

The Renal Association UK Renal Registry



Haemoglobin, Ferritin and Erythropoietin Management Amongst UK Adult Dialysis Patients in 2015

Anaemia is a condition associated with reduced iron stores in the body. In reality, this can be caused by having too few red blood cells, or not enough haemoglobin (Hb) in those red blood cells. Anaemia has been shown to affect a patient's quality of life. It is also associated with an increased risk of heart complications and of needing a hospital admission. Anaemia in kidney patients can worsen kidney function. It is managed by giving patients iron and/or by using a treatment to stimulate red blood cell production. These treatments are known as erythropoietin stimulating agents (ESAs). Monitoring anaemia is done using different blood tests including the measurement of:

- haemoglobin levels: national Renal Association (RA) guidance for adults with kidney disease suggests medical teams try to aim for levels of between 100 and 120g/L. Both low and high levels of haemoglobin are known to cause problems for adults with kidney disease.
- ferritin levels: ferritin is a measure of the body's iron storage levels. National guidelines suggest we should aim for ferritin levels of 100µg/L or more.

The full annual report chapter provides a lot of information on the management of anaemia in the UK. This includes:

- The level of Hb and ferritin levels for 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 mainly 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.

Most centres passed on their patient information to the UK Renal Registry relating to Hb and ferritin levels.

Haemoglobin levels for most patients on HD and PD were above the RA minimum standard of 100g/L (79% for HD and 81% for PD). A higher percentage of stable patients (80%) than new patients (47%) had a Hb greater than or equal to 100g/L. Since the early 2000's, the percentage of both new and stable dialysis patients with Hb greater than or equal to 120g/L has fallen. This was probably an effect of guideline changes. These changes were made because several studies in the early 2000's suggested evidence of an increased risk of strokes in the groups with higher Hb values.

Figure 1 shows the percentage of HD patients who had Hb less than 100g/L (the bars at the bottom of the graph), between 100 and 120g/L (the bars in the middle), and above 120g/L (the bars at the top). The centres are ordered by the proportion of patients with Hb levels between 100 and 120g/L (the target range). The graph is useful as it allows you to see the proportion of each centre's patients with Hb levels outside of the target range.

The average (median) Hb value for patients on HD was 110g/L with an inter quartile range (IQR) of 101-119g/L. This means that when the Hb values for all the patients are sorted from lowest to highest, a quarter of people have values of 101g/L or less, a quarter are between 101g/L and 110g/L, a quarter are between 110g/L and 119g/L and a quarter are above 119g/L. The values were similar for patients on PD – average (median) 112g/L with an IQR of 103-120g/L.

