). Interpretation occurs because researchers and participants share daily activities and events that are both human and meaningful. Closing the circle enhances the researchers' comprehension of the experience and exposes them to a new level of self-understanding (Allen, 1995; Gadamer, 1986; Heidegger, 1962; Plager, 1994). Phenomenological methods involve a conversation that results in a conversational structure of questions and answers. The goal is to make sense of or interpret the ideas of the speakers while keeping the question open (Van Manen, 1997b). Lastly the research had six identified aims:

1.   Obtain descriptions of nurses' experiences of their involvement in the withdrawal of treatment process.
2.   Analyse and present these descriptions using phenomenological methods.
3.   Establish meaning that nurses attributed to being involved in the withdrawal of treatment.
4.   To interpret how nurses dealt with this experience and the effect it had on them.
5.   Identify nurses' priority concerns for this client group

So in essence this study aims to illuminate the nature of nurses' understanding of withdrawal of treatment and how such understandings are translated into nursing practice. Through interpreting and describing nurses' experiences being involved in withdrawal of treatment and their experiences of providing care and support to the dying child and family, it was hoped to illuminate the nature of this experience.

Philosophical Underpinnings Of The Chosen Methodology

Van Manen (1997a) states that every project of phenomenological enquiry is driven by a commitment of turning to an abiding concern. "To think is to confine yourself to a single thought that one day stands still like a star in the world's sky", said Heidegger (1971). As a researcher who has worked in paediatric intensive care for some 15 years, the topic has great personal meaning to me. I can remember as a senior nurse caring for a baby in paediatric intensive care with a more junior nurse. This baby had been admitted to the unit with respiratory failure due to a severe immunodeficiency illness and was now on aggressive and maximal ventilatory support, drug infusions to maintain blood pressure and invasive monitoring to monitor his blood pressure, heart rate and oxygen saturation. This tiny baby was in a cubicle, lost amongst this barrage of equipment, his tiny body disfigured by the severe body oedema and his swollen stomach. His skin was tinged blue and cold to the touch. Medical staff felt that further treatment was futile and not in the best interests of the baby and had discussed withdrawal of treatment with the mother. His mother was unable to agree to this, as in her eyes this was an act of murder. At this point in time the medical team seemed to withdraw from the situation as if they felt unable to contribute anything further to the care of this mother and baby. I remember so well feeling isolated in that cubicle and somehow paralysed in my ability to provide meaningful and appropriate care to that mother and her dying baby. As I write this I am aware of my feelings of isolation but also the

powerful collective experience of myself, the junior nurse and mother, each of us responsible for this tiny little child. Grief for someone else's child is a recognition that all children are in the trust of adults, and it is this which possibly gave sorrow its particular shape that day.

In my introduction I have alluded to some of the key literature relating to withdrawal of treatment. However, what this literature does not address is the complex nature of the lived experience of the actors participating within the decision making process (Darbyshire, 1994a). When health care professionals come together during the difficult and intimate decisions regarding the withdrawal of treatment, we become in a symbolic sense, through the community of sharing and sadness, involved in the lives of children other than our own. It is true of course, that our connection to other children is not the profound and intimate connection of parents and child, however the intimate nature of this event is often charged with emotion and grief for that child and family. As an experienced paediatric intensive care nurse that has worked within the speciality for fifteen years, I have personally witnessed and experienced the emotional labour which transcends nurses involvement in caring for children and families during withdrawal of treatment (Smith, 1992). Over time this research topic has become important for two reasons. Firstly, and from a pragmatic stance, it is becoming increasingly difficult to recruit and retain nurses to work in paediatric intensive care (Department Of Health, 1997). By exploring the lived experience of nurses who are involved in caring for parents and children during withdrawal of treatment, it is hoped that some insight will be gained into how we can better support them and meet their educational and development needs. Secondly, there is a government expectation to improve standards of care, through improving communication between healthcare professionals and parents (The Bristol Royal Infirmary Enquiry, 2001). By exploring nurse's experiences of caring for this client group it is hoped that this may contribute to improving the care that they receive.

I have chosen hermeneutic phenomenology because it sits well within my own philosophical beliefs about the holistic nature of caring for critically ill children and their families. Secondly, as nursing professes a philosophy that values the importance of the individual and the primacy of the individual's understandings and meanings of given situations (Paterson, 1994; Patteron & Zderad, 1976; Watson, 1985), it seems imperative that such a philosophy be recognised in the research approach. Indeed, hermeneutic phenomenology's contribution is not in developing predictive and prescriptive theory, but in revealing the nature of human experience. Although such interpretive enquiry does not prescribe action for use in clinical practice, it does influence a thoughtful, reflective and attentive practice by its revealing of the meanings of human experience (Van der Zalm & Bergum, 2000). This central purpose of phenomenology, the description of the lived experience of people, obtained from their own perspective, transcends many of the divergences that exist within the various schools of phenomenological thought (Cohen et al., 2000; Reeder, 1987; Spiegelberg, 1975). Husserl postulates that only a pure description of consciousness can overcome the naïve naturalism of science and provide a point of departure for solving philosophical problems (Johnson, 2000). However, a notable exception here is Heideggarian hermeneutic phenomenology (Benner, 1985; Benner, 1994; Benner & Wrubel, 1989) which eschews the focus on individual's subjective realities. Heideggarian phenomenology seeks to overcome the dualistic dichotomy between the subjective and objective. It rejects the idea of person as private, and disconnected, standing over and merely responding to an objective world (Paley, 1998; Van Manen, 1984). A Heideggarian hermeneutic interpretation focuses on the person in context, on commonalities of language, practices, everyday shared understandings and ontological questions concerning persons' being in the world (Darbyshire, 1994a). Phenomenology is most appropriate for the study of concepts and issues within nursing whose meanings have remained unclear or unexplored (Munhall, 1989).

