The Renal Association

UK Renal Registry

2016 Multisite Dialysis Access Audit in England, Northern Ireland and Wales

Plain English Summary

Two types of dialysis treatment (blood cleaning) are used for kidney failure: haemodialysis (HD) and peritoneal dialysis (PD). Both treatments remove waste that builds up in kidney failure. In PD, fluid is passed in and out of a tube in the belly to collect and remove the waste. In HD, blood passes directly through a machine for cleaning. For HD to be effective, a good flow of blood through the machine is needed. Blood flow is achieved in one of three ways:

- An arteriovenous fistula (AVF) – formed by a surgeon sewing a small artery and vein together, usually in a person's arm, or
- An arteriovenous graft (AVG) – formed by a surgeon sewing a plastic tube (graft) onto an artery and vein, usually in a person's arm, or
- A HD line/catheter – a plastic tube placed into a large vein, usually in the neck. Lines can be temporary 'non-tunnelled' lines or semi-permanent 'tunnelled' lines.

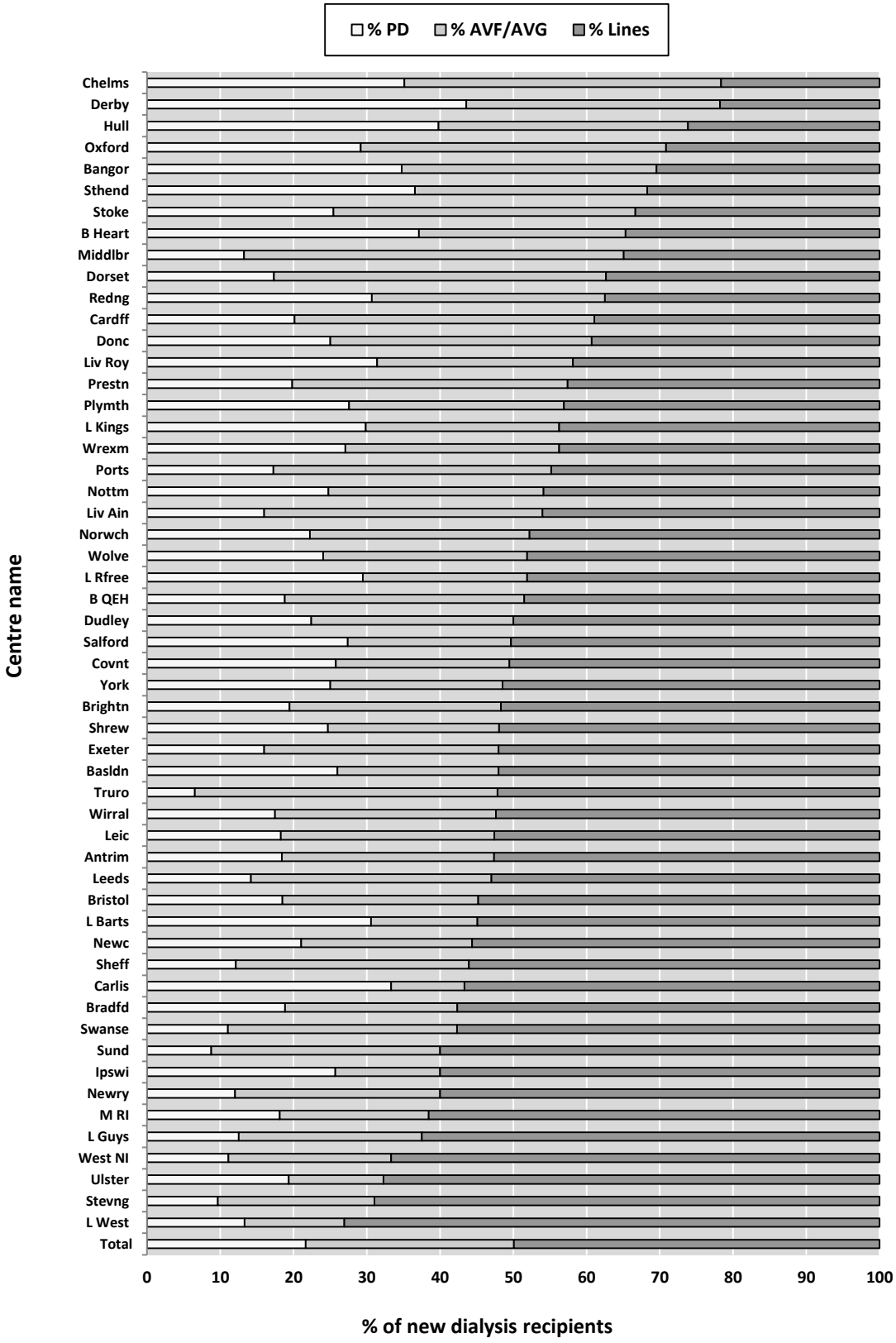
AVFs, AVGs, lines and PD catheters are all forms of dialysis access. Together, AVF, AVG and PD catheters are sometimes called 'definitive access'. Definitive access usually works better and lasts longer than a HD line. Lines are also associated with blood stream infections and tend to need replacing, causing disruption to people and their dialysis treatment. National guidelines advise use of definitive access where possible. It is recommended that at least 60% of new HD recipients receive dialysis via an AVF or AVG. Of patients who are receiving long-term HD, the guidelines recommend 80% have an AVF or AVG.

All 62 adult kidney units in England, Wales and Northern Ireland were contacted for information about the dialysis access used for new patients in 2016. Information from 55 centres was collected. During 2016, information regarding dialysis access was available for 5,810 people who started dialysis. Of these, 4,564 started HD and 1,246 started PD. Overall, 50% of people started dialysis with definitive access. The other 50% started HD with a line. Large differences across centres were seen for new and current dialysis recipients (see figure 1). Sixteen centres reached the 60% threshold for new HD recipients and seventeen centres reached the 80% threshold for patients receiving long-term HD.

Patients who had been known to a kidney doctor for over three months before starting dialysis were more likely to start with definitive access. Patients who were referred for early surgical assessment were more likely to start with an AVF or AVG. Of those who started dialysis with definitive access,

89% still had definitive access or had received a kidney transplant by 3 months. For those starting HD with a neck line, only 10% had definitive access or were transplanted by three months.

Figure 1. Dialysis access used when starting dialysis, by renal centre



Conclusion

Across England, Wales and Northern Ireland, use of definitive dialysis access falls below national guideline standards. A proportion of centres do meet these standards. It is hoped that quality improvement projects will help to improve rates of and reduce variation in the use of definitive dialysis access.

For the full annual report chapters, please visit www.renalreg.org/reports/2017-twentieth-annual-report/