

The Renal Association UK Renal Registry



2015 Multisite Dialysis Access Audit in England, Northern Ireland and Wales

There are two types of dialysis (blood cleaning) for kidney failure: haemodialysis (HD) and peritoneal dialysis (PD). PD uses fluid passed through a catheter into the abdomen to remove waste from the blood. In HD, blood passes directly through a machine which removes waste products. For HD to be effective, a good flow of blood through the machine is needed, which can only be achieved in one of three ways: using a fistula (arteriovenous fistula (AVF)), a graft (arteriovenous graft (AVG)) or a catheter placed into a large blood vessel in the neck (neck line). For PD to be effective, a plastic catheter must be placed correctly to allow fluid to move back and forth into the abdomen. Fistulas, grafts, neck lines and PD catheters are all forms of dialysis access. Neck lines can be temporary (non-tunnelled line (NTL)) or semi-permanent (tunnelled line (TL)).

Dialysis access is of interest for several reasons. We know that certain types such as fistulas, grafts and PD catheters, are likely to work better for longer and have fewer complications (i.e. blood stream infections). National guidelines for kidney teams therefore advise their use as 'definitive' access (fistula, graft or peritoneal dialysis catheter) for patients. It is also important to know how well different types of access work as their failure can cause disruption to patients and their dialysis, and is expensive for the NHS.

This is the fifth year the UK Renal Registry (UKRR) has carried out this audit. All 62 adult kidney units in England, Wales and Northern Ireland were contacted for information about dialysis access used for new patients in 2015. Information from 53 of the 62 centres was collected.

In 2015, we had information on 5,107 new patients starting dialysis (4,032 on HD and 1,075 on PD). Of those on HD, 38.4% of patients started therapy with an AVF or AVG, 36.4% with a TL and 25.2% with a NTL. AVG/AVF use increased with rising age and body mass index (BMI). This may reflect the fact that older, obese patients are less likely to use PD or to receive a transplant as their first treatment.

Large differences between centres were seen for new and existing dialysis patients. Centres are audited against national standards, which expect 60% of new HD patients to have a fistula or graft as their access type. Only 10 centres reached this target. For existing patients, it is expected that 80% of patients will have definitive access in place. This target was reached by 17 centres.

The UKRR reports access used for new patients at the start and three months into dialysis therapy. It is hoped that by three months, most patients are using definitive access (fistula,

graft or a peritoneal dialysis catheter) rather than a neckline. Of those who started dialysis with definitive access, 88.2% either continued this or had received a transplant. For those starting dialysis with a neck line, 13% of patients changed to definitive access or were transplanted by three months. Temporary neck line (NTL) use fell from 20% at start of dialysis to 2% at three months.

For new patients, there was a clear link between the length of time known to a renal unit and dialysis access used. This trend was also seen in previous years. Only 15.2% of new patients known to specialists for less than 90 days were transplanted or had definitive access compared with 60% of patients who were known for more than a year (figure 1).

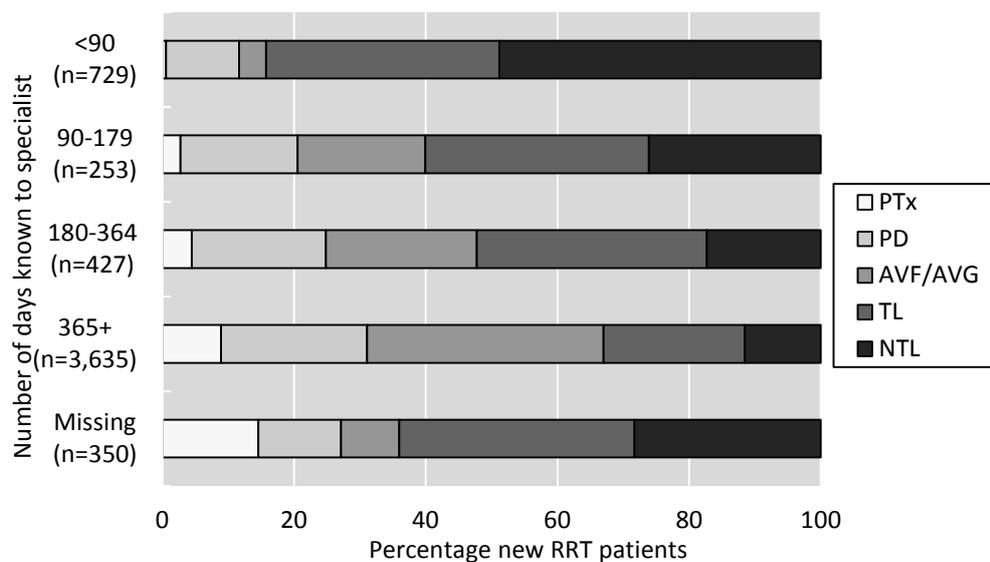


Figure 1. Percentage of incident RRT patients by late presentation group, 2015
(n = number of patients in each group)

PTx – pre-emptive transplant; PD – peritoneal dialysis; AVF – arteriovenous fistula; AVG – arteriovenous graft; TL – tunnelled line; NTL – non-tunnelled line

Conclusion

In 2015, half of all new dialysis patients started therapy with some sort of ‘definitive’ access (fistula, graft or PD catheter). Despite national guidance, there were obvious differences between renal units in the proportion of patients using definitive access. Few units were reaching national targets. It is hoped that quality improvement projects will help to improve rates of fistula and graft use in HD patients and reduce the variation seen.

For the full annual report chapters, please visit the UKRR website:

www.renalreg.org/reports/2016-nineteenth-annual-report/