Heidegger, unlike Husserl, therefore rejected the possibility of and necessity for a transcendental standpoint that grounds knowledge and experience (Howarth, 1998). Consequently, the notion of interpretation, where all interpretations have both a fore-structure (presuppositions) and an as-structure (meaning), replaces the Husserlian themes of consciousness and perception (Moustakas, 1994). For Heidegger, the standpoint of humans is to always be involved in the practical world of experience. Therefore, the world of human beings can never be a presuppositionless world wherein one's consciousness confers meaning on the objects one encounters. The world of human beings is always one of practical involvement where things take on meaning in relation to one's purpose (Nenon, 1997). More specifically, meaning

emerges because of the unitary relation between human beings and other things/people that is possible only because of the unique structure of being human (Dasein) (Heidegger, 1962). Heidegger calls this structure, temporality, and the way humans have of relating to others in the world, being in the world (Heidegger, 1962; Mulhall, 1996). Thus, being-in is not a spatial relationship, but rather indicates the way that human beings relate to other entities (both human and non human) in a familiar world of involvement (Richardson, 1963). Therefore, the things humans encounter in the world do not simply exist "out there" in a detached manner, waiting to be investigated. They are all part of an interconnected world of human investment and interest. Heidegger's philosophy sits well within nursing's simultaneity paradigm (Parse, 1997) which focuses on the quality of life from the person's perspective. This is congruent with my own philosophy which refutes the nature of scientific quantitative enquiry and the way it views human beings in a mechanistic way. Naturalistic enquiry, in this instance hermeneutic phenomenology acknowledges that each individual may have different perceptions about the same experiences because experience has many contextual facets (Caelli, 2000).

In phenomenological research the emphasis is always on the meaning of lived experience. The point of phenomenological research is to "borrow" other people's experiences and their reflections on their experiences in order to better be able to come to an understanding of the deeper meaning or significance of an aspect of human experience, in the context of the whole human experience (Van Manen, 1984). In the hermeneutic phenomenological method, to elicit narrative data I aimed for interviews that resembled conversations. This differs from interviews that are tightly structured and use a more directive style, such as interviews with guides that specify questions that must be asked, a specific wording for each question, and an order of asking. These interviews were akin to what Morse (1991) described as interactive interviews and Holstein & Gubrium (1995) described as an active interview. In this kind of interview, information is exchanged between informant and interviewer in both directions, the format is relatively unstructured, and the emphasis of the interviewer is on listening to whatever the informant says as opposed to guiding and controlling the conversation.

As discussed previously, the "data" of human science research are human experiences (Van Manen, 1984). It seemed natural, therefore, that if I wished to investigate the nature of this experience or phenomenon, the most straightforward way to go about the research was to ask the co-researchers to write their experiences down. However the literature points to several potential difficulties (Alvesson & Skoldberg, 2000; Van Manen, 1997a). The first obvious consideration is the task of writing itself. Most people find writing difficult. They will talk with much more ease and eloquence and with much less reserve than they will write their thoughts on paper (Van Manen, 1984). Also, writing forces the person into a reflective attitude, in contrast to face to face conversation in which people are much more immediately involved (Van Manen, 1997b). On reflection, I felt that this reflective attitude together with the linguistic demands of the writing process would place certain constraints on the free obtaining of lived experience descriptions. In hermeneutic phenomenological human science the interview serves very specific purposes: 1. it may be used as a means for exploring and gathering experiential narrative material that may serve as a resource for developing a richer and deeper understanding of a human phenomenon, and 2. the interview may be used as a vehicle to develop a conversational relation with a partner (the co-researcher) about the meaning of an experience (Van Manen, 1997b). It was felt that interviews or conversations best reflected the philosophy behind the research and would more readily obtain the data required.

How The Data Were Analysed
The goal of the analysis was to create a thick description that accurately captured and communicated the meaning of the lived experience for the informants being studied. A thick description is one that captures the experience from the perspective of the informants in its fullest and richest complexity (Denzin, 1989). The idea of a dialectic process often referred to as the hermeneutic circle underlies hermeneutic thinking and provides guidance for this interpretative effort (Gadamer, 1986).

