
Chapter 1

Summary of findings in the 2008 UK Renal Registry Report

David Ansell^a

^aUK Renal Registry, Bristol, UK

In 2007, all but one UK renal centre provided electronic data extracts to the UK Renal Registry. In the UK, the acceptance rate in 2007 was 109 per million population (pmp) compared to 111 pmp in 2006. Acceptance rates in England (107 pmp), Scotland (108 pmp) and Northern Ireland (105 pmp) have fallen slightly, whilst that in Wales (140 pmp) has risen. The median age of all incident patients was 64.1 yrs and for non-Whites 57.1 yrs. Diabetic renal disease remained the single most common cause of renal failure (21.9%). By 90 days, 67.4% of patients were on HD, 21.3% on PD, 5.2% were transplanted and 6.1% had died or stopped treatment. The incidence of late presentation (<3months) was 21%.

There were 45,484 adult patients receiving RRT on 31/12/2007. The population prevalence for adults was 746 per million population per year (pmp) with an annual increase in prevalence of approximately 5% per annum. The median age of prevalent RRT patients was 57 yrs (HD 65 yrs, PD 60 yrs, transplant 50 yrs). Median RRT vintage was 5.3 yrs (HD 2.8 yrs, PD 2.1 yrs, transplant 10.4 yrs). The prevalence rates for males peaked in the 75–79 year age band at 2,506 pmp and in females in the 70–74 year age band at 1,314 pmp. The most common treatment modality was transplantation (46.6%), closely followed by centre-based HD (42.1%) in either the primary centre (25.2%) or the satellite

unit (16.9%). The HD population has continued to expand, and the PD population to contract.

Increasing live and non-heartbeating donors were responsible for the increasing transplant activity. Transplant waiting list numbers continued to rise by 8%. Graft failure occurred in 3.2% of prevalent transplant patients. Death rates remained stable at 2.3/100 patient years. Malignancy accounted for 21% of these deaths. Analysis of prevalent transplants by CKD stage showed 16% with eGFR <30 and 2.2% <15. Of those in stage 5T, 26% had Hb <10 g/dl, 27% phosphate >1.8 mmol/L and 50% an iPTH >32 pmol/L. These patients were less likely to achieve the UK Standards in comparison to CKD5 dialysis patients.

In the incident RRT cohort, 52% had one or more comorbidities. Diabetes mellitus and ischaemic heart disease were the most common conditions seen in 28.9% and 22.5% of patients respectively. Comorbidities were more common in Whites and were associated with a greater likelihood of starting on HD (rather than PD). In multivariable survival analysis, malignancy and ischaemic/neuropathic ulcers were the strongest predictors of poor survival.

The 2006 unadjusted 1 year after 90 day survival for patients starting RRT was 86%. In incident 18–64 year olds the unadjusted 1 year survival has risen from 85.9% in 1997 to 91.5% in 2006 and for those aged

>65 it has risen from 63.8% to 72.9%. The age adjusted survival of prevalent dialysis patients rose from 85% in 2000 to 89% in 2007. Diabetic patient survival rose from 76.6% in 2000 to 84.0% in 2007. The relative risk of death on RRT compared with the general population was 30 at age 30 years compared with 3 at age 80 years. In the prevalent RRT dialysis population, cardiovascular disease accounted for 34% of deaths, infection 20% and treatment withdrawal 14%.

81% of prevalent HD patients met the UK Clinical Practice Guideline for URR (>65%). This has increased from 56% in 1998 to 81% in 2007.

This year for the first time there has been a small fall (from 85.9% in 2006 to 85.6%) in the percentage of HD patients with a Hb of >10 g/dl. This contrasts with previous annual improvements in this figure and is related to implementation of the new Hb Standard which has a target range of 10.5–12.5 g/dl. The median Hb in prevalent HD patients was 11.6 g/dl with 86% having Hb \geq 10.0 g/dl. The median Hb on PD was 11.9 g/dl with 91% having Hb \geq 10.0 g/dl. In 2007 58% of patients commenced RRT with Hb \geq 10.0 g/dl (median Hb 10.3 g/dl). Of incident patients 81% and 87% had Hb \geq 10.0 g/dl by 3 and 6 months of dialysis treatment respectively. The median ferritin in HD patients was 417 μ g/L and 95% had a ferritin \geq 100 μ g/L. The median ferritin in PD patients was 255 μ g/L with 85% having a ferritin \geq 100 μ g/L. The mean ESA dose was higher for HD than PD patients (9,300 vs. 6,100 IU/week).

Serum phosphate was between 1.1–1.8 mmol/L in 53% of HD and 64% of PD patients. Since 2003 there has been annual improvement in phosphate control for both HD and PD patients, largely through a reduction in phosphate >1.8 mmol/L. PD patients this year also showed a reduction in the percentage with a low phosphate. Adjusted calcium was between 2.2–2.6 mmol/L in 73% of HD and 78% of PD patients. Parathyroid hormone was between 16–32 pmol/L in 25% of HD and 27% of PD patients.

Significantly more haemodialysis patients achieved the BP standard (44.6% pre-HD and 48.8% post-HD)

than peritoneal dialysis (32.8%) or renal transplant patients (26.7%). Median BP fell significantly between 2000 and 2007 for each treatment modality. There was significant variability in BP control between renal centres ($p < 0.0001$) for haemodialysis and transplant patients. Hypertension was significantly more common in haemodialysis patients with vascular disorders such as diabetes and renovascular disease (56.8%) than in glomerulonephritis (51.0%) or tubular disorders (45.1%). The effect was less prominent in peritoneal dialysis and not evident in transplant patients where few achieve the BP standard.

From April 2007, all centres providing RRT in England were asked to provide additional data on patients with MRSA bacteraemia. From April 2007–March 2008, 188 discrete episodes of MRSA bacteraemia were reported in patients receiving dialysis. Over the same period 4,448 MRSA bacteraemias were reported in England, indicating that 4.2% of all cases occurred in dialysis patients. The relative risk of MRSA bacteraemia was about 8 fold higher for a patient using a catheter in comparison to a fistula. The mean rate using just HD patients as the denominator, was 1.14 ± 0.95 episodes/100 patients/year with a range of 0–3.93. Compared to previous registry reports, absolute numbers of reported MRSA bacteraemias has fallen by approximately 62% from 2004.

The UK paediatric RRT population in April 2008 was 875 patients with 74% transplanted. The proportion with grafts from living donors was 34%. For those on dialysis, 57% were on PD. The prevalence under age 16 yrs was 55 pmp and the incidence was 8 pmp. Children from ethnic minority groups were less likely to have an allograft and living donation was also less frequent. The rate of RRT for South Asians was 3 times that of the White and Black populations. Diseases with autosomal recessive inheritance were more common in patients from ethnic minority groups. Renal dysplasia was the most common diagnosis accounting for 33% of prevalent RRT patients. The incidence of cystinosis causing ERF has fallen, reflecting better early treatment. Overall 5 year survival for children with ERF was 91.8%. Five year survival of infants starting dialysis was just 62%.