

The Renal Association UK Renal Registry



Adequacy of Haemodialysis in UK Adult Patients in 2014

Lay summary

For the full annual report chapters [click here](#) or visit <https://www.renalreg.org/reports/2015-eighteenth-annual-report/>

Patients with kidney failure need to have waste products, like urea, removed from the body by dialysis. To find out if dialysis is removing enough urea, a blood sample is taken before and after the dialysis session and the urea in the two blood samples compared; this will show how much urea was removed during a dialysis session. The urea reduction ratio (URR) is often used to measure how well urea is removed from the blood by dialysis and is shown as a percentage. The UK Renal Registry (UKRR) receives URR information from all the renal centres in the UK. It is important to report on URR to make sure that all renal centres are providing enough dialysis to patients and also because survival of patients with kidney failure treated by haemodialysis (HD) is affected by how well urea is removed from the blood. A small number of patients that perform their own dialysis at home (home haemodialysis) are excluded from this report.

URR information completeness

Information for URR was available in 71.9% of all patients receiving HD in the UK in 2014 compared to 75.3% in 2013. Six centres (Carshalton, Manchester Royal Infirmary, Newcastle, Reading, Brighton and Sunderland) provided URR information for less than half of their patients and seven other centres (London Barts, London King's, London Royal Free, London St Georges, Liverpool Aintree, Liverpool Royal Infirmary and Wirral) provided no information on URR to the UKRR and are not included in the results.

Number of dialysis sessions per week and time per dialysis session

Most patients on HD have three dialysis sessions per week, but there were big differences between renal centres; some centres reported that more than 8% of patients have four or more dialysis session per week and other centres reported that more than 10% of patients have two dialysis sessions per week. Most patients dialysed between 3½ to 5 hours during a dialysis session, although there were also large differences between centres in reported time per dialysis session.

Changes in URR over time

Clinicians recommend that URR should be >65% when patients are on HD and dialysing three times per week, because this will help patients live longer and stay well. In 2014, 89% of HD patients had a URR >65%, a big increase from 71% in 2001 (see Figure 1). More women than men reached the recommended URR level: 92% of women compared to 87% of men.

The average URR in 2014 was 75%. Women had a higher average URR than men: 78% for women compared to 74% for men. Average URR has increased from 70% in 2001 to 75% in 2014, but the average URR and percentage of patients reaching the recommended URR (>65%) has plateaued since 2011 (see figure 1).

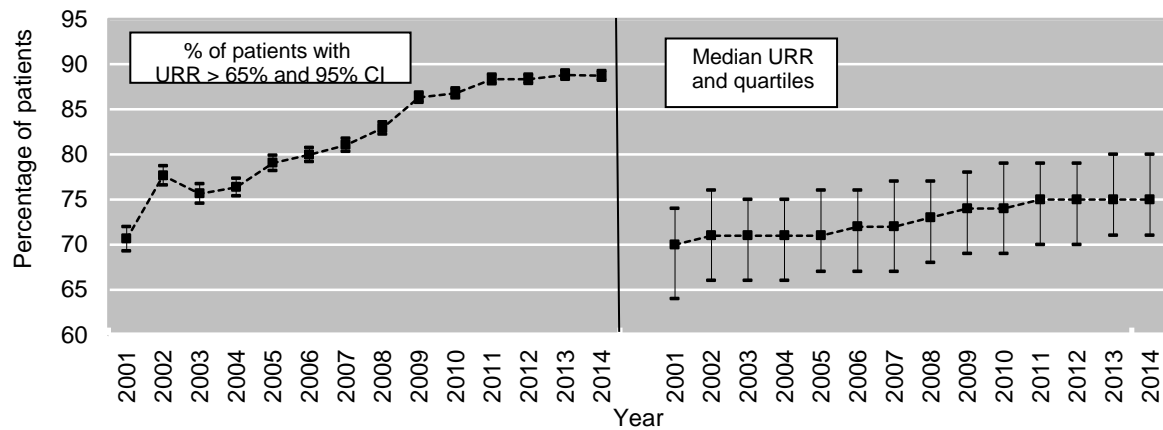


Figure 1 Change in the percentage of patients on HD with URR > 65% and the average URR between 2001 and 2014

Variation in the URR recommendation >65% and time on dialysis

More patients reached the recommended URR (>65%) the longer they were on dialysis; 91% of patients receiving renal replacement therapy (RRT) for more than two years reached the recommended URR, but only 73% of patients on RRT for 6 months reached the recommended URR of >65%.

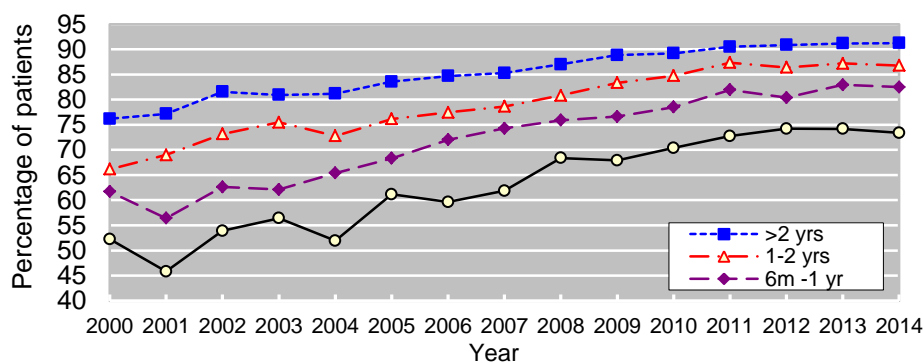


Figure 2 Percentage of patients on HD achieving URR > 65% by time on RRT between 2000 and 2014

Conclusion

The dose of dialysis given to patients, as measured by URR, has increased over the last 10 years. Most patients in the UK reached the recommended target URR of >65%, but there were large differences between renal centres.