The hermeneutic circle is a metaphor that guides the process of inquiry on several levels. Analysis begins as parts of the text are understood in relation to the whole text and vice versa. Then, the individual texts are understood in relation to all the texts and vice versa. The researcher

begins with a vague and tentative notion of the meaning of the whole of the data and with the reflexive awareness that this notion is an anticipation of meaning (Alvesson & Skoldberg, 2000). This awareness causes a dialectical examination of parts of the data to understand better the whole. With a better understanding of the whole, examination of different data or the same parts of the data at a deeper level drives the analysis ahead. This is the hermeneutic circle as it continues throughout the analysis. Using the hermeneutic circle as a means of interpreting data means that the smallest statements must be understood in terms of the largest cultural contexts. Interpretation therefore occurs at two levels: descriptive or ontic understanding involving the concrete aspects of an experience and ontological understanding or the essence of an experience (Geanellos, 2000).

A selective or highlighted approach was used to guide the interpretation of the text (Van der Zalm & Bergum, 2000). This involved reading and re-reading the text to identify remarkable statements and phrases that revealed the lived experience of paediatric intensive care nurses who are involved in the withdrawal of treatment. Themes were interpreted using reflection and clarification. The themes emerged from the dialectic process of moving between a background of shared meanings and focused meanings. Reflective writing was used to explicate major themes (Allen, 1995). Contextual field notes were added to the text in order to obtain the non verbal communication aspects of the interviews.

Findings

Linguistic Transformation: The Essence Of The Phenomenon
Hermeneutic inquiry orientates us to a world that is strange and does not fit our usual expectation of an experience (Gadamer, 1986). This is the world of treatment withdrawal. This strange world involves the nurse in a journey of painful discovery, and this journey may vary in length, but its nature is intense and real. Indeed, withdrawal of treatment has a temporal aspect to its nature. And although this temporality is different for each nurse there is a feeling that withdrawal of treatment extends outside the purely physically aspect of withdrawing treatment, and that there are consequences for the family and nurse which extend beyond the confines of the admission to paediatric intensive care into their private worlds. Nurses draw upon their own private life world to identify personally with the parent's tragedy and even when their work is done there is this realisation that these events will encompass the parent's reality for the rest of their lives. There is a perception that withdrawal of treatment has neither a definable beginning nor end. It is a complicated extension of the nurses desires to do the best for the child and family, to support them and their fundamental need to make the experience as positive and rewarding for the parents as possible. No one experience is the same and nurses are involved in building up a repertoire of experiences each time they are involved in the withdrawal of treatment. There is a feeling of travelling into unknown territory, a sense of waiting for an uncertain future because within the paediatric intensive care environment life is precious and technology allows us to maintain this tenuous attachment to life. This attachment to life may be short lived or long and drawn out. Nurses, constantly battle between their own perceived reality, which is based on professional knowledge and experience with that of the parents, who still cling to the hope that their child will survive. However, underlying the specific expectations of hope is a more fundamental sense of sadness and personal loss, and although the nurse is sustained by this hope there comes a time when the acceptance of bad news, allows the nurse to see more clearly, accept that it is time to stop and to reprioritise. Gradually this experience of hope fades as the bad news becomes a reality. Over time, the nurse shares through narration and telling body language their experiences and interpretation of unfolding events, in the hope of helping the parents acknowledge the realities of the future as their beloved child slips peacefully away. There is a mutual unfolding and acceptance between individuals as to the realities of the situation as its true nature unfurls. This creates for the nurse doubts and uncertainties about the absolute nature of the withdrawal of treatment experience. There is a feeling of tension during the transition from active life saving treatment to where the decision to withdraw treatment is made. The life world that the nurse perceives through societal norms, values, and expectations dictates that because they are a "nurse" they are compelled to maintain the mask of professionalism. In supporting the

family, the nurse feels obligated to hold their emotions at bay in order to provide professional support to the family.

The life of a nurse who is involved in caring for a child and family during withdrawal of treatment can be a life filled with feelings of pain, helplessness, isolation, anger, grief, inadequacy, exhaustion and emotional labour. These feelings are the result of the intense and intermit relationship which builds up between the nurse and family and which creates a burden of responsibility on the nurse. There is also a sense that their interaction with the child's parents will leave a lasting impression that will never be forgotten. The closeness of this relationship is negotiated by the professional and parents and both are recipients of gifts of care; concern, satisfaction and wisdom. However, as the nurse becomes more experienced over time they are more able to cope with their feelings and the experience of withdrawing treatment.

The relationship between the nurse and parents is a complex one which begins to blossom when a mutual unfolding of shared trust, honesty and respect for the other alleviates suspicion and lays the foundation for what is to come. Each individual feels the need to make the self accessible for the other so that the gift of sharing the experience becomes an evolutionary process. The sharing of the withdrawal experience is presented as an offer for the taking, only if you wish to receive and are willing to listen. Individuals may find themselves more susceptible to share wisdom when death of the child is approaching. Timing and readiness have everything to do with this sharing of wisdom. Shared wisdom can be seen, heard and felt in the rhythm and patterns of fellow human beings. It is merely the sharing of an insight that has been taken for granted, but this sharing is no easy task; you must want to comprehend the other's truths and may even feel helpless doing so. When the gift of sharing the wisdom of this experience comes to a close, there is a loss, a sense of finality, but with that finality comes a constant. The experience of sharing that intimate exchange remains with you as that constant, while the details of the truths and insights into the experience come and go from your consciousness as you see fit.

