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Citation for published version:

Wood, A, Tocher, J & Rodgers, S 2019, 'Delivering direct patient care in the haemodialysis unit: A focused ethnographic study of care delivery', *Journal of Research in Nursing*, vol. 24, no. 8, pp. 712-725.
<https://doi.org/10.1177/1744987119883406>

Digital Object Identifier (DOI):

[10.1177/1744987119883406](https://doi.org/10.1177/1744987119883406)

Link:

[Link to publication record in Edinburgh Research Explorer](#)

Document Version:

Peer reviewed version

Published In:

Journal of Research in Nursing

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TITLE:

Delivering Direct Patient Care in the haemodialysis unit - a focused ethnographic study of care delivery

ABSTRACT

Background: Direct patient care is a term used within nursing and healthcare to help quantify and qualify care delivery. Direct patient care time is considered as a valuable measure by healthcare providers to indicate efficiency and to quantify nursing work, however little is understood of the patient experience and care delivery in haemodialysis settings.

Aim: To gain an understanding of patients' and nursing staff perceptions and experiences of 'direct patient care' within one haemodialysis unit.

Methods: A focused ethnographic approach utilised participant observations, informal questioning, photographs and 27 semi-structured interviews of registered nurses, clinical support workers and patients. Observation notes and interviews were transcribed and thematically analysed.

Results: The key finding was the construction and reconceptualisation of care delivery in this setting. Care was identified to be delivered in two distinct ways, both of which allowed patients to feel cared for. 'Active care' where patients feel cared for when they are being dealt with directly by staff and 'Passive care' where patients feel cared for through staff availability and visibility.

Conclusion: Developing this understanding of patient care delivery in this specialism has highlighted some important aspects to the way care can be delivered which challenges current traditional understandings of direct patient care. Time spent with a patient is not the only important consideration to patient experience in haemodialysis. This understanding of passive care could improve care experiences in this setting.

INTRODUCTION

Internationally there has been a shift in focus towards efficiency and effectiveness of healthcare services, with the implementation of programmes focusing on LEAN principles (Radnor et al., 2012) and methodology. One approach to measuring efficiency is to give a value to how much time clinical staff spend directly with patients. This approach implies that the more time staff spend directly with patients, the higher the quality of care. Maximising staff time spent providing direct care is therefore considered one way to improve patient experience. Within Scotland, the Releasing Time to Care (RTC) programme aims to improve healthcare efficiency and patient experience. One element of RTC is the measurement of direct patient care (DPC), defined as the amount of nursing time spent directly with patients (Robert, 2011). DPC is likely to vary within different healthcare settings, depending on the length and technicality of treatment. A patient requiring haemodialysis therapy can spend significant amounts of time in the haemodialysis unit receiving highly technical, life-saving treatment. These patients have a potentially high level of interaction with clinical staff and are therefore an interesting population to consider in relation to direct care metrics.

To apply measures of DPC for haemodialysis therapy, understanding is required of what constitutes direct care in this setting. A haemodialysis unit is a loud and highly technical environment (James, 2008). Treatment can involve three sessions of up to five hours per session, per week (Bevan, 2000). It is viewed as both a lifeline (Hagren et al., 2001) and a part-time job by some patients (Faber et al., 2003), who can struggle to gain a sense of control (Lindsay et al., 2014). The haemodialysis experience can evoke fear meaning that patients have significant emotional and informational needs (Lai et al., 2012).

Patients identify listening as a key and valued activity of the haemodialysis nurse (Bonner and Lloyd, 2011) alongside being attentive and including the patients in decision making (Glyde et al., 2019). Additionally, staff being gentle and supportive regarding cannulation contribute positively to care (Chenitz et al., 2014). Patients report a high level of trust in nurses, stating that a nursing presence makes them feel safe (Lovink et al., 2015). That said, haemodialysis nurses have been observed to be technology, rather than patient, focused and to treat the patient and dialysis machine as one unit (Bennett, 2011). While skilled technical care is valued (Chenitz et al., 2014), there is evidence that patients want genuine caring (Tanyi et al., 2006). Some patients value time spent with nurses, while some value other forms of caring more (Van der Veer et al., 2012). Indeed, silent care has been suggested to be prevalent in the haemodialysis unit with the concept of technological intimacy proposed, but there is no research exploring how these are experienced by either nurses or patients (Bennett, 2011). While patient perspectives have been explored, little is known about nurses' perspectives of patient care during haemodialysis. This study therefore aims to explore the experiences of nurses, clinical support workers (CSWs) and patients to increase understanding of DPC in a haemodialysis unit.

