Journal of Nephrology and Renal Transplantation

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NURSING THE MACHINE: AN ETHNOGRAPHY OF A HOSPITAL HAEMODIALYSIS UNIT

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Abstract

This paper reports the process and findings of an ethnography conducted in a hospital haemodialysis unit. The aims of the study were to acquire a comprehensive understanding of how nursing care was conducted in a hospital haemodialysis unit and to identify structural and cultural enablers or barriers to the provision of patient centred care. Five themes were identified. “Doing more with less”, “who gets a machine?”, “technological creep”, “dialysis centred care” and “the bottom line”. These themes were seen to impinge on the nurses’ ability to provide patient centred care. The study confirmed that the nursing culture in the hospital haemodialysis unit did not enable nurses the opportunity to recognise the patients’ suffering and discomfort and failed to provide any interventions to ameliorate it. The focus for nurses needed to shift from care associated with the dialysis procedure to a more holistic patient centred model.

Keywords

Ethnography, haemodialysis, nursing, technology

1. Introduction

The patient with end stage renal failure (ESRF) requiring hospital based haemodialysis must endure the process of attending the hospital haemodialysis unit (HHU) three times a week, and for most this will be for the rest of his/her
life. Consequently, a significant aspect of treatment with haemodialysis is the need to conform to the monotony of dialysis regimens. In addition to dialysis, the patient must conform to rigid dietary and fluid restrictions to control symptoms. Multiple medications are needed to subsidise the shortfalls of dialysis and to treat several of the side effects of kidney failure. The relationships and family roles of the patient are often challenged resulting in social and psychological responses for these patients. These dilemmas have been identified as some of the many stressors of people requiring haemodialysis who attend HHUs [1-4].

The nurse, as the primary carer in the HHU, is the best-placed health care professional to offer support to patients suffering or feeling discomfort due to their treatment.

2. BACKGROUND

The clinical Nurse Consultant (CNC) for the HDU identified a number of instances where it seemed that the nurses were not providing patient centred care. Patients expressed feelings of despair and concern to the CNC regarding the diminished quality of life they were experiencing on haemodialysis. The CNC wanted to know why the patients were unable or unwilling to speak to other nurses about problems, which were causing them major concern. The study was conducted by the CNC to gain a better understanding of nursing care provision and to identify any structural and cultural enablers or barriers to the provision of patient centred care in the HHU.

Prior to commencing this study there had been little literature exploring the work of nurses in HHUs. The literature establishes that the major role of the haemodialysis nurse is the provision of the dialysis. Bevan (1998) suggests the nurse has become “enframed” by the technology of dialysis [5]. The word enframed implies that the nurse is surrounded or enslaved by the technology. Without the technology, dialysis nursing would not exist. The enframing of the nurse by the technology results in the focus of the nursing work shifting away from caring for the patient to the operation of the machine and associated technology.

The significance of the technical role is reinforced by Polischek (2003) who contends that the dominant action in the renal setting is the provision of the dialysis treatment [6]. However, he identifies the unique contribution of the nurse in the haemodialysis unit is responding to the experience of the person who is living on dialysis. Nurses in an Australian haemodialysis unit have described their role as that of supervising dialysis treatments and teaching patients to
manage their own dialysis and symptoms related to complications of chronic renal failure and dialysis [7]. Ran and Hyde (1999) suggest nephrology nurses should take up the challenge of looking beyond the technical expertise to form an empathetic therapeutic relationship with patients [8]. The nephrology nurse should function within a patient support role with emphasis on the additional functions of caregiver, educator, advocate, facilitator, mentor and referral agent.

Subsequent to commencing this research, an English study of the culture of haemodialysis units was published [9]. The ethnography aimed to determine themes that would help to understand the culture of dialysis units. The themes were survival, belonging-teams, them and us, leadership, communications and environment. From these themes, a theory of partnership emerged. These partnerships are forged between the patient and his/her diseased body, the patient and the machine as well as with other people such as the caregivers. Aswanden (2002) contends that a greater understanding of the culture of the haemodialysis unit could improve patients’ well-being. Through this concept of partnership there can be increased understanding about culture that could contribute to delivering improved patient care. Arguably, findings of the English study may not necessarily be generalised to every HHU.

Apart from the technological environment, the literature on the provision of nursing care to patients requiring hospital haemodialysis does not offer any other reason for nurses not providing patient centred care.