The relationship which is co-created between the nurse and parents is a highly intense one charged with emotion and with the potential for shared connectedness between the nurse and parents. As this shared connectedness develops and unfolds the nurse begins to see the child and parents as people who they need to get to know and understand their uniqueness within the context of their illness and their life. They are then able to contribute to remembering the child as a person and loved member of a family. As individuals are able to share their life, their feelings and thoughts an interconnectedness develops. An intensity that arises when sharing such thoughts takes place, but this makes the nurses' experiences much more personal and connected with the family. When treatment is withdrawn there is a feeling of inner calm in the nurse because the child is now at rest and no longer suffering, but these feelings are somehow transferred to the parents. As the parent catches them by surprise, eye contact is made and like mirrors they reflect the pain and grief within their souls. The nurse experiences this grief personally as an overwhelming wave which invades their whole mind and body. During this personal grief the nurse in order to maintain a therapeutic relationship with the parents draws on a whole repertoire of highly complex skills which are patient centred. Higgs & Titchen (2001) refer to this as professional craft knowledge. This relationship is highly demanding and emotionally charged, and the gift of unusually intimate contact in the form of practical caring is engaged in between nurse, parent and child. But even at the most saddest of times another human can lift another human's spirits by acknowledging the nurses support and skills during this tragic time. During such times the nurse may feel compelled to hold their emotions at bay in order to provide professional support to the family, but as it comes time to say goodbye this professional mask is shed.

Entwined within every aspect of withdrawal of treatment is the parent's experience of having treatment withdrawn on their child and this becomes the impetus for the nurse to do his/her best, to care and make the parent's experience as good as possible. Great time and energy is put into working collaboratively with other members of the multidisciplinary team to facilitate an experience which is parent focused and allows them to be involved in planning what they want. But achievement of such goals is temporal in nature and requires time. Nurses need to feel that they have time to provide the best withdrawal of treatment, but this can be hindered when a child becomes acutely unstable, other members of the team have different priorities or when sudden death prevents this. The underlying expectations of the nurse cannot be met and a

sense of feeling out of control develops. The dying and withdrawal processes are intertwined and their rhythms and patterns can become desynchronised with the nurses' expectation of the time needed to facilitate a good withdrawal and the time that the reality of the situation allows. The nurse is made to feel that she is not in control of the situation or able to provide parents with that important time to come to terms with this catastrophic event. Although she may repeatedly seek to help the parents, she feels separated from the parents because they maintain a distance by barring her from their life world, or because their aggression places a barrier between them. Emotional disconnection occurs and a façade of caring develops where the nurse feels unable to be authentic. In addition, there are times when the nurse feels sad for the parents but is unable to truly empathise or feel a personal sense of loss.

There are good days for the paediatric intensive care nurse, which at times tend to wear away the emotional and physical effects of their experiences with withdrawal of treatment. Reality is what sustains them; the reality that they are not alone in this experience and that for everyone one day that they are involved in caring for a child that is dying there are many more happier days caring for children and parents who survive and recover from their critical illness. There is a feeling that this time for recovery is important, because sometimes the nurse feels a personal sense of involvement because there has been time to get to know the child and family as human beings. And when the child and family take that journey through withdrawal of treatment, it leaves a profound and lasting effect on the nurse. Every detail of the event is remembered and the emotional labour that is felt is both physically and emotionally draining.

Figure 1: **Major Themes And Sub-themes Of The Thematic Analysis**

Major Themes	Sub Themes
Wanting to Care And Develop Relationships	1. Being client centred 2. Seeing the most pertinent issues 3. Having concern for responding to the child/family as a person 4. Searching for connections: seeing the child and parents as people 5. Showing the way 6. Parental response
Emotional Labour: being surrounded by grief and sorrow, swells of enjoyment and tides of sorrow	1. Parental response 2. Being surrounded by the visual and emotional impact of dying 3. Saying goodbye 4. Personal loss 5. Feeling sad and exhausted 6. Feeling helpless 7. Getting to Know the client as a person
Consolation when a human being suffers	1. Becoming ready for consolation 2. Being in communion 3. Dialogue 4. Shifting perspective
Making sense of the situation: I can see clearly now (sometimes)	1. Temporality 2. Connoisseurship 3. Artistry 4. Attunement to the situation 5. Being in the situation: involvement and control 6. Being authentic/knowing self

Thematic Analysis

Thematic analysis refers to the process of recovering the theme or themes that are embodied and dramatised in the evolving meanings and imagery of the work (Van Manen, 1997a). Too often thematic analysis is understood as an unambiguous and fairly mechanical application of some frequency count or coding of selected terms in transcripts or texts. Making something of a text or of a lived experience by interpreting its meaning is more accurately a process of insightful invention, discovery or disclosure. Grasping and formulating a thematic understanding is not a rule bound process but a free act of "seeing" meaning (Van Manen, 1997b). Themes give control and order to our research and writing. Phenomenological themes may therefore be understood as the structures of the experience of being involved in the withdrawal of treatment. So when analysing a phenomenon, we are trying to determine what the themes are, the experiential structures that make up this experience. Figure 1 provides the reader with the major themes and sub-themes that communicate the substance of the nurse's experience of caring for parents and children during withdrawal of treatment..