METHODOLOGY

This study employed a focused ethnographic approach (Venzon Cruz and Higginbottom, 2013) to explore the experiences of staff and patients in haemodialysis unit in Scotland, UK. The research initially used overt observations supplemented by informal questioning and photographs of those observed. This was complemented by semi-structured interviews with nurses, CSWs and patients.

Sample

All nurses and CSWs who were regularly employed in the dialysis unit and patients who were regularly attending for treatment were eligible to take part in the study (table 1). Potential participants were initially approached by the charge nurse and given written study information. The study team had no access to participant details until they gave written permission to be approached by a researcher. All participants gave written informed consent for each individual aspect of the research. A smaller purposive sample was selected to take part semi-structured interviews. Purposive sampling for staff was representative of gender employment in the unit and the patient sample was representative of gender and time of treatment (e.g. morning versus evening).

Table 1 – inclusion and exclusion criteria

Inclusion Criteria	Exclusion Criteria
Nursing Staff / CSW working in the unit on a regular basis	Patients who were prisoners.
Patient attending the dialysis unit on a regular basis	Patients who were visiting the unit, on holiday dialysis or receiving treatment as inpatients.
Adults without capacity to give informed consent could be consented by relatives	Nursing Staff / CSW who were not working in the unit regularly, sent to cover a shift

Data collection

Data were collected by the principal researcher, who was a registered nurse with three years' experience and employed in the study dialysis unit. As such, she was ideally placed to implement an ethnographic approach. This 'insider' role (Asselin, 2003) provided background understanding of the unit and unique opportunities through already being known to some participants. It allowed for the establishment of rapport and trust to facilitate data collection. All observations and interviews were undertaken outside of the researcher's employed hours in the unit. The researcher entered the 'field' in November 2013 and data were collected from January to August 2014. Observations were focused on the dialysis room, which was the central space shared between patients and nursing staff. This allowed patients and staff to be observed over a 'usual' dialysis appointment. It provided natural beginning and end from the patient's perspective, and a manageable observation period for the researcher. Observations lasted between 4-6 hours, totalling 127 hours. Observing different rooms on different days and times, and with different patients' maximised opportunities to understand the whole unit. Each observation included between 4-8 patients and 3-6 staff members. Extensive field notes were written, which were then transcribed. During observations, over 100 photographs were taken, alongside informal questioning of participants, which was also documented in field notes.

All semi-structured interviews were conducted within the unit separately to scheduled observation sessions. They took place either during a patient's planned treatment or during a staff shift. Patient interviews took place in a private dialysis room rather than in the larger

shared rooms and staff interviews were conducted in private, outside the unit. A digital audio recorder captured the interviews, which were transcribed verbatim. A reflective diary captured the researcher's thoughts alongside the data collection in order to support reflexive practice.

Ethical considerations

The study was approved by the NHS Research Ethics Committee and NHS clinical managers. Observations only took place in spaces where all patients and staff had consented. Communal spaces were excluded due to lack of consent. Participants could take part in only the observations, observations and photographs, or both these elements and an interview. Participants were free to withdraw from the study at any time, and the unit staff and patients were given advance notice of observation sessions occurring. Consent was checked verbally at each data collection point. All data were anonymised, including photographs.

Data analysis

Observational field notes and transcripts from semi-structured interviews were analysed in NVivo 10 (QSR International Pty Ltd, Doncaster, Victoria, Australia) using thematic content analysis (Braun and Clarke, 2006). Initial analysis was conducted following 12 hours of observation. Preliminary concepts were recorded after open coding of initial observations. These concepts informed further observations and topics explored during semi-structured interviews. This iterative process continued until data collection was completed. This form of analysis was in line with the ethnographic approach due to its inductive nature. It involved examining the transcripts of fieldnotes and interviews to assist in coding and labelling of the data. Labels or nodes were assigned to this written data, and these then collapsed or joined with others to become themes or codes. This initially resulted in over a hundred small nodes, which condensed as the analysis progressed to become themes and subthemes.