3. THE STUDY

3.1. Aims

The aims of the study were to investigate the culture of the HHU to acquire a comprehensive understanding of how nursing care was conducted and to identify the structural and interpersonal enablers or barriers to the provision of patient centred care within the HHU.

3.2. Methodology

The study method was ethnography. In a broad sense ethnography involves the researcher participating, overtly or covertly, in people’s daily lives for an extended period of time, watching, listening, asking questions and collecting whatever data are available to throw light on the issues that are the focus of the research [10].
The notion of culture is central to ethnography. Culture can be defined as the “total way of life of a group, the learnt behaviour which is socially constructed and transmitted” [11]. Individuals in a culture or subculture hold common ideas acquired through learning from other members of the group. No matter what the setting the general questions guiding ethnographic studies are the same: “What is it like to be a member of a particular culture? What are the rules guiding social behaviour?” [12].

The literature reveals a limited understanding of the nursing care provided in a HHU and of the relationships between the various members within this culture. Ethnography was chosen as the study method to help provide contextual meaning to the ways in which the people in the HHU interact and communicate. The focus of the research was the interactions between the nurses and patients, who were the major informants within the HHU.

3.3. Setting

The study was conducted in the haemodialysis unit of a large teaching hospital in Sydney, Australia. The HHU has 12 machines operating six days per week, 16 hours a day, for patients requiring haemodialysis treatments for acute or chronic renal failure.

3.4. Participants

As the study used an ethnographic method, all people attending activities in the HHU were participants in the study. The major participants were nurses and patients. Doctors, other health care workers, domestic and catering staff and patients’ carers and visitors attended the HHU for short periods during the study. There were 48 patients attending the unit for dialysis sessions three times each week. Fifteen nurses with differing levels of experience in nursing worked in the HHU either part time or full time. The unit was staffed to provide dialysis sessions for 48 patients with a usual ratio of one nurse to four patients. There are no data to compare this finding with other HHUs within the state or country.

3.5. Data collection

Ethnographic data collection involves observations, interviews and the review of relevant documents [13]. The CNC collected data over a twelve-month period. Participant observations were performed over a nine-month period for a total of 280 hours. Observations were performed on different days of the week and during different shifts in order to determine whether practices changed with
the time of day and week. All fieldwork observations were recorded in a field note diary during the observation periods.

Formal interviews were conducted following the observation period. The focus of the research was the interactions between the nurses and patients and formal interviews were limited to these two groups. Twelve patients and ten nurses were interviewed. Interviews were semi-structured, 30-40 minutes in duration and open-ended questions were used to keep the conversation focused. Patients were asked questions about what is it is like to be a patient on haemodialysis and about their physical, social and psychological symptoms and limitations. Nursing care provision and the primary nursing model utilised within the unit were discussed. During the interviews, the nurses were asked questions to identify whether they felt they provided technical or patient centred care and to ascertain the level of patient satisfaction with the type of nursing care provided to patients in the HHU. The topic of primary nursing and the appropriateness of this nursing model for the unit were also discussed. Interview data was recorded in note form by the CNC.

During the observation period documents including diaries, minutes of meetings, nurse rosters and patient notes were also examined to acquire information regarding nursing care provision and staffing in the HHU. Pertinent information was recorded in the field note diary.

3.6. Ethical considerations

Both the hospital and university Human Ethics Committees granted ethics approval. The ethics committees identified that individual participant consent for the observational fieldwork would be extremely problematic and disruptive to the study. Institutional consent was accepted by the ethics committees, as all observations were to be included in the study. Individual written consent was obtained for the formal nurse and patient interviews. Study information was given to all nurses, patients and carers/family. The study was discussed regularly at unit meetings to inform other members of the medical and multidisciplinary team. Other people who rarely entered the HHU included visitors and domestic and catering staff. These participants were advised of the study by the CNC if observations were in progress during their visit.

The work role of CNC changed significantly when the observer role was adopted. It was important for the CNC’s presence to cause minimal disruption, allowing the participants to display their routine behaviours within the setting. The issue of role change from CNC to researcher was addressed by the following
strategies. Information sheets outlining the change in role and its significance were circulated and discussed with staff and patients. During the fieldwork periods, the CNC dressed differently and wore an identification nametag, which said “researcher”. The fact that the fieldwork observation was performed during leave from the CNC role also helped to gain support for the different role.

3.7. Data analysis

Data analysis started during the collection of the first observation data. After every day of observation in the HHU, the field note diary was reviewed and memos made for the following day. The memos were used to clarify situations by questioning or observing similar encounters more closely. Further analysis used components from analytical processes proposed by Spradley [14, 15]. The first step in Spradley’s process is the search for cultural domains, which are the basic units in every culture. Further analysis of the data involved searching the data to identify the basic units and patterns using domain analysis [15].

