

Organising the work: choosing the most effective way to deliver nursing care in a hospital haemodialysis unit

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Abstract:

The hospital haemodialysis unit (HHU) is faced with an ever increasing number of patients. The dilemma for nurses is how to approach the nursing work to achieve professional accountability and autonomy, patient centred care and optimum patient outcomes.

A number of models of care have been described in the literature and fall under the main categories of functional or task nursing, patient allocation, team nursing and primary nursing. Each model appears to be a legacy of a previous model as nursing care is seen to be constantly evolving.

A literature review was conducted to inform a project aimed at evaluating and formalising the model of care in our busy HHU. The model of care in the St George HHU was traditionally termed primary nursing. Over time, the role developed and primary nurses have been expected to take on more of the challenges of chronic patient management, which have been allocated in an ad hoc fashion. There has been input from the nurses but no clear guidelines regarding the prerequisites, attributes and educational supports and functions of the primary nurse.

The literature review confirmed that primary nursing is the most suitable model of care for the HHU. Subsequent to the literature review, the primary nursing program was formalised by developing guidelines, primary nurses were allocated to teams and educational packages were developed to support the primary nurse role.

Introduction

Our hospital haemodialysis unit (HHU) provides dialysis treatments for more than 140 patients and is the largest hospital based haemodialysis unit in Australia (ANZDATA, 2007). With our current annual growth rate at 7% in the last three years (St George Renal Department, 2006), there is every indication that this expansion will continue, providing increasing strain on already limited resources. It is an imperative that the HHU nurses maintain an effective model of care (MoC) that caters for

the growing patient numbers while supporting patients' individual needs.

Thus the aim of this paper is to provide information gathered from a recent literature review of different MoC utilised in hospital wards and the limited information available on MoC in haemodialysis units.

Method

Literature for this review was sourced from a search of MEDLINE and CINAHL databases. The chosen timeframe of the literature review was

Key Words

models of care, primary nursing, team nursing, haemodialysis, dialysis

1980 until present day. Articles were chosen when information was present that contributed to the MoC discussion. Key words used were numerous and included models of care, task, team, allocated and primary nursing. The term MoC is defined in various ways. For the purpose of this paper and the literature review, MoC is defined as the way nurses organise their nursing work.

The information gathered from this literature review was used to inform a project aimed at developing the most effective MoC in our HHU. The traditional MoC was primary nursing but over the years, primary nursing had evolved from ad hoc processes and primary nurses had no clear responsibilities and guidelines to formalise the role.

Results

In the literature the following four MoC were discussed; functional nursing or task nursing, allocated nursing or patient allocation, team nursing and primary nursing. A useful way to examine MoC is as a time continuum starting with an early model - functional nursing and ending with primary nursing, a more sophisticated MoC. Literature regarding

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each MoC will be discussed and then an overview of the evaluation of the various models will be presented. The paper will end with a brief overview of the way the literature was used to develop the primary nursing program in our HHU.

Functional Nursing

One of the earliest MoC in the literature is functional nursing. Functional nursing became obvious after World War II when nursing levels were critically low and the nursing workload had to be re-organised to cope with demand (Tiedman & Lookinland, 2004).

Functional nursing, sometimes referred to as task nursing, involves organising nursing work according to the principles of task allocation. Functional nursing places emphasis on tasks and these tasks are distributed according to levels of expertise. This model has a long association with nursing particularly when nursing students comprised the majority of the nursing workforce (Gullick, Shepherd & Ronald, 2004). Makinen, Kivimaki, Elovainio & Virtanen, (2003, p98) describe this model as “a mechanistic approach to the delivery of care, where task completion and maintaining the ward routine takes precedence over the needs of the individual patient”. This method had an inert weakness as it places emphasis on tasks rather than providing patient centred care.

Allocated Nursing

Allocated nursing sometimes termed total patient care, involves the allocation of several patients to one nurse who is responsible for delivering total care. The nursing care is handed over to another staff member at the end of the shift (Tiedman & Lookinland, 2004). This MoC emerged in the 1970s in conjunction with a growing academic focus for nursing (Gullick et al. 2004).

