

The Renal Association

UK Renal Registry



Haemoglobin, Ferritin and Erythropoietin Management Amongst UK Adult Dialysis Patients in 2014

Lay summary

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

Anaemia (having too few red blood cells and/or too little haemoglobin in the blood) is one of the major problems contributing to high comorbidity and poor outcomes in dialysis patients. Renal centres continue to strive towards achieving the Renal Association (RA) standards in order to prevent adverse outcomes associated with low haemoglobin (Hb) such as impaired quality of life, increased hospitalisation, increased cardiovascular events and increased cardiovascular and all-cause mortality. The full report chapter provides comprehensive information regarding the management of anaemia in the UK including: Hb and ferritin levels in people on dialysis (haemodialysis (HD) or peritoneal dialysis (PD)); the Hb levels of people new to dialysis and also of those who have been on dialysis for some time. The brief results shown here are for the stable group of people who have been receiving the same type of dialysis at the same renal centre for at least three months.

Completeness of data returns to the UK Renal Registry were generally good for Hb and ferritin. For Hb, no data were available from London Guys. For ferritin, Carlisle (HD), Kirkcaldy (PD), Newry (HD) and Salford (HD & PD) provided data for less than half of their patients and so are not shown in any results.

Haemoglobin levels for most patients on HD and PD were above the RA minimum standard of 100g/L (81% and 83% respectively). A higher percentage of stable patients (82%) than new patients (50%) had a Hb \geq 100g/L. Since the early 2000's, the proportion of both new and stable dialysis patients with Hb \geq 120g/L has fallen. This was probably an effect of guideline changes that resulted from evidence from several studies in the early 2000's which suggested increased risk of fatal and nonfatal strokes in the group with higher Hb values.

Figure 1 shows the percentage of HD patients who had Hb <100g/L, between 100 and 120g/L, and above 120g/L. The centres are shown ordered by the percentage between 100 and 120g/L (the 'target range') so, by this measure, Exeter has the best values. The country averages are shown together on the right hand side of the figure. The graph allows you to see the percentage with low Hb, high Hb as well as the percentage meeting the target. For example, Exeter had a very low percentage with Hb<100g/L whereas this was up towards 30% for some centres.

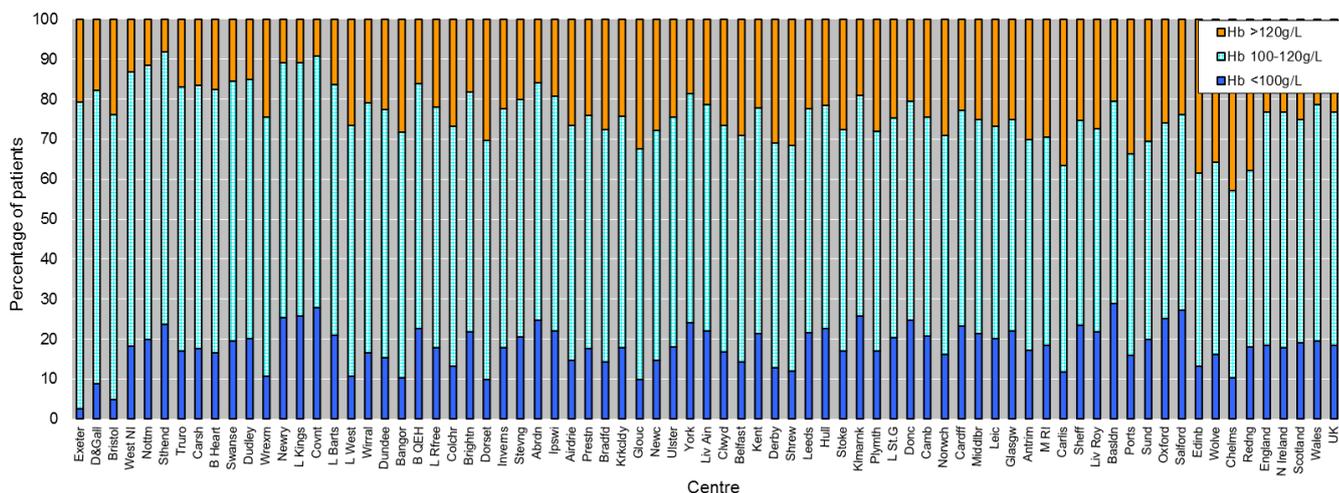


Figure 1 Distribution of haemoglobin in patients treated with HD by centre in 2014

The average Hb of patients on HD was 111g/L with an IQR of 103-120g/L. This means that when the Hb values are ordered from lowest to highest, a quarter of people have values of 103g/L or less, a quarter are between 103g/L and 111g/L, a quarter are between 111g/L and 120g/L and a quarter are above 120g/L. The values were similar for patients on PD – average 112g/L with an IQR of 103-121g/L.

Ferritin levels are a measure of longer term iron storage in the body. Renal centres aim to have people's iron stores as shown by ferritin at 100µg/L or greater. In 2014, success with this aim remained high with 95% of HD patients and 88% of PD patients achieving a serum ferritin of 100µg/L or greater. There was a lot of variability between centres in the percentage of people having high ferritin levels (>800µg/L) probably due to the current uncertainty about the safety of high levels.

The UKRR also reports on the use of erythropoietin stimulating agents (ESAs). These are medicines commonly used in people receiving dialysis and are used to increase the production of red blood cells and hence Hb levels. Data on ESA use was less reliable than for Hb or ferritin and it could only be analysed for about 40 renal centres.

On average, across the centres that supplied data on ESA use, 87% of people on HD and 68% of people on PD were on ESA treatment. Figure 2 shows these percentages by age group. The median ESA dose was higher for HD than PD patients (7,333 vs 4,148IU/week). There was a lot of variability between centres in the average ESA dose.

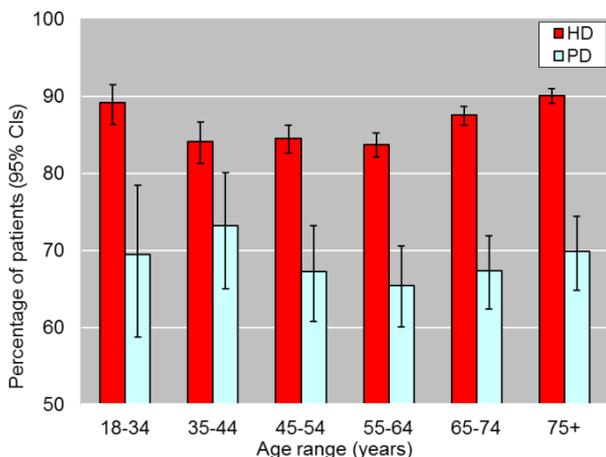


Figure 2 Percentage of dialysis patients on ESA, by age group and treatment modality (2014)