To perform domain analysis multiple worksheets were constructed. The worksheet was ruled and had three headings: cover term, included term and semantic relationship. Using the example of the people in the HHU the cover term is the name for the cultural domain – people in the HHU. The included terms are the names for all the smaller categories inside the domain such as nurses, patients and doctors. The third heading is the semantic relationship. The semantic relationship forms the link between the two categories. For example, a patient is a type of person in the HHU.

This analysis became the basic method for analysing the domains and cultural themes. The second step is taxonomic analysis, which is the search for the way cultural domains are organised. Component analysis is the third step and involves a search for the attributes of terms in each domain and the meaning that is given to cultural categories. The final analysis is termed theme analysis. Theme analysis involves looking for relationships among domains and how they are linked to the overall cultural scene. A cultural theme is “any principle recurrent in a number of domains, tacit or explicit and serving as a relationship among subsystems of cultural meaning” [15].

3.8. Rigour

Strategies to ensure rigour in the study included the use of multiple methods of data collection – observations and interviews. Comprehensive field notes were
kept during the observations and patient and nurse interviews provided information, which confirmed or supplemented the observational data.

It was identified that the effects of the CNC as researcher needed to be considered as her presence may potentially alter the context and data collected. The trust of each nurse was established as they performed their usual practices and within a short while did not appear to react to her presence. The nurses openly engaged in discussion regarding their nursing practice and consistently answered questions regarding observations of their practice. The CNC had to remain reflexive and constantly question the participants as to the meanings they assigned to the same observed encounters. As the CNC was a student within a doctoral program, findings were also discussed regularly with the research supervisors and this helped to reduce the effects of bias in the study.

4. Results

The ethnography provided a wealth of information regarding the actors, activities, rituals, rules, communication patterns and relationships within the HHU. It is beyond the scope of this paper to provide the details of all the findings. The ethnography has been reported in its entirety in a doctoral thesis [16]. The major findings from the study were five cultural themes. These themes were “doing more with less”, “who gets a machine?”, “technological creep”, "dialysis centred care" and “the bottom line”. All of these themes were seen to impinge on the nurses’ ability to provide patient centred care to patients in the HHU. An explanation of each theme follows, including relevant extracts from interviews and the field note diary.

4.1. “Doing more with less”

The theme “doing more with less” represented the way nurses were experiencing an increase in demand for services because of increasing patient numbers without the provision of extra resources. These resources included the physical space, the number of machines and the number of nursing staff.

The increased demand had resulted in the nurses providing haemodialysis treatments for more patients. The sooner the patients were “on” (the machine) the sooner they were “off” and the sooner everyone goes home. The three “Gs” as it was known “get em on, get em off, and get home” was a sub theme, which was evident throughout the data. These behaviours were supported by HHU “covert rules”. For example, “five-hour” patients, (those who required five hour
treatments] were placed on a machine before the “four-hour” patients because this was perceived to allow a more timely completion of the shift. When asked about the importance of keeping to time one nurse replied:

“It is important to keep to time. If everyone [patients] came on time and there is no sick leave, this helps. Sometimes you think everything is okay and the patients will be “off” on time but there is a machine problem and someone is “off” late. If someone is “off” late, it throws the whole shift out and we get to lunch late or someone works through [the lunch break]. On a bad day things happen one after another. When we have a good day everything happens when it should and there are no delays” (field note 12/03).

4.2. “Who gets a machine”

The theme “who gets a machine” represents the way nurses are required to provide treatments for increasingly sicker and more elderly patients in unchanging environments as the number of people requiring dialysis increases. While the social justice principles of equity and access are overtly being upheld for patients there is an impact on nurses. Nurses evaluate the use of precious and limited resources and may not understand medical decisions to dialyse some patients.

Study data were rich with examples of nurses expressing their reservations about dialysing aged people especially those with co-morbidities. Statements by nurses included “why are we doing this?”, “what good are we doing this patient?” and “the doctors must be daft continuing with this [dialysis in a particular patient]”. This theme flows from the first in that it can be argued that, if the nurses were not pressured to provide more dialysis treatments, there would be little discussion around who should and should not be having the dialysis.