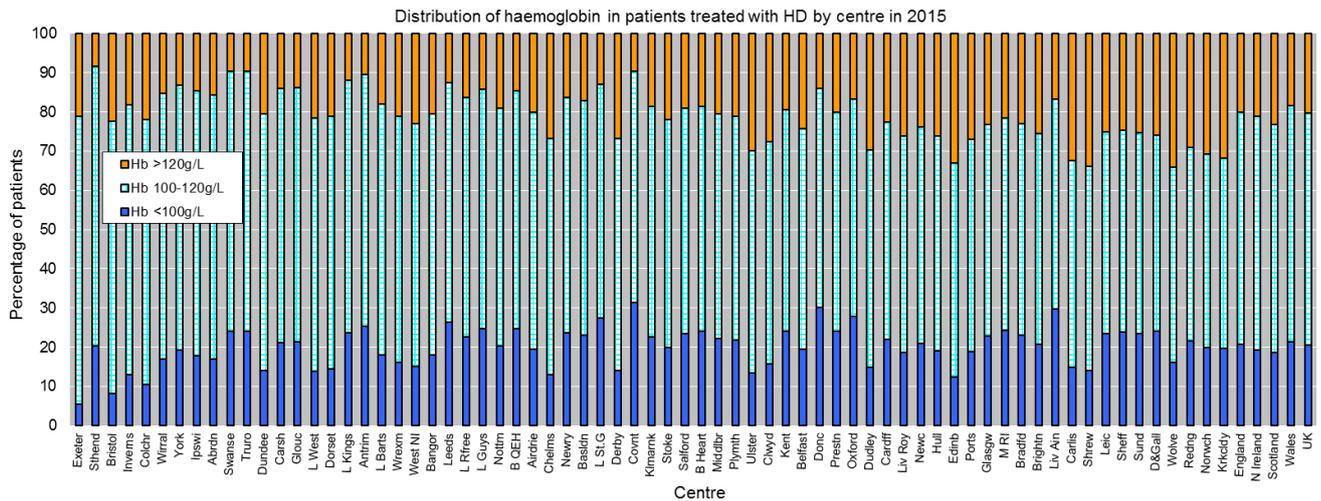


Figure 1. Distribution of haemoglobin in patients treated with HD by centre in 2015

In 2015, a high number of patients reached the target level of ferritin (more than or equal to 100µg/L): 94% of HD patients and 88% of PD patients. Big differences were seen between centres when looking at patients with very high ferritin levels (>800µg/L). This was probably due to the current uncertainty about the safety of high ferritin levels.

The annual report chapter also reports on the use of erythropoietin stimulating agents (ESAs). Data on ESA use was less reliable and therefore information from approximately 40 renal centres was used. On average, 88% of people on HD and 69% of people on PD were on ESA treatment. Figure 2 shows these percentages by age group. The median ESA dose prescribed was higher for HD than PD patients (7,500 IU/week versus 4,000 IU/week). There was a lot of inconsistency between centres in the average ESA dose used for dialysis patients.

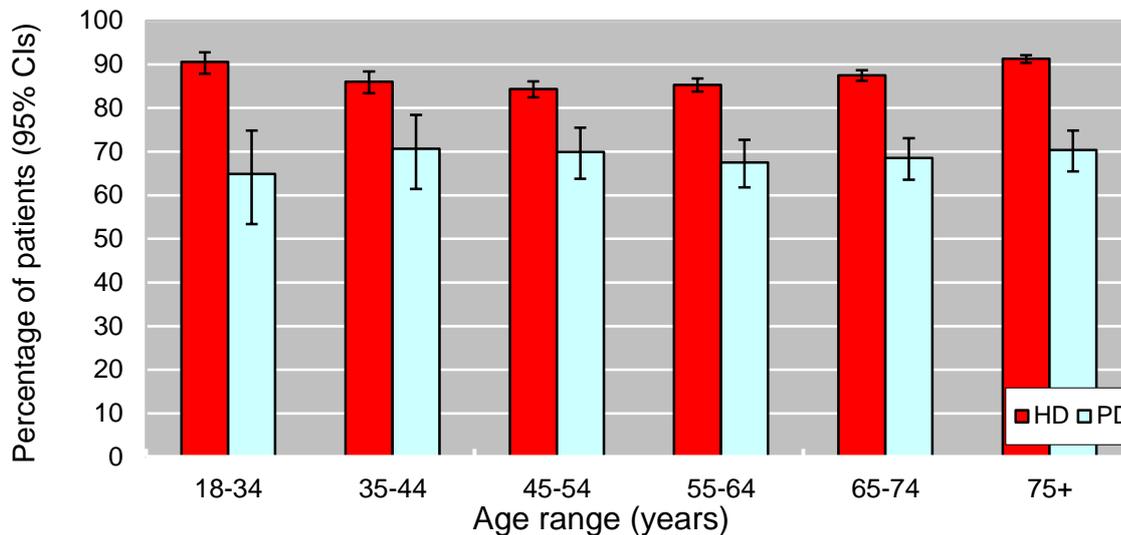


Figure 2. Percentage of dialysis patients on ESA, by age group and treatment modality (2015)

For the complete annual report, please visit the UK Renal Registry website:
www.renalreg.org/reports/2016-nineteenth-annual-report/