Trustworthiness

Trustworthiness describes the validation or verification of the research findings within qualitative research (Lincoln and Guba., 1985). Ethnographic studies have utilised various verification strategies to ensure trustworthiness (Rashid et al., 2015). This study employed four different strategies: triangulation, prolonged engagement, thick description and reflexivity. All data sources were drawn on to perform triangulation. Comparing data and concepts from observational data and interview data strengthened the analysis. Opposites highlighted disparate views or different aspects. Mismatch across data and themes was considered important and remained highlighted. This was reported within results. Thick description allows readers to make decisions regarding transferability due to the detailed accounts of participants and settings and gives confidence in the researcher's interpretation of the findings (Geertz, 1973). Trustworthiness was also demonstrated through extensive and prolonged engagement in fieldwork (Koch, 1994).

Reflexivity

Reflexivity played a key part in the research process and analysis, particularly in light of the researcher's insider status as an employee in the unit, which resulted in prior knowledge and potential bias. Reflexivity relates to conscious reflection by the researcher about how they shape, and are shaped by, the research process, analysis and the research findings (Finlay,

2002). Engagement by the researcher in their pre-research position through fieldnotes and discussions with supervisors, and reflection on observation sessions, the data generated and time spent as a researcher within the unit supported the researcher to focus on their impact and influence on the research process. This also occurred in the analysis stage by considering the data collected, alongside the influence of the researcher on the data and the potential resulting bias.

RESULTS

In total 102 participants were involved in the study (table 2):

Table 2 – Recruitment numbers and distribution across methods

	Participant Numbers for Observations	Participant Numbers for Photographs	Participant Numbers for Interviews (male /female)
Patients	55	55	12 (7 / 5)
Registered Nurses	42	39	12 (1 / 11)
Clinical Support Workers	5	5	3 (2 / 1)
Total	102	99	27

Thematic analysis

A DPC delivery model was constructed through the analysis of both staff and patient data. DPC was delivered in two distinct ways; active care and passive care (figure 1). During active care, the staff member and patient spend time together, there is some engagement or involvement between them and the interaction may involve verbal dialogue. During passive care, both staff and patients perceive that care is given, but there is no active involvement or engagement. There is physical visibility between staff and patient, and there is perception of availability. Active care for one patient may be construed as passive care for another patient who is nearby.

Active Care

During active care, patients feel cared for when they are being dealt with directly by staff as part of a clinical task or conversation. Active care involved tasks such as patients being ‘put on’ (attached to) or ‘taken off’ (disconnected from) the haemodialysis machine, the assessment for fluid removal, holding the fistula, or having a discussion about treatment or just general conversation (fieldnote 1).

‘Nurse’ Don (patient) shouts out. ‘What’s up? - oh you’re leaking’, she grabs a large square absorbent pad from a nearby trolley. ‘Has this happened before? I’ll clean you up, we’ll put some kaltostat under your

needles', putting the pad underneath the patient's arm. 'I'm going to get wipes' (fieldnote 1)

Time together

Time spent together was viewed as necessary, but at times also as non-essential. Staff and patients were actively involved in these encounters, which were achieved through casual discussions, education, and discussion about treatment and/or assessment. Staff clearly understood the importance of time together and made a conscious decision to spend time with patients. This was achieved in different ways, ranging from pulling up a chair and sitting to chat, or standing beside them. The registered nurses particularly did this during clinical tasks.

'Generally speaking, its either at the beginning or when they are coming to do the checks, or give me drugs or something, generally people don't stop and chat, unless they are coming to do something' (Donald, Patient)

While most time spent together was orientated around clinical tasks, one nurse was observed rubbing a patient's feet with cream during dialysis. Time together did not always involve verbal communication. The same clinical task could be performed differently depending on circumstances, for example a patient might be awake or sleeping, or clinical pressure sometimes created other priorities (fieldnote 2).

***The administration of Intravenous Iron supplements is a task where the patient has the registered nurse beside them for the 5 minutes in which the drug is administered into the blood lines through the machine... Huge variation between what happens during this 5 minutes. Some staff take a chair over and sit down whilst administering, I have seen one nurse who positioned herself behind the machine, so that they could not see the patient whilst administering the medication into the machine, and sometimes there is a full 5 minutes of conversation and then beyond the activity. There is usually an acknowledgement from the nurse to the patient to suggest that they will be administering the medication but when the nurse is doing this, some patients don't even take their nose out of the crossword book or iPad. (fieldnote 2)*

One difficulty for staff and patients was the overriding clinical and emergency aspects of care, which took precedence. Preference was given to the physical aspects of dialysis. Staff acknowledged that some patients required more time and/or attention than others and would leave one patient to deal with something else, without always returning to the original patient.