4.3. “Technological creep”

“Technological creep” is a situation that is occurring throughout healthcare in general [17]. It has resulted in practitioners at all levels requiring an increase in skill and by doing so dropping an aspect of their role which is presumably picked up by the next level practitioner. Nephrology nurses today fundamentally function as doctors have in the past [18].

Tensions existed between the doctors and the HHU nurses due to the nurses’ unwillingness to undertake functions previously performed by doctors for example who determines the amount of fluid to be removed during the dialysis session in the acutely unwell patient. There were a number of examples during
the observation period where the nurses waited for an extended period for a doctor to assess the amount of fluid to be removed during the dialysis treatment. On two occasions, the patient was “off the machine” before the doctor was able to attend the unit. When one nurse was asked why she did not assess the patient, she said:

“It is not my job to assess the patients. That is doing the doctor’s work. I have enough to do without doing the doctors’ work as well as my own.”

When asked whether she thought the lack of assessment had any detrimental effects for the patients she replied:

“Some times the patients come “off” on the wrong weight. We still take some fluid “off” but it is only our guess. If something goes wrong it would be the doctors’ fault for not coming and doing their job” (field note 12/03).

Resistance from nurses to take on new functions was noted, as they were ill prepared. Nurses also lacked the time to commit to further functions as identified in the previous themes. Realistically nurses could only take on other functions if they relinquished something from their existing role.

4.4. "Dialysis centred care"

Nurses in the HHU spent much of their time preparing machinery, connecting and disconnecting patients from the machine and attending non-direct patient care activities such as writing to doctors or reports. Other interventions, including the management of non-dialysis related physical needs and psychosocial concerns have become less importance over time or the skills have been lost altogether.

On interview some of the nurses understood what patient centred care meant but felt they could not achieve it because of other issues impinging on their practice. These issues included the doctors’ ideas around their own specialist practice and their insistence on treating dialysis and dialysis related issues only. Dialysis related issues included vascular access management, anaemia management, dialysis adequacy and complications from long-term treatment. Essentially, the nurses felt that the doctors’ care was focused around managing the technological aspects of care. In a number of interviews the nurses said they had “little room to move” as far as support from the medical staff, for patient centred care. The nurses believed that the specialist medical model dominated and that the model did not provide for the management of non-dialysis issues, especially psychosocial considerations. The nurses did not see their practice as being distinct from that of the doctors and believed that they were conforming to
the medical way of thinking. Although the nurses were the major providers and managers of patient care, they did not believe that they had the power to challenge the practice of the medical staff.

However, the doctors are not the only reason for the machine-focused care. Seven of the nurses interviewed reported that the technology was a major reason for choosing to work in the HHU. The literature identifies that technology attracts nurses to work in haemodialysis units [5, 19].

The non-technical work traditionally carried out by the HHU nurses has been abandoned.

“We are “haemo” nurses and we should not be expected to do other things like wound dressings. We have enough to do without having to look after the other things that the patient has. It isn’t an easy dressing and I really don’t want to do it any way. There are other things I could be doing” (field note 06/03).

When asked what the other things might be the nurse above replied:

“I have the doctor’s letters to write for my patients and that takes time because I have to look up the results and check the charts for the last month” (field note 06/03).

The reluctance of the nurses to relinquish their engagement with the dialysis was a central finding of the analysis. One nurse was able to provide personal insight into what made most nurses hold onto the technology rather than other aspects of nursing care:

“I have been doing this [haemodialysis] for a long time. I enjoy my job a lot and that is why I have not left (not that there is anywhere else to go). I am a good cannulator and the new or junior nurses always ask me to teach them or to help them. If I did not do the dialysis I do not know what I would be able to do here. They would give the things I know how to do to the other nurses or ENs and I would have to take on other things. I do not think there would be a job here for me. I hope the ENs don’t take over “(interview N10).

It would seem that at least for this nurse there was no insight into other functions the RN could do if technical tasks were relinquished to another level of nurse. The nurse feared that she would lose her identity as a haemodialysis nurse. Being a haemodialysis nurse was something she took pride in and it was difficult to imagine things any other way. The nurse went on to explain her desire to provide the technical care in the HHU.

“Patients thank us [the nurses] when we put the needles in easily and without hurting. Other nurses praise nurses who are “good” cannulators. We are looked up to by nurses outside of dialysis for our expertise in cannulating. Cannulating was always a skill of the doctor and not a nurse. The nephrologists are most
interested in talking with us about problems with cannulation and the dialysis process” (interview N10).