Wanting To Care And Develop Relationships

One of the major themes the participants in this study discussed was their desire to both care for and develop a meaningful relationship with the parents and child during the progression of treatment withdrawal. Some of the nurses' accounts gave some support to the view that caring may be a human trait which they found important to their experience during the withdrawal of treatment. They spoke of caring as being a personal and often exceptional quality, something which made them feel good about themselves and which made the experience more positive for them.

Being able to care for these parents is a very privileged position to be in, and by being able to help them and provide care gives me a great feeling and sense of achievement. It's something which I have developed over time.

Such caring was a highly intimate experience which was charged with emotion and feelings for the nurse. Such caring was reflected time and time again during interactions between the nurse and parents.

…… so I think mum and dad were just… crying and saying we don't want him to suffer. I think I remember Jack repeating over and over again, we just don't want him to suffer anymore…….And I erm said we'll give him something to make sure he is not suffering. I discussed with a doctor and we gave him a small dose of fentanyl and then stopped his inotropes……………And he didn't gasp or anything like that when we extubated him and turned off all the monitors and mum and dad sat at the bedside and cuddled him. They then helped me wash him and make him comfortable.

Such narrative vividly portrays how these nurses experienced unusually intimate contact with the child and parents during the caring process. However, some participants interestingly alluded to Heideggarian concepts of authenticity and inauthenticity in their descriptions of some of their experiences and feelings, particularly experiences which occurred when they were more junior and inexperienced.

I could see the nurse was quite emotional. She was crying and a bit tearful and a bit sort of emotional as you would expect but I find myself not necessarily feeling like that, erm and sometimes I worry that I don't feel emotional in situation like that, but I'm very distant and cold and the things I say to the families are things which are perhaps very appropriate and sincere, you know are the right things to say, but perhaps aren't heart felt. Almost like, been here done that, that's just another one, but in my mind I don't feel like that, I know that's not true, but I worry that I'm a little bit hardened maybe to, it's a child dying for goodness sake you know, somebody's baby is dying, how can I be so cold about it…..

This is an important experience to consider because Darbyshire (1994a) shows how parents speak positively about nurses who did not take over from them and who did not engender within them a sense of exclusion and alienation from their child's care. Being authentic was an important aspect of this. The parents explained how some nurses seemed genuinely caring as opposed to others who seemed less sincere or who felt to be just going through the motions. In

this respect Heidegger (1962) warned against a solicitude which "leaps in" for others and takes over. Solicitude can as it were, take away "care" from the other and put itself in his position in concern; it can leap in for him. "This kind of solicitude takes over for the other that which he is to concern himself. The other is thus thrown out of his own position" (Heidegger, 1962, p.158).

He also describes a solicitude, or care, which "leaps ahead" to empower and authentically return care to the person. For these experienced nurses this ability to care and truly empower parents to take control of the situation and create possibilities rather than dependency was an inherent part of the experience. In describing caring, not as a trait, but as the most basic mode of being in the world Benner & Wrubel (1989) explain that caring means that persons, events, projects, and things matter to people.

Theorists such as Gadow (1990) and Watson (1985) have argued that caring is fundamentally a moral imperative. For Watson caring calls for a philosophy of moral commitment toward protecting human dignity and preserving humanity. She also suggests that caring is the moral ideal of nursing. While avoiding the traditional language of moral discourse based upon rationality and principles, Benner (1994) also argued that caring and, more specifically, a caring practice has an inalienable notion of good. The moral imperative conceptualisation of caring seems to suggest that caring must be constant or given, uninfluenced by factors such as, in this case the child and parent, the nurse or the situation. However, the accounts of the nurses suggested that this was not always the case.

> *I found the second experience a lot more difficult because the parents weren't really talking to me much at all, they didn't want to come in and see the child and it took quite a lot of persuasion to bring them in. I felt as if I wasn't doing my job properly. The dad was really so angry, didn't want the child christened , and I think you are limited in what you can do.*

Nurses described the difficulty that they experienced in caring where they found the parent difficult to care for, or where they truly disliked the parent.

> *……. I think it is about time spent with the family probably and also last week I was a bit annoyed, irritated by the mother, which is a really horrible thing to say, I realise that, but you know her child's dying and I was annoyed by her…. She was quite aggressive at one stage and I had to call security because I thought she was going to hit me basically and she was yelling and screaming, why is this happening who has done this to my child. You know blaming type of words and……. When people speak to you like that you sort of establish a bit of distance between you don't you, you don't want to… well its hard to feel sympathetic or empathy for somebody who's been aggressive towards you.*

This finding supports the work of Kahn & Steeves (1994) who noted that while nurses believed that they should care for all patients equally and unconditionally, they were often unable to achieve this moral ideal. This was particularly so where they were unable to "like" the patient and where a more "friendly" relationship could not develop. The position that caring is a moral imperative has a strong appeal in that most nurses say that the reason they became nurses was to help people or to do good in a specific way (Roche, 1987). This is certainly an aspect of these nurses' experiences as they attempted to do their best at caring for the child and family during withdrawal of treatment.

In their attempts to develop relationships with these parents and children four sub themes appeared particularly important in this aspect of the nurse's experiences. These were being client centred, seeing the most pertinent issues, having concern for responding to the child and parents as people and searching for connections. The development of a close friendship developed particularly when a child and family had had a particularly long admission, such as the child with a chronic life threatening illness. The nurse and family develop close bonds and ties as they got to know each other on a more personal level. However, sometimes nurses were unable to make these connections.