Verbal dialogue

Verbal dialogue was a distinct element of active care that occurred during time together. Close proximity was sometimes unnecessary. Verbal dialogue also occurred when staff were at the desk and raised voices were used across the room. Staff dealing with one patient sometimes engaged verbally with other patients at the same time.

'Paula (nurse), who will have a conversation with someone across the room, with several at the same time' (Tina, Registered Nurse)

Staff highlighted the importance of talking with patients, as the amount of time spent in the dialysis unit could affect their opportunities to socialise. Patients also felt that staff were willing to spend time with them to answer questions and explain their treatment to them.

'They (the staff) are willing to sit and talk, and help me, help me get through it' (Martha, Patient)

'Banter' was a highly valued form of verbal communication by staff and patients, providing a more friendly, light-hearted and informal non-treatment related discussions. Humour was used by patients and staff to keep them entertained and distracted during treatment time.

Passive Care

During passive care, patients felt cared for through the availability and visibility of staff, even when staff were not in close proximity or were providing care to another patient. Passive care was delivered when staff were in a room with patients. Passive care involved tasks such as preparing a dialysis space in the same area as a patient on a dialysis machine. During passive care, staff were otherwise engaged but visible and available. For example, patients perceived that they were receiving DPC when staff were focused on using equipment or writing notes (fieldnote 3).

'Silence between the nurse standing at the side of the patient and the patient who is sitting in the chair, nothing is being said. The nurse stands with her apron and gloves on, and the patient sits in the chair, both waiting for the machine to alarm and break the silence between them (Fieldnote 3)

Visibility

Staff being physically visible and always in the room was important to patients. They felt reassured about completion of dialysis without complications. Indeed, a staff member always being in the room was unit local procedure. Patients viewed staff being in the room as a positive experience of care.

'Just keeping an eye on the machine, keeping an eye on my needles, that they are still intact, and they are firm, with the tapes, we have had those problems in the past, especially if I fall asleep, that somebody is keeping an eye on me, and I feel quite confident that they are' (Emma, Patient).

Availability

Staff availability was closely linked to visibility. Availability was considered vitally important when patients were receiving treatment, as staff were required to react to issues and provide care. For example, one patient felt that the buzzer system allowed staff to be alerted if they required assistance. Patients did not always want active care when receiving their dialysis treatment, but wanted staff to be available if needed. An example of this was staff writing notes at the desk while patients received their treatment.

'There is always someone at the desk if you don't feel right' (Edward, Patient)

The dialysis rooms were mostly open spaces, with the desk in a central position, so if staff were at the desk they were visible in the room. Patients in cubicles, however, were unable to see staff and this was highlighted as a concern. The availability of the staff, despite not doing anything directly for, or with any patients, provided a feeling of being cared for. Figure 2 illustrates both active and passive care. The nurse at the desk is not actively engaged in DPC, but is still perceived to be providing passive care. Two staff members are providing active care to one patient, but since they are available to other patients in the room, they are also delivering passive care.

DISCUSSION

This aim of this study was to explore the experiences of nurses, CSWs and patients to increase understanding of DPC in a haemodialysis unit. The resultant model of DPC identified DPC being delivered in two distinct ways: active and passive care. Active care was defined as direct involvement or engagement, either physically or verbally, between the patient and staff. By contrast, in passive care there was no direct involvement or engagement, but patients felt cared for through the availability and visibility of staff, even when staff were not in close proximity. Patients and staff constructed an experience of care in a non-traditional way. Passive care, was not an engaged interpersonal process and nor was it merely 'presence'. This research has reconceptualised the provision and delivery of DPC within the haemodialysis unit. The concept of passive care highlights that care is more than direct time spent by staff at a patient bed, or being near a patient, and demonstrates the poor value in measuring nursing work only in terms of traditional DPC in LEAN and efficiency models. The study is important because it provides understanding of the limitations of measurements within models such as RTC. The inclusion of passive care in future efficiency models could give a better measure of patient care and experience.

