**Title:** Royal Preston Hospital Renal Vascular Access Service Quality Improvement Programme

**Background:** The Renal Unit at Royal Preston Hospital serves a catchment area of approximately 1.6 million people in the North West of England, providing a hub-and-spoke model of care for neighbouring healthcare trusts of Blackpool, East Lancashire and Morecambe Bay. In 2011-2012 our renal unit had an annual prevalent permanent access (PA) rate of > 85% in our in-centre dialysis population of between 530 and 560 people. Since then, year-on-year, PA rates have fallen steadily to 77% in 2016. In 2017, we undertook a service wide QI programme with the support of the Pathway Development Manager at Baxter Healthcare and our Vascular Access (VA) pathway became a core priority for improvement.

**Aims:** Identify delaying factors and develop processes that reduce time between referral to functioning PA.

**Methods:** Through process mapping of patient flow, we identified inefficiencies in the patient pathway. We found the average wait for creation of PA was 6-8 weeks. The majority of our patients have ultrasound vein mapping by the Vascular Surgeons and consented for arteriovenous fistula creation at their index visit. For a third of patients who were complex, the wait was at least twice as long. This was almost exclusively due to delays in venogram reporting and lack of a dedicated dialysis access MDT which resulted in additional clinic appointments and associated delays. We developed several value-adding processes. Firstly, by developing agreed criteria for early venograms in potentially complex access patients at the point of referral to the Vascular Surgeons. With the intention that these patients would have their venograms available at their index Vascular Surgery appointment and can be directly listed for surgery without the need for additional return appointments. Secondly, we initiated a dedicated renal VA MDT to review all venograms in conjunction with our Surgical and Radiology colleagues. Thirdly, we introduced a nurse-led early post-op review clinic to identify and manage complications, improve patient education around access preservation and early re-referral for primary AVF failures. Finally, to improve information exchange between specialities we developed a shared database of patients progressing through the VA pathway. From the outset, we incorporated 6 monthly PDSA cycles into our programme to ensure we continue refining and developing only the processes that result in patient benefit and redesign those that do not.

**Results:** Thus far, our nurse led early post-op review has assessed 16 patients. Although > 80% of patient could demonstrate the correct method for checking their PA we identified 7 primary failures. Furthermore we identified 1 infected wound and 1 patient with no review appointment. All primary failures have been prioritised for repeat PA surgery much earlier than would have been the case. Our other initiatives have recently commenced and we are currently data collecting and will have additional results available to present in June.

**Conclusion:** Through a thorough evaluation of our service, we identified deficiencies that led to our declining PA rates and initiated a QI programme to develop our service and address these deficiencies. Early evaluation indicates these processes are already delivering patient benefits.