Transferring from functional nursing to patient allocation was shown to improve nurses' learning opportunities (Chavasse, 1981). Gullick et al. (2004) surveyed 20 wards in a major Sydney Teaching Hospital. Six hundred and twenty questionnaires were distributed and 212 were returned. Ninety four percent of staff felt allocation nursing had the greatest potential to meet the needs of the patients at this time. In research conducted in the United Kingdom, staff inexperience was a factor for not adopting the allocation model (Procter, 1991).

Team Nursing

Team Nursing has been described as

“Nurses and ancillary staff with different levels of education, skills and licensure are assigned responsibility for a group of patients for the duration of the shift under the discretion of an RN”
(O'Connell et al. 2006, p11).

The team nursing model needs an effective team leader (Wu, Berger & Courtney, 2000). This is possibly the weakest link of team nursing. It has been further suggested that when implementing a model such as team nursing there needs to be clear communication and role identification (O'Connell, Duke, Bennett, Crawford & Korfiatis, 2006). The literature documents tensions when implementing team nursing. These tensions have arisen between RNs and enrolled nurses (ENs) in the team nursing framework. O'Connell et al. (2006) found ENs felt they spent a disproportionate amount of time attending to hygiene while RNs spent the majority of their time delivering medications.

Walker (2002) describes a style of team nursing titled “Partners in Care” which was implemented in an

Australian hospital. While recognising the increasingly limited resources, this MoC encourages partnerships with RNs moving from allocated nursing to a partnered approach to patient care. Effective teams were formed between RNs, ENs and Assistants in Nursing.

Primary Nursing

Emerging in the United States in the 1960s, the primary nursing model involves patients being allocated to individual nurses (Tiedman & Lookinland, 2004). One RN is allocated a number of patients for whose care this nurse is accountable during the patient's hospital stay (O'Connell et al. 2006). The nurse-patient relationship is the backbone of primary nursing (Zander, 1980). The primary nurse becomes the spokesperson for the patient in the health care setting.

There has been a plethora of literature on the topic and the different ways of implementing primary nursing. It is beyond this literature review to address primary nursing in detail but it is important to note that there are ten elements said to underpin its use (Watts & O'Leary, 1980, p90). These elements are termed the five A's and five C's are included in Table 1.

These components help define some of the principal facets of the primary nurse model. Furthermore the ten qualities provide a useful framework to consider the type of care we provide to our patients in the haemodialysis setting.

The emphasis of primary nursing is continuity of care for the patient and higher autonomy and accountability of practice for the primary nurse (Makinen, Kivimaki, Elovainio & Virtanen 2003). Furthermore, primary nursing has been seen as a system that maintains standards and supports junior staff allowing

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Table 1. The five A's and five C's which underpin the use of primary nursing (Watts & O'Leary, 1980, p90).

1	Accountability	acceptance of the ultimate results of action taken
2	Advocacy	the process by which one pleads the case of another
3	Assertiveness	the indication of appropriate behaviour or feeling
4	Authority	the right to use power or control to influence or control others
5	Autonomy	the commitment to self-direction or initiation of independent action
6	Collaboration	the sharing of insights, skills, knowledge, and/or resources of people
7	Communication	an interaction or process in which information is interchanged
8	Commitment	support to a defined cause
9	Continuity	an uninterrupted process
10	Coordination	organised action

them to develop their managerial skills (Flowers, 1992).

Jovie, Calaway, Jorgensen and Swokowski (1988b; 1988a) describe the way primary nursing was introduced into a chronic haemodialysis service. The major responsibilities of the primary nurse are listed as the provision of clinical information to others who are involved in caring for patients in his/her absence, making information available to others in the problem-oriented medical record, instituting the steps in the nursing process when planning care for patients and finally discharge planning if appropriate. In the primary nursing model described by Jovie et al. (1988a) one nurse performs all the care tasks for assigned patients. In the absence of the primary nurse, the patients are cared for by a core group of associate primary nurses. The authors argue that the implementation of this

primary nursing model has led to the nurses having a better knowledge of the patient and therefore being able to provide more applicable and effective patient centred nursing care.