DPC is defined as being 'at the patient, or near the patient' within the RTC programme. The conceptualisation of active care enhances this description further by suggesting there is a requirement of engagement or inclusion of the patient in the care provided. Patients and staff acknowledged the difference between engaging with each other, rather than just being nearby. Time together on an individual basis was demonstrated in a variety of ways, predominantly when patients were getting prepared for, during or when discontinuing haemodialysis. All groups of participants identified the importance of spending time with each other during this regular dialysis experience, which aligns with the original terms of reference for DPC. This research suggests it is not just the physical proximity or being beside the patient during their healthcare experience that is important. This echoes other work where patients seek time with staff, as a form of support and to receive information when receiving treatment in the haemodialysis unit (Lai et al., 2012). Various other scholars have described this concept of nurse and patient spending time together, or the nurse being there, as a way of caring (Ford, 1990; Berg et al., 2007; Holopainen et al., 2019). 'Nursing action' has been described as a way of caring, either doing something for the patient or being with the patient (Brilowski and Wendler, 2005). Active care differs from these concepts by focusing on the need for active engagement with, or involvement of the patient.

While some active care interactions focused on non-verbal interactions such as smiles and nodding of heads, verbal dialogue was one valued way of delivering active care. Communication constitutes a crucial element of care, impacting quality of nursing care and patient satisfaction (Fleischer et al., 2009). Previous research in a haemodialysis setting suggested that nurses spend time talking with patients but usually only in connection with

clinical duties, sometimes leading to poor care experiences (Moran et al., 2009). The current study highlights the value of all types of verbal dialogue between nurses, CSWs and patients, and its positive contribution to care over and above just being at a patient.

The findings in this study emphasise the importance of presence in providing care. The term presence is thoroughly discussed in nursing literature and this study suggests its' importance within DPC. In active care, presence is demonstrated through active engagement with the patient and requires more than simple physical proximity. Benner (1984) established presencing of the nurse, which is the art of being with a person or patient, without the need to be doing anything to them. Doona et al. (1997) argued that presence is more than simple nursing action. Instead it focuses on the patient through a unique, intersubjective encounter. Similarly, research within an ICU context has shown that the engagement with patients through touch, voice and intent highlights engagement as a key element of both care and the role of the nurse (Estabrooks and Morse, 1992). Close physical proximity has been established as an essential aspect of presence and includes engaged availability (Easter, 2000). However, in contrast, this study highlights that patients considered staff to be present and providing care in a passive way. This research suggests that DPC can be delivered through passive care. This contrasts with much of the existing literature detailing care as an active engagement or encounter.

The importance of staff being available in the haemodialysis setting is highlighted by (Yngman- Uhlin et al., 2016). The current study suggests that the availability and visibility of staff, when not directly interacting with patients still allows patients to feel 'cared for'. Conversely, the findings also imply a dissatisfaction when nurses are not readily available, as reported by (Henderson et al., 2007) in the context of inpatient care. Patients understood when staff could not spend time with them, but were dissatisfied when staff were not available to respond to their immediate needs. Passive care still requires the nursing staff to be available if required.

The data from this study supports the idea that 'good' nurses are those who work in proximity to patients providing total patient care (Schluter et al., 2011), although it also suggests care can be provided in other ways. Proximity concerns physical distance, and in the current study, nurses provided passive care by being in close proximity to patients, checking machine settings or needles, while patients read their books or watched the television. The patients felt cared for despite not being actively engaged in the processes. This element of passive care is similar to the concept of 'hovering' (Allan, 2002) as a way of nursing staff being there within a fertility unit context. This ethnographic work highlighted nursing staff as 'being there in the background' and ready to respond by hovering in the corridors and near patients. Additionally, this work highlighted that both nurses and CSWs hold this position which has strong correlation to results from the haemodialysis unit with both nurses and CSWs delivering valuable passive care. Despite the reason for visiting the clinical areas and subsequent treatment is different, both these works illustrate that staff being visible and available is still valued in both these differing clinical contexts.

Passive care can include presence and/or close proximity. These may be important for caring but are not the totality of caring and are not necessary at all times. Passive care was delivered through the availability and visibility of nursing staff. A lack of direct engagement from staff during a patient's time in haemodialysis did not detract from the caring process, since engagement between the two individuals was not the only way that care was delivered. When exploring nursing caring behaviours, Hegedus (1999) reported that patients felt comforted by

the silent presence of nurses. This is similar to the concept of passive care in that it suggests a lack of interaction or direct engagement, but a feeling of being cared for nonetheless. The exploration of care or 'caring', has been widely discussed, and this research seeks to support and extend concepts within the current evidence base. Morse et al. (1990) discuss five concepts of care; caring as a human trait, caring as a moral imperative, caring as an effect, caring as an interpersonal interaction, and caring as a therapeutic intervention. Active and passive care have a strong correlation to three of these; caring as an interpersonal interaction, a therapeutic intervention and also an affect (Morse et al., 1990; Morse et al., 1991). Particularly interpersonal interaction supports engagement within active care, and the feeling of being cared for without engagement aligns with the concept of caring as an effect as within passive care.

