

Chapter 1: Summary of Findings in the 2006 UK Renal Registry Report

In 2005, the acceptance rate for RRT in adults in the UK was 108 pmp and this was derived from 100% complete data returns for the UK. From 2001–2005 there has been an 7.3% rise in the acceptance numbers in those 42 renal units with full reporting throughout that period.

The median age of patients starting RRT in England has increased from 63.8 years in 1998 to 65.2 years in 2005. Patients starting on PD were on average 9 years younger than those on HD and had fewer co-morbidities present. HD was the first modality of RRT in 76% of patients, PD in 21% and pre-emptive transplant in 3%.

Patients starting RRT without any co-morbidity present had a lower estimated eGFR (eGFR) than those with co-morbid conditions. 12% of patients starting RRT had a previous MI and 31% of those starting RRT aged over 65 years had IHD. Patients with a previous MI or CABG, started RRT with slightly higher mean haemoglobin than those without co-morbid conditions or other co-morbid conditions. Estimated GFR at the start of RRT appears to be higher in older than younger patients. Mean eGFR of all patients starting RRT rose from 6 in 1997 to above 7.5 in 2003, since when it has remained stable. In 2005, the mean percentage of patients referred late (<90 days before dialysis initiation) was 30% (centre range 13–48%). This was similar to the value in 2000.

From the date of first RRT, the 1 year survival of all patients (unadjusted for age) is 79%. From the 90th day of RRT (to allow comparison with other countries' 1 year survival), the 1 year survival is 83%. The age adjusted (60 years) survival for the 1 year after 90 day period is 86%. There is a high death rate in the first 90 days on RRT (6% of all patients starting RRT), a period not included in reports by many registries and other studies. The 5 year survival (including deaths within the first 90 days) rates are 58%, 53%, 44%, 28%, 20% and 12% respectively for patients aged 18–34, 35–44, 45–54, 55–64, 65–74 and 75+ years.

The 'vintage effect' of increasing hazard of death with length of time on RRT, prominent in data from the US, is only noted in older age groups (65–75 and 75+ years) at 5–6 years after starting RRT.

In the multivariate survival analysis of incident patients, the presence of ischaemic/neuropathic ulcers was the predictor of worst survival, followed by malignancy, previous MI and age per 10 year increment.

There were 41,776 adult patients alive on RRT in the UK at the end of 2005, a prevalence for adults of 694 pmp. Addition of the 748 children under age 18 on RRT gives a total prevalence of 706 pmp. The annual increase in prevalence in the 38 renal units participating in the Registry since 2000 was 5.0%. The median age of prevalent patients on RRT was 56.6 years, that of patients on HD 64.5 years, PD 59.2 years and transplanted patients 49.7 years.

The median vintage of the whole RRT population was 5.1 years: that of transplanted patients was 9.8 years, HD patients 2.8 years and PD patients 2.1 years.

There is no significant differences in survival of prevalent patients between centres. The one-year survival of prevalent dialysis patients increased significantly from 1998 to 2004 in England (83.3% to 87.1% $p=0.0001$ for linear trend), Scotland (84.0% to 87.0% $p=0.023$ for linear trend), and Wales (83.4% to 86.1% $p=0.027$ for linear trend).

In the 2006 vascular access survey, 51% of all patients commenced renal replacement therapy using definitive access. Of patients commencing on HD, 37% commenced with definitive access (31% in the 2005 survey). 4% of patients currently on HD were in-patients. 30% of staphylococcal line infections were MRSA, which was similar to the 2005 survey.

At 6 months after starting RRT, 76% of live patients were using definitive access (defined as the use of peritoneal dialysis, transplant, AVF or AVG) and at 12 months 80%. Of HD patients starting RRT in April 2005, 65% started using venous catheters, at 6 months this had fallen to 35% and at 12 months 30%. The use of non-tunnelled lines was below 1% by 6 months.

The median Hb on HD is 11.8 g/dl with 86% of patients having a Hb >10.0 g/dl. The median Hb on PD in the UK is 12.0 g/dl with 90% of patients having a Hb >10.0 g/dl. In the UK, 49% of patients on PD and 48% of patients on HD have a Hb between 10.5–12.5 g/dl. The median ferritin in HD patients in the UK is 413 µg/L and 256 µg/L in PD.

In the UK there is a continuing year-on-year trend of improvement in serum phosphate control in dialysis patients. The RA target (<1.8 mmol/L) was achieved in 71% of PD and 63% of HD patients. 76% percent of UK dialysis patients achieved a corrected calcium concentration within the RA target range and there was a continuing trend of year-on-year improvement. Nearly two-thirds (69%) of patients achieve a calcium × phosphate product within the KDOQI guidelines. There is large variation in the ability of renal centres to achieve the UK Renal Association target for plasma PTH (median 63%, range 47 to 92% compliance with the standard).

The % of HD patients achieving the combined BP standard (<140/90 pre-dialysis) average 43% and post-dialysis (<130/80) average 48%. On average, 27% of PD patients achieve the standard of <130/80 and 26% of renal transplant patients. Over the last 8 years there has been no significant change in systolic or diastolic BP achievement.

The total number of patients active on the transplant waiting list (adult and paediatric) on 31/12/2005 was 5,736, an 8% increase from the previous year. On 31/12/2005 46% of prevalent adult RRT patients in the UK, had a functioning renal transplant which equated to 19,074 patients. During 2005, the death rate in prevalent transplant patients was 2.7/100 patient years. An additional 3.1% of all prevalent transplants failed with patients returning to dialysis. 11.4% of incident transplants in 2005 were to patients with diabetes.

Transplant function analysed by CKD stage 1–2 (eGFR <60), 3 (eGFR 30–59), 4 (eGFR 15–29) and 5 (eGFR <15), shows that these categories account for 24%, 59%, 15% and 2.5% of patients respectively. The median Hb in prevalent transplant recipients was 12.9 g/dl, with 10% of patients having a Hb <10 g/dl. Hb values fall with decreasing eGFR such that of the 2.5% of transplant patients with eGFR <15 ml/min, 27% had a Hb <10 g/dl and 51% <11 g/dl. Control of iPTH was poor in transplant recipients in CKD stages 4 and 5, with 22% and 50% respectively having a PTH >32 pmol/L. Patients with failing transplants are less likely to achieve RA targets of key biochemical variables when compared to patients on dialysis.

For paediatric patients at one year from starting RRT, 49% are on PD, 10% on HD and 41% have a transplant. Short stature is a major problem in paediatric ERF patients with 29% of transplant patients and 41% of dialysis patients below the 2nd percentile for height. Only 6.5% of transplant patients and 15.5% of dialysis patients are receiving rhGH. 14% of paediatric transplant patients and 30% of paediatric dialysis patients have a haemoglobin below 10.5 g/dl.