4.5. “The bottom line”

Within the HHU, the doctors and nurses focused their attention on the machine and dialysis related issues. This focus on the machine rather than the holistic care of the patient has become a barrier to the development of interpersonal skills between the doctors and nurses and nurses and patients.

The bottom line in any nursing care experience is the effect the nursing care is having on the patients. The nurses did not “know” the patients on a personal level. The nurses knew the patients’ dialysis prescriptions and the best places to put the needles in their vascular access, but they did not know how the patients led their lives and functioned as individuals outside the HHU. The nurses had little knowledge or understanding of the effort the patients expended in order to hold down a job, maintain a relationship or just to attain some normality in their life. One young female patient reported:

“They [health care workers] just don’t know. They just don’t know about the loss of freedom and the changes you have to make. They always say why aren’t you working? There is a misconception that dialysis gives you a normal life. It is a 24 hour problem and everything that happens to you outside the unit impinges on you as a dialysis patient in the unit” (interview P9).

The nurses were too busy attending to the machine to assist patients with non-dialysis issues. On interview a number of patients identified the nurse as being busy:

“The nurses here are always busy so I do not interrupt them. They have their jobs to do and I do not want to disturb them with my problems” (interview P10).

The patients were seen to be suffering without obvious recognition by the nurses.

One patient was in obvious pain due to an ischaemic hand. She was very ill from sepsis and obviously found relief by raising her arm in the air. The problem was that the affected arm was the access arm in which her needles were placed. The only time that the arm raising gained any attention was when the arm raising triggered the machine alarms and then the nurse would yell from the desk to tell her to put her arm down. As described earlier the patient was not asked why she continually raised her arm and was not offered any pain relief (field note 26/03).
5. Discussion

The findings of this study provided a rich description of the culture in a hospital haemodialysis unit. There is an overarching construct within the HHU where the machine and the provision of the dialysis treatment dominate and little else is seen. The doctors focus their attention on the dialysis and the related physical symptoms and management of renal failure. It can be argued that the doctors see the nurse as an extension of the dialysis process and therefore this obscures the nurses as co-professionals and dialysis treatments becomes a barrier to the development of interpersonal skills between the doctors and nurses. The nurses also focus on the dialysis. In essence, the nurse is nursing the machine and not the patient. Factors that support the technologically focused care are the time constraints of an increased workload, an unwillingness to take on new roles and an evolving shared attitude that the nurses are in the unit to provide the dialysis.

The “bottom line” is that the culture has evolved where nurses are both unable and in some cases unwilling to provide patient centred care which addresses the total needs of the patient. The haemodialysis nurse is "technologically enframed" and it is a dilemma for nurses [5].

In this study the themes identified by Aswanden (2002), survival, belonging-teams, them and us, leadership, communications and environment were not evident. In a HHU where the emphasis is on treatment and not patient centred care, partnerships between the nurse and patient did not develop [9].

Findings regarding the roles of the nurse have major implications for future nursing in the HHU. If nurses are only providing the dialysis, a task patients and carers can successfully attend at home; they risk being replaced by lower level nurses or technicians. There is a need for nurses to consider their future in the unit and skilfully plan for change. Redesigning nursing care to ensure the nurses are nursing the patient rather than the machine is the major recommendation from the study.

The implications of ineffective relationship between doctors and nurses in the clinical setting have a significant impact on each other and on the patients receiving care. Clearly, the nurse-doctor relationship acts as a barrier to the provision of patient centred care. The focus of the study was the interactions between nurses and patients. Issues around the relationship between the nurse and the doctor warrant a more in depth investigation.
5.1. Limitations of the study

The limitation to the study is the nature of the study methodology. The study was undertaken in one major Sydney teaching hospital. This ethnography is meaningful for the nurses within the HHU but may be assessed and approached differently in another haemodialysis unit.

6. Conclusions

The study findings confirmed that the nursing culture in the HHU did not enable nurses the opportunity to recognise patients’ suffering and discomfort and failed to provide any interventions to ameliorate it. Where the patient group was most needy, the nurses were not acting as they could to help the patient to overcome the difficulties.

Traditional systems of care delivery are being scrutinised for their clinical and cost effectiveness. Nurses in the HHU need to feel confident about their role by beginning to understand how delivery of these activities can be improved to take account of wider social, economic and technological changes. Haemodialysis nurses need to stand back and view their current practice and the effect these pressures are having on their ability to provide nursing care for patients.

Following this study, the nurses in the HHU engaged in Practice Development with the aim of shifting the culture in the HHU to one in which patient centred care is recognised and valued.

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REFERENCES