> *She irritated me, but I also felt guilty for feeling irritated about somebody who was going through such a horrible time really….. But I think that's why I, I didn't identify with her at all, I didn't have anything in common with her, didn't have a conversation with her that wasn't directly pertinent to what was going on, there was no connection between me and any, perhaps a little more with Dad, but between me and any of the family members there was no sort of connection beyond, I was the nurse looking after their child, there was no*

sort of emotional connection between us, so I didn't feel emotionally involved in the whole process of him dying or us withdrawing therapy…….. It was more thinking about how could we do this fairly and do it well.

However when these nurses cared for children over a long period of time they were able to make connections with the child and family and therefore experienced the development of personal involvement and seeing the child as a person. In one example the withdrawal of treatment left a lasting impression on the nurse and a mutual correspondence between the nurse and parents took place.

In this experience I think the difference is that it is a sense of loss yourself, a personal sense of loss, because you know them as more than just a patient almost, obviously he is a patient, but you know them more than just a patient that passes through the unit…….. Erm I looked after him when he first came back from theatre on the very first day, he came back from theatre and had a really rough time then and I spent a lot of time with mum that day because dad wasn't able to be there and then you know every time I cam back in I would speak to them………and so I felt I had a personal connection with that family, and I think they obviously must feel the same about me because otherwise they wouldn't have written to me (tearful).

Emotional Labour: being surrounded by grief and sorrow, swells of enjoyment and tides of sorrow

A second major theme the co-researchers in this study discussed was the feelings of being surrounded by grief and sadness and experiencing swells of enjoyment and sorrow. These nurses were regularly involved in a journey of painful discovery, and although this journey would vary in length, its nature was always intense and real.

You know things are not going well, you can see your figures over a period of time are not going the way you would like them to, and so perhaps you have got longer to adapt to the fact that this child is not going to make it.

It became apparent that the emotional labour encountered by these nurses was significant and all consuming. There was a sense that these nurses were the members of the multidisciplinary team that spent the most time with the child and parents. Many of the feelings were shared by the nurses including the need to hold their emotions at bay in order to provide professional support to the family.

I remember what a tutor said a long time ago that erm you are there to do a job you are there to support them, if they end up supporting you that's not going to……. (tremble in voice) so I think while the parents are there and while the child is still alive, it's important you are there for the family and supporting them, no matter how you are feeling.

But sometimes these nurses were unable to control their grief. As one nurse said:

There is this huge wave of grief…. A feeling filling up the whole room and being really overwhelming and erm what do you say to these people, I don't know, you can, you can make all the right noises can't you and say all the right things as a nurse but nothing you can actually say is going to make any difference to the fact that their child has died and they're feeling overwhelmed by grief.

So in this sense nurses experience parental grief as an overwhelming wave which invades their whole mind and body. There is a feeling that what ever they say it cannot make the pain go away. For many of these nurses, once the child was comatose or so severely ill not to be aware of what was going on, the pain and suffering was transferred to the parents, and for these nurses this was the most distressing aspect of the experience.

I have never had trouble being involved in withdrawal of treatment if it has been in the best interest of the child. When I start to find it difficult, is seeing the grief in the parent's eyes (cries)…….It's the parents, it's the parents that are the problem, (cries throughout) I can cope fine with the child, it's seeing parents that's a distress.

So in a real sense the suffering and pain which is transferred from the child to the parents is experienced in a real sense by the nurse, and an individual's eyes may reflect the pain and grief in the person's soul (Parse, 1997). In some circumstances other factors made these feeling of pain and suffering even more intense and personal, namely the visual impact of the child and how long the nurse had had to get to know the child as a person. When theses nurses were able

to share the parent's and child's life, feelings and thoughts, interconnectedness developed. An intensity arose whilst sharing these thoughts which made the nurses experiences much more personal and connected with the family.

It was obvious that nothing was going to save him, erm and it was decided then, it was the middle of the night, it was very unpleasant, it was untidy, he had been bleeding, there was blood everywhere, on the bed, there was dried blood in his hair, from the day before because he had been too sick to wash him. He looked horrible, his face was all filled up and swollen, purple looking. He didn't look anything like he had looked before, he was a child who had been on our ward on and off for a couple of months, and you know this 14 year old, quite amusing guy, you know you actually have a conversation with him. He held my hand and asked me to sit with him one night, you know because he was afraid to be by himself, and I spent a lot of time talking to his family and looking after him and you know and we were all pleased when he went to the ward, and then so devastated when he came back again as an emergency, that was horrific.

All the nurses in the study found these aspects of their work both draining and exhausting both mentally and physically during their 12 hour shift on the paediatric intensive care. Indeed for some nurses each experience although individual has the effect of acting like a catalyst in remembering all the children that have died and the nurse remembers feelings of sadness for all the children they have cared for. These emotional feelings are brought to consciousness and result in the need to cry.

I think when you are involved with the situation with the baby this week, you are sad and try not to cry or cry appropriately, for all the children you have looked after, not just for the one that is in front of you there, and your feelings are then very strong about the great sadness of all the children.

