Patients with end-stage renal disease (ESRD) can spend a considerable length of time in hospital owing to the worsening of their condition, underlying comorbidities or complications of renal replacement therapies. However, ESRD patients tend to be asymptomatic until stages 4 or 5 and therefore may not need to be admitted to an acute medical ward until the latter stages of their disease (Yu and Tsai, 2014).

For the majority of patients with ESRD, the dialysis journey will begin and end in hospital (Renal Association, 2014). Some patients may find that there is a need for more frequent and increasingly longer hospital stays because of complications relating to access and a number of comorbidities, for example. Length of stay can vary greatly from a few days to several weeks, depending on the reason for admission (Yu and Tsai, 2014).

According to Gardiner at al (2014), it is generally accepted that the last year of a patient’s life will be marked with increased hospital stays. However, it is also believed that, given the choice, patients would rather not be in hospital at all. Therefore, any intervention to improve patients’ experience and reduce their length of stay should be welcomed (Redfern and Sinclair, 2014). In this article, the author discusses the introduction of a staff education programme on an acute medical ward, which was implemented to assist general nurses in developing the skills to access haemodialysis catheters, and improve patient experience and care.

Background
Within the haemodialysis service for this acute hospital, the proportion of patients who commenced dialysis in the past 12 months with a central venous catheter was greater than those starting with an arteriovenous fistula or graft. In addition, acute or emergency patients had to undergo treatment with a tunnelled or non-tunnelled central venous catheter, and often these patients would be in the acute ward setting (UK Renal Registry, 2013).

This reflects previous studies which have shown that almost all new starters (not previously known to renal services) begin their dialysis journey in hospital with a central venous catheter (Renal Association, 2014) (Figure 1). The reasons behind these findings are generally due to the progression of the disease and, as previously stated, many patients are initially asymptomatic and subsequently delay treatment (Barr et al, 2014; Thomas, 2014).

Issues experienced by renal patients in an acute ward setting
Due to the nature of ESRD, peripheral vascular access in haemodialysis patients can prove problematic. Trained renal nurses develop a unique skill set through training and experience that can assist them with regular venepuncture to monitor urea, creatinine and electrolyte levels. Occasionally, general nurses in the acute inpatient ward can struggle with successful venepuncture in renal patients because of their poor peripheral access. Cannulation with an intravenous cannula can also prove difficult and cause distress and unnecessary pain to renal patients (Rami and Breakwell, 2013). This can be frustrating for patients and the nursing staff providing their care.

Traditionally, in the acute ward of this hospital, when the ward staff had difficulty with venepuncture on a renal patient they requested the assistance of nurses from the renal dialysis unit to attend the ward and retrieve blood samples from the patient’s haemodialysis catheter. However, this placed a strain on resources in the renal unit, leading

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to long waits, potential delay to treatment and a sense of frustration for both staff and patients (Ball et al, 2014). Patients also highlighted that when they experienced failed venepuncture, it delayed the administration of antibiotics and other treatments which had the potential to increase their length of stay in hospital.

To address these issues, a detailed evaluation of patient and staff experiences within the ward was undertaken. The evaluation presented an opportunity to enhance care provision for renal patients with difficult peripheral vascular access by eliminating delays in obtaining blood samples, ensuring timely administration of intravenous antibiotics and improving the skill set of the nursing staff on the ward. Consultant nephrologists supported the development of a tailored learning programme for the ward’s nursing staff to enable them to access haemodialysis catheters for blood sampling and occasional administration of intravenous antibiotics (Blomqvist et al, 2010).

When patients were informed of this initiative, the vast majority were pleased and felt this should have already happened (Renal Association, 2014). Some patients, however, expressed concerns that they were uncomfortable with non-renal or inexperienced nurses accessing their haemodialysis catheter, which they considered to be their lifeline. Various reasons were put forward such as the risk of infection and the fear of unnecessary stress and pain, mirroring previous studies which found that patients developed additional anxieties and worries in relation to failed canulation attempts (Renal Association, 2015). It can be argued that renal patients are experts whose views and considerations are vital in shaping nursing practice (Appleby, 2013).

Therefore, the perceptions and experiences expressed by patients can have an adverse effect not only on nurse-patient relationships, but also the overall opinion of renal care in the hospital (Axley and Rosenblum, 2012).