Primary nursing care in haemodialysis units has been described as having both positive and negative effects.

“Primary nurses in haemodialysis know their role is crucial to sustaining the lives of patients. They are involved not only in providing adequate dialysis treatments but in humanising the experience as much as possible” (Zander, 1980 p253).

The major problem identified when primary nursing is introduced into the haemodialysis unit is that in some instances the constant care by one nurse can lead to an over dependence on the nurse by the patient (Zander, 1980).

“Sometimes primary nurses can be too smothering and controlling” Zander (1980 p255). Primary nurses and patients form relationships in the haemodialysis setting that could cross professional boundaries. Nursing staff need to maintain professional distance and be aware of safe and unsafe practice in the chronic outpatient dialysis setting.

Quirk (1998) outlines the development and outcomes of primary nursing teams in a chronic haemodialysis outpatient unit. A decrease in venipuncture infiltration (bombs) was used in the evaluation of clinical outcomes. Episodes decreased from a monthly average of 17.8% to 7% following the initiation of primary nursing teams. Additionally, there was also a significant improvement in dialysis adequacy. The new model was also evaluated positively by staff and patients. Ilumin (2003) describes a planning tool for primary nurses in haemodialysis which serves as an educational and patient assessment guide. Ilumin also highlights autonomy, need for education and clear communication as key aspects of primary nursing in the haemodialysis setting. Primary nursing is described as the usual method of organising care in haemodialysis units in the United States but Quirk (1998) suggests that functional care delivery, in which it is not unusual to have a different assignment each day is practiced in many units.

While primary nursing is a superior model of care skill and staff shortages have been suggested as barriers for implementation (Procter, 1991). The literature has noted that future staffing changes may alter dynamics in nursing care (Hayman, Cioffi & Wilkes, 2006). When Procter studied three British wards, the system of task nursing was present due to skill mix and lack of staff. The only way to truly improve the model of care and introduce primary nursing would be to address these issues.

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Evaluation Literature

In terms of nurse satisfaction with different MoC, Makinen et al (2003) examined the relationship between three models of nursing and levels of stress in nurses. The three models examined were; allocated nursing, team nursing and primary nursing. There was no clear correlation between choice of model and levels of stress. Additionally, Gardner (1991) conducted a five year comparative study of primary and team nursing and found that there was no difference in the nurses' stress scores between primary and team nursing. In this same study staff retention in the units using primary nursing was longer than those utilising team nursing. Primary Nursing seems to receive an overall positive response and has been perceived as the most patient centred approach (Fraser, 2002). Primary nursing has also been described as promoting the role and status of nurses (Fraser, 2002).

In reference to patient satisfaction, it has even been suggested that most patients are unaware of which MoC is being used (Gullick et al. 2004). Wu et al (2000) compared team nursing and patient allocation MoC. The comparative study indicated patients rated no difference between MoC and level of patient satisfaction. When interviewed patients appeared more concerned about domestic issues such as food and the cleanliness of the ward. Patients also placed a high value on availability and attentiveness of nursing staff (Wu et al. 2000).

Thomas, McColl & Priest et al. (1996) surveyed 2078 patients in a large British hospital. Patients were questioned if they knew the name of the nurse providing care. The results indicated that only 49.6% were able to name their nurse but if they did there was a greater level of satisfaction with care. Again, there was

no significant difference in satisfaction between primary nursing and team nursing. Both these studies suggest that the named nurse approach is beneficial whichever MoC is chosen.

There is little literature addressing the comparative costs of the different MoC. The functional MoC has been viewed to be cost effective because of the reduced numbers of RNs required to enact it but this has not been confirmed in research (Tiedeman et al. 2004). Gardner (1991) conducted a five-year study comparing the cost of primary nursing with team nursing in eight medical units in New York. Primary nursing was found to be more cost effective and better at retaining staff. This has been confirmed by Tiedeman et al. (2004).