Interestingly in this study there were different experiences regarding nurses' involvement in the decision making process but in all accounts there was a sense of feeling involved and at ease with the decisions to withdraw. For some nurses this sense of involvement and agreement was facilitated when there was adequate knowledge and consensus between those involved in the decision making process.

I think because we had done a complete set of brain stem tests and I'd seen brain stem tests done regularly before so I feel one hundred percent happy with the fact that they are dead, erm we'd worked with the parents and the parents had been given full explanation as to what we were doing with the observations.

This is contrary to the findings of some research. Liaschenko's research which examined nurses narratives relating to ethical decision making found that nurses' knowledge was somehow devalued in this process (Liaschenko, 1995). Because of this nurses were placed in a position of what Liaschenko calls artificial personhood characterised by powerlessness. The central point in this concept is that the person doing the speaking or acting is not the author of the actions. Therefore nurses must act on decisions made by the doctor and in which they have no say at all. The study revealed that nurses could be harmed in two ways. One type of harm might be seen as psychological, as conveyed by the notions of moral distress and moral outrage (Pike, 1990). The other might be seen as moral harm in the form of loss of integrity in their practice (Liaschenko, 1995). In the authors' experience, nurses often ask the question "why are we doing this?". Also relevant to this work was research undertaken by Anspach which looked at decision making in the neonatal unit. The findings revealed that nurses utilised intuitive processes to perceive complex situations, however as this type of knowledge is difficult to articulate when involved in the decision making process with doctors, this type of nursing knowledge was always questioned (Anspach, 1993). Liaschenko (1995) asserts that self-doubt and a long history of not being heard lead to silence. The inability to have a meaningful say that contributes to the mutual construction of mutual ends reduces nurses to the status of artificial persons. However over time and with experience, nurses develop the skills of resistance; they learn the system, learn how to exert pressure, and on whom in order to have their views heard. In the authors' opinion these findings have implications for how nurses are allocated to caring for children and families who are in the process of having treatment discontinued. In the authors' experience it is often the junior more inexperienced nurses who are allocated to these children because their needs are now less technologically focused. Also the experienced nurses in this research were able to rationalise the

sense of losing touch with normality and they were able to return to their reality through a journey that took them back to their own real world.

> *On a day like Sunday we had, erm, I am very sad very drained so by mid day I am exhausted and plodding on with things erm, and so I leave the hospital feeling sad, and I then cycle up the hill and I've almost forgotten my sadness because I've cycled up the hill and I think, and my feelings then have toned down and I think that is what I have to do in order to go back the next time.*

Consolation - When a Human Being Suffers

Consolation when a human being suffers was the third major theme. When one is suffering one needs consolation. Suffering is seen as a kind of alienation and a threat against a person's sense of identity, integrity and connectedness (Kahn & Steeves, 1986; Younger, 1995). Suffering thus alienates suffering persons from themselves, from other people, from the world and from their transcendent source of meaning (Younger, 1995). From analysis of the transcripts, four sub themes arose as being key elements of consolation when a human suffers; becoming ready for consolation, being in communion, dialogue and shifting perspective.

People must become ready for consolation before they can mediate or receive it. For the nurses this meant becoming open, present and available. Through taking care of practical matters, the person who mediates consolation can make space and time available for the suffering person, being at hand and letting the suffering person know that he or she is not alone. The person who mediates consolation communicates implicitly that he or she has no prestige invested in the situation, but has confidence in the suffering person's possibilities.

> *She was more open I think…… prepared to listen, I think she was more open, receiving and almost unprejudiced in some way…… her own values and interests were put within brackets somehow. I felt I was received.*

Openness, presence and availability create trust. When the relationship is trusting, there is room to uncover the wound (the cause of the suffering). The suffering person becomes calmer and dares to look at the wound. The person who mediates consolation is "walking alongside" and shows that weakness, grief and expressions of pain are accepted. Both parties accept that the wound is irreversible. In the short perspective, uncovering the wound could increase the pain: consolation increases pain because then the wound becomes obvious. The sharing of suffering between the nurse and parents means being in communion. Communion is beyond words. The nurse mediating consolation and the suffering person (the parent) become able to "see" and confide in each other. They share the suffering in reciprocal presence and availability.

> *I went up to her, where she sat with her dying child, purple and bloated attached to a ventilator. Then I tried to say something, but I could not say a word, so I stood holding my arm around her. Time went by and it felt like we were waiting for ages before her child died, we cried but still we could not say anything. Later when we met up to say good bye she thanked me "Thank you, we were standing together clinging to life that was about to slip away.*

Dialogue is important for consolation. Consoling dialogue in the experiences of these nurses was grounded in communion and could occur in silence. The suffering person is given space to gain insight through distance.

> *He began talking about John (his deceased child) and what a fantastic relationship they had, the trips swimming, the fishing trips……as he was telling, his face (expression) changed and he started to cry…….he continued telling his story and there it was, this feeling of…..it was some kind of………hardness and despair in him……..that melted away………in the end we were holding hands….. and I mean…… I experience it every time I think about that moment; it was the consolation that I could give.*

Once the wound was uncovered and when in communion and dialogue, a shift of perspective was able to take place between the nurse and parent. However this shift in perspective was not always immediate and for some nurses this took many days or weeks. As the overwhelming feelings of darkness subsided then the nurse was able to contemplate this suffering and reach a feeling of how to relate and come to terms with it.