Involving patients from the outset was paramount to this project’s success and it ensured a patient-centred approach to delivering high-quality care in an acute medical ward. However, given the potential consequences of misuse or non-compliance with renal standards, appropriate ratified training would be required to alleviate patient fears and any reservations reported by staff (Lindberg et al, 2012).

Development of an education programme for nursing staff

A learning needs analysis was undertaken by all nursing staff in the ward to assess the knowledge and skills on a range of topics, including the proposed use of haemodialysis catheters for obtaining blood samples and the administration of antibiotics. The results of the analysis highlighted that there was a deficit in their knowledge, understanding and experience relating to the use of haemodialysis catheters and how they could potentially be used for access. However, the nurses in the target ward had developed advanced nursing skills and were competent in the care of Hickman and peripherally-inserted central catheter lines, using aseptic non-touch technique (ANTT), having successfully completed a training programme approved by the clinical education centre. Results also indicated that nursing staff had a genuine desire to learn new skills and improve patient care (Ball et al, 2014).

Based on the results of the analysis, consultation with nursing staff, clinical service leads and renal

Figure 1: New starts on dialysis at Antrim Area Hospital’s renal unit

New starts on dialysis 2014

<table>
<thead>
<tr>
<th>Month</th>
<th>January</th>
<th>February</th>
<th>March</th>
<th>April</th>
<th>May</th>
<th>June</th>
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<th>September</th>
<th>October</th>
<th>November</th>
<th>December</th>
</tr>
</thead>
<tbody>
<tr>
<td>New starts</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>1</td>
<td>1</td>
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<td>0</td>
<td>3</td>
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<td>1</td>
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consultants established that a structured work-based education programme was the preferred method of teaching to support nurses to gain knowledge, skills and experience in accessing haemodialysis catheters. As part of the programme, pre-course reading was recommended before attending the teaching session. This model was adopted to facilitate the practical aspects of learning needed and to allow flexibility with training of staff on the ward (Forchuk et al, 2013). The approach was implemented as the nursing staff highlighted concerns on how, where and when the training would be delivered (Khalil and Abdalrahim, 2014). Furthermore, based on previous experiences, they found it difficult to attend ad hoc training. Reasons cited by staff included pressure and constraints associated with caring for acutely ill patients (Ball et al, 2014).

To comply with quality educational standards, a clinical education facilitator from the clinical education centre reviewed the training programme to ensure that quality educational standards were achieved (Fitzgerald et al, 2013). To enhance the programme, a local policy was developed to uphold clinical governance standards.

Implementation
To date, training has comprised of group presentations to supplement pre-course reading, the purpose of which was to highlight the vulnerability of renal patients and the consequences that can occur due to non-compliance with standards of renal care. To consolidate the theory, nursing staff were given the opportunity to take part in simulated practice (Ross et al, 2013), which was then followed up with supervision and assessment of the procedure on a renal dialysis patient on at least two occasions. To recognise that everybody learns in different ways, the training was based on applying different teaching styles. Nurse-led presentations were used instead of e-learning to assist with answering questions (Ventura et al, 2013; Blevins, 2014). Research has demonstrated that this type of learning works well in blending theory and practical elements together, which helps ease nurses into adopting new practices without difficulty (Jokinen and Mikkonen, 2013).

Competency-based assessment was also used to consolidate theory and integrate learning into practice. This approach helped not only to instil confidence in the nurses performing the task, but also demonstrated to patients the new knowledge and skills being developed by the nursing staff (Barnes et al, 2013). It is important to note that patients were exercising personal choices with regards to their care and gave consent both before the implementation of the programme and when the nursing staff were being supervised accessing their haemodialysis catheter. Training relied on both nurse and patient availability on the target ward, which to a certain extent delayed training (Govranos and Newton, 2014). Consent was also gained from consultant nephrologists to permit the use of dialysis catheters for the training programme.

Progression
To date, a small number of nurses have successfully completed the training and have been added to a trust’s registry of competent staff who are able to change a haemodialysis catheter dressing and access the haemodialysis catheters independently for blood sampling or, when required, intravenous drug administration. Based on the policy documents created, yearly updates will be carried out to ensure staff adhere to the new practice and maintain standards. An audit will also be carried out to ensure compliance with aseptic technique and minimise the risk of infection (Moreau, 2013).