There are similarities and differences between British, American and Australian healthcare systems. There are also similarities and differences between the highly specialised wards and units that have evolved in our modern hospital setting. For these reasons it may be the case that one size does not fit all in regard to MoC. For example Adams & Bond (1997) demonstrated that medical ward nurses have greater autonomy than surgical wards or orthopaedic wards. Autonomy is a key ingredient in the primary nursing MoC.

The literature also suggests that the way that a MoC is introduced is important. When introducing a new MoC it has been noted that a top down approach meets resistance (Fraser, 2002). To ensure success, nurses at the ward level should be involved in the implementation of a new MoC (Fraser, 2002). Change is difficult and nurses often struggle with its demands. Whichever model is chosen, good communication is crucial for smooth transition in the change process (Hayman et al. 2006).

A final consideration in the use of primary nursing is the support of the line manager. Ultimately the Nurse Unit Manager (NUM) ensures that accountability and quality of care is maintained at a high standard. A nurse-manager's skill in management and staff development is the greatest contribution to the long term, lasting success of primary nursing (Zander, 1980). Support of the NUM is critical when implementing a new MoC.

Implications for clinical practice

Traditionally the St George HHU has implemented a primary nurse MoC. Each patient has a case manager, titled the Primary Nurse. The literature review has helped to confirm that primary nursing is the most appropriate MoC to manage the patients' individual needs. Changes have been made to the HHU primary nurse program as a consequence of the literature review and other evaluation methods including staff and patient satisfaction. The major change is a blending of team nursing with the primary nurse model. Satisfaction surveys from the nurses revealed that they found it difficult planning for continuity of care when they were on leave. The teaming of primary nurses also acts as a support for novice primary nurses who can learn from their more experienced colleagues.

Currently, primary patient allocation is based on teams of 3-4 staff. Full-time staff are allocated 5-6 patients. Part time staff have fewer patients depending on the number of shifts worked. Each team is given a name chosen by the members of their team. The teams have at least one senior primary nurse who has a mentoring and leadership role. Team members will cover for others when on leave or on days off. This ensures that when a staff member is on leave the primary care for the patient continues with a team member who is familiar

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with the primary nurse's care plan and the history and complexity of the patient.

In our current haemodialysis environment it would not be practical to roster a primary nurse for each shift that his/her primary patients attend haemodialysis. Therefore this model has to be adapted to the chronic haemodialysis setting and other nursing staff enact the care plan implemented by the patient's allocated primary nurse on a day to day basis.

Patient stories have indicated that primary nursing has been well received by our patients. Staff are generally satisfied with the approach but Practice Development was utilised to examine the strengths and weaknesses and further develop the model to cater for the increasing needs of the patients. Additionally, Practice Development groups addressed several key learning areas. The result has been the development of learning packages including the topics of single needle dialysis, calcium and phosphate management, anaemia management and fluid assessment. The learning packages are distributed and evaluated by the clinical nurse educator (CNE) and a certificate is issued when the criteria of assessment is fulfilled. The development of effective tools to educate and guide nursing staff is imperative as primary nursing develops in the haemodialysis setting.

Conclusion

A review of the literature suggests that each MoC appears to be a legacy of a previous model and nursing practice appears to constantly be evolving. Primary nursing is evaluated as the best MoC and its greatest strengths are autonomy and continuity of care. Several aspects of primary nursing care lend favourably to the haemodialysis

setting. Greater autonomy and the named nurse approach contribute to patient and staff satisfaction. The HHU nurses will continue to use primary nursing as our preferred MoC. The primary nurse approach continues to be redefined and extended as the healthcare setting seems to be placing greater autonomy and responsibilities on nursing staff. Nurses need to be educated and supported to ensure that nursing care is of a high standard to maintain a quality of care that supports this autonomy. It appears that whatever MoC delivery is chosen there is a need for it to be malleable and adaptive for it to succeed in the modern hospital setting.

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