Conclusions

In this paper, the literature alludes to a highly mechanistic and decision making approach to the withdrawal of treatment in the highly technological environment of paediatric intensive care. However, what this literature has not addressed is the complex nature of the lived experience of the actors participating within the decision making process. When health care professionals come together during the difficult and intimate decisions regarding the withdrawal of treatment, we become in a symbolic sense, through the community of sharing and sadness, involved in the lives of children other than our own. The purpose of this study was to create a detailed and faithful interpretive account of nurses' experiences during their involvement with the withdrawal of treatment from the critically ill/dying child in the paediatric intensive care environment. A hermeneutic phenomenological approach was used to study how these nurses interpret their lives and make meaning of what they experience (Van Manen, 1997a). Data was collected using taped conversations with five experienced paediatric intensive care nurses. The data was analysed using a selective approach so that a linguistic transformation allowed narrative interpretation of the phenomena as a whole and to secondly elicit major themes. The findings in this study, although based on a small population of paediatric nurses, points to the phenomena as being highly complex having temporal, emotional and interpersonal aspects to it. Three main themes were found namely: waiting to care and develop relationships, emotional labour, and consolation when a human being suffers.

It became very clear that, when time allowed, highly personal relationships developed as the nurse made connections with the child and family. The experiences although very painful also had moments of joy as the nurse was able to ensure that the understanding for the family was positive and rewarding. In the background, nurses were demonstrating highly complex skills both in terms of physical care and their abilities to make connections with the family, interpret their needs and show them the way during this highly private and emotional journey. The findings from this study indicate that this kind of client centred care is highly skilled requiring experienced and expert paediatric intensive care nurses. Support and guidance in the form of clinical supervision and guided reflection is vital in order to help support and develop nurses to take on this important aspect of care and to help develop these skills in more junior staff. Prior to having my eyes opened to the realities of withdrawal of treatment, this universal paediatric intensive care phenomenon appeared to be a commonplace occurrence. However phenomenological clarification has illuminated an aspect of intensive care life. If we wish to improve the quality of care that we give to this client group whilst continuing to support our staff, further research is required.

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What are your comments?

The Editorial Board would appreciate your comments on this publication. This can include any thoughts that you have regarding the structure as well as the content of the Newsletter.
We would particularly appreciate your suggestions on topics or issues that you would like to read about in future editions.

Forward your ideas to Franco Carnevale (Editor) :
frank.carnevale@muhc.mcgill.ca

4th World Congress on Pediatric Intensive Care

Hynes Convention Center
Boston, Massachusetts, USA
June 8 – 12, 2003
www.pic2003.com

Further information:
EIMP Inc.
759 Square Victoria Suite 300
Montreal, Quebec, Canada H2Y 2J7
Tel:514 2860855
Fax:514 2887945
Email:pic2003@eventsintl.com

In Boston, Geneva 2007 will take the opportunity to introduce the next World Congress which really will be become an European event.

Upcoming Conferences

29th Annual Meeting 'Gesellschaft für Neonatologie und Pädiatrische Intensivmedizin' – GNPI
Köln, Germany, July 3 – 5, 2003
Info: m:con, Daniel Ruckriegel
Rosengartenplatz 2, D 68161 Mannheim
Tel.: +49 621 4106 137
Fax.: +49 621 4106 207
Email: daniela.ruckriegel@mcon-mannheim.de

10th European Burns Association Congress
10-13 September 2003, Bergen, Norway
info: eba2003@congrex.no
Website to be announced
Main topics:
Burns in developing countries
Reconstructive surgery
Quality of life
Burn related research

The following **IPOKRaTES** events will be available on the internet at www.ipokrates.info and are mailed on request.
Neonatal Comfort and Care, Padua, Italy, June 8-11, 2003
Curriculum of Excellence in Neonatology: Respiratory Disorders, Paris, June 16-20, 2003
Paediatric and Neonatal Intensive Care, Lecco/Milan, Italy, June 23-25, 2003
Neonatal Imaging, Cracow, Poland, Sept 25- 27, 2003

14th ESPNIC Medical and Nursing Annual Congress
"Evidence - based Medicine in Pediatric & Neonatal Intensive Care"
November 20 - 23, 2003, Astir Palace Hotel - Vouliagmeni - Athens, Greece
Congress secretariat: Zita Congress & Travel S.A.
1st Klm Peanias - Markopoulou Ave., P.O. Box 155
Athens 190 02 Greece
Telephone: +30 210 6641190
Fax: +30 210 6642116 / +30 210 6642958
E-mail: info@zita-congress.gr
www.zita-congress.gr
Or: Jantie de Roos, director, Rose International
E-mail: jderoos@rose-international.com
Website: www.rose-international.com

15th ESPNIC Medical and Nursing Annual Conference
Imperial College, London, United Kingdom
16 - 18 September 2004
Send your name, address and e-mail details to
ESPNIC2004@rose-international.com to receive the Preliminary Programme and further information.
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