A lack of interaction between nursing staff and patients may suggest to an observer that there is no care or experience provided, but this research suggests a significant value in nursing staff being present in the room, despite a lack of attention or engagement. This lack of direct engagement should not be interpreted as staff 'doing nothing' as they were observed to be busy. The term 'direct patient care' within RTC and LEAN approaches, suggests that closeness is required for positive patient experiences and that this is valuable to patient care. The concept of passive care illustrates complexity within the care delivery process and highlights that the current definition of DPC within RTC and LEAN approaches may be too simplistic. Care in this context is more than staff and patients spending time together and is considerably more than simply being close. This has implications when considering safe staffing levels, the layout of haemodialysis areas and the creation of a positive environment for patient care.

In this study, focusing only on DPC did not adequately measure the total experience of patient care. Such a measure did not take into account factors such as the environment and how this allowed patients to feel cared for, even when they were not receiving traditionally defined DPC. Rudge (2013) suggested that LEAN approaches may have a limited impact on healthcare staff productivity. However, this study suggests that in addition to measuring DPC, healthcare managers need to consider the layout of areas and the workflow of staff in the measurement of patient care. With LEAN and efficiency being prominent within healthcare (D'Andreamatteo et al., 2015), it is crucial to understand the term DPC and how it adds value to healthcare in this context, as well as showing efficiency and measuring nurses work. By planning workspaces to maximise staff visibility, there is the potential to increase patient perceptions' of staff availability. This could lead to increases in positive patient perceptions of care. Additionally, the study acknowledged the contribution of CSWs to patient experience, meaning that there is a need to consider the role of both nurses and CSWs in patient care. Given the development both roles, and the change of skill mix and distribution of staff further exploration is required better understand how this might impact on the future measurement of patient care.

Limitations

While extensive time was spent in the field, the 127 hours of observations were spent only in the clinical rooms and not the wider unit. This may have limited the opportunities for care to be witnessed. The sample size and single site limits the variety of scenarios that occurred, with ethical stipulations limiting the observation opportunities. Within ethnographic research, qualitative analysis and particularly insider research, there is the potential for existing knowledge and role to introduce bias across data collection and analysis. Efforts to

limit this were made through the triangulation of the data and the use of a reflexive diary, and also discussing what was seen and written with the co-authors. The position of being an insider was viewed as a positive step to facilitate engagement with the environment, potential participants, and the context of the study.

Methodological Considerations

The method supports all three participant groups to contribute to the construction of care delivery in this shared area. As staff delivered care, and patients engaged with staff or received care in different ways, the concepts discussed here allow a shared understanding of care in area haemodialysis unit. The use of focused ethnography to explore the concept of DPC allowed for the consideration of multiple methods and context to provide deeper understanding. The use of focused ethnography is not considered a limitation, the approach allows the synthesis of data from different methods and participant groups to be synthesised with relation to context (Savage, 2006).

CONCLUSION

This study conceptualised DPC as either active or passive in a haemodialysis setting. In active care, direct involvement or engagement, either physically or verbally, between the patient and staff contributed to DPC. During passive care, in contrast, perceptions of high staff visibility and availability, without patient engagement, contributed to DPC. This illustrates the poor value in measuring nursing work only in terms of currently defined DPC in efficiency models. Time spent with a patient, is not the only important consideration to patient experience in this setting. The inclusion of passive care in future efficiency models could give a better measure of patient care and experience. Healthcare managers should consider the layout of areas and the workflow of staff. Planning workspaces to maximise staff visibility would increase perceptions of availability. In turn, this could lead to increased positive perceptions of care.

Key points:

- This paper contributes to the contextual understanding of the term direct patient care, which is used in healthcare efficiency.
- Care is valued in a haemodialysis unit context through both direct engagement with staff and through staff availability and visibility
- Both registered nurses and clinical support workers are valuable in providing patient care in a haemodialysis unit
- Some non-traditional elements of care are valued by patients and are a key part of a positive patient experience.
- This research should be considered when reviewing healthcare environments and will have an impact on nursing staff, through their visibility and availability to patients as part of their caring processes.

Funding: This research was funded as part of a PhD studentship at the University of Edinburgh.

Ethical Permissions: A favourable Ethical opinion was received from the NHS Ethics committee in November 2013 (Ref: 13/SS/0163).

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