Challenges
A number of challenges arose throughout the training, the most prevalent being the ability to organise and schedule suitable times when both dialysis and ward staff were available to undertake training or supervised care. The main reason cited for not being able to release staff to carry out training was because of the clinical pressures of caring for sick and vulnerable patients on the ward (Barnes et al, 2013). To address this issue, a meeting was held between senior managers to discuss how best to proceed. It was agreed that the best course of action was to use the skill set of experienced nursing staff within the ward who had previously worked in the renal unit, and adopt a train-the-trainer approach. The staff in the renal unit also continued to provide clinical input and supervision when required to ensure compliance and ratify the quality of teaching provided (Baylis, 2014).

Outcomes
The introduction of this training programme has benefited both patients and staff. A post-implementation survey revealed that renal patients felt more comfortable and had more confidence in nursing staff in the acute medical ward to take blood samples from their haemodialysis catheter. Patients no longer experience delays or endure failed attempts to gain peripheral access.

This intervention has help to accelerate recovery, reducing patients’ length of hospital stay and easing their psychological distress (Kidney Disease Outcomes Quality Initiative, 2005; 2015). Care is now focused on the patient to ensure that treatment
is delivered in a timely way, by nurses with the right knowledge and skills to do so.

Staff have become proficient and confident in dealing with haemodialysis catheters and are able to take blood samples at the required time and administer medications to patients without avoidable delays and frustration. This, coupled with the social aspect of attending training with colleagues, has also led to enhanced communication regarding individual patient care and has enabled interdepartmental relationships to develop and improve (Zakari et al, 2010).

To date, the training programme has had no impact on the infection rates seen within the dialysis population. However, infection rates on the ward remain low and well below recommended targets (Renal Association, 2015).

Future implications

Nurses

This training marks the introduction of future interdepartmental educational programmes to enhance and develop nurses’ knowledge and skills with regard to caring for renal patients in an acute medical ward. The success of the training has demonstrated the benefits of collaborative working between departments to improve the care delivered to patients. Future educational programmes may cover the assessment of arteriovenous fistulas and dry weight, and fluid balance control.

Patients

The training programme was undertaken as a direct result of deficits identified in patient care. Patient care remains at the centre of the nursing role and any developments that aim to improve care should be a priority (Houle and Counts, 2013). This training programme provided a stepping stone in the right direction and demonstrates staff commitment to listen and respond to patient needs (Bennett, 2013).

Other trusts

Other trusts can benefit from undertaking a similar process to the one outlined in this article, by identifying any areas where multiple departments can work together. By listening to both patients and staff, they can implement improvements to benefit both groups. Patient care can only ever be enhanced through effective communication and when staff feel empowered enough to highlight areas where improvements can be made and take steps to make those improvements (Houle and Counts, 2013).

Conclusion

This article documents the process undertaken in an acute medical ward to identify areas where renal patient care could be improved. Discussions between patients and staff highlighted a sense of frustration, as non-renal nurses’ lack of knowledge and skills delayed blood sampling and treatment. In response to these concerns, a customised learning programme was developed and implemented to support nursing staff to develop new skills for accessing haemodialysis catheters, a role traditionally carried out by renal nurses. The implementation of the programme has improved patient care and facilitated a better working environment for staff.

Acknowledgements

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References


Key points
- Dialysis patients can spend a considerable time in hospital. Most of them have permanent vascular access which is not used owing to a lack of staff education
- After discussion with patients and staff, it was decided that, given the appropriate training, central venous catheters could be used for non-dialysis purposes
- A learning needs analysis was used to capture staff expectations for training
- Policy development and a competency-based learning teaching programme was devised in conjunction with clinical education facilitators to uphold trust standards
- Training was initiated under direct supervision from renal staff. A train-the-trainer approach was then adopted to facilitate learning due to clinical pressures experienced in the ward
- Patient care and experience have improved as a result of the training programme. Perceptions have improved and staff feel more empowered
- There has been no increased rate of infection following the training programme. Rates of infection remain historically low within this hospital setting