## **Chapter 1: Summary**

Included in this Report is the first UK wide survey on vascular access (Chapter 6).

Only 6 renal units in the UK have not started submitting their data to the Registry. It is hoped all units will participate within 2 years.

In 2004, the total estimated acceptance rate for RRT in adults in the UK was 103 pmp. In addition, 104 children started RRT giving a total incidence of 105 pmp. The real incidence may be 107 pmp as the English rate is probably an underestimate by about 3 pmp.

In the mainland UK, for adults in 2004, the crude acceptance rates in Local Authorities varied from 29 to 232 pmp; the standardised rate ratios for acceptance varied from 0.27 to 2.30.

In the 38 UK renal units submitting data since 2000, there was a 7% rise in the acceptance numbers: there was a 3% rise in Scotland, a 6% rise in Wales and an 8% rise in England.

The median age of patients starting RRT in England has increased from 63.3 in 1998 to 64.7 in 2004 and in Wales from 62.5 in 1998 to 68.7 years in 2004. Over the same time the percentage of incident patients aged >75 years has risen from 18% to 25%.

The increase in the overall acceptance rate of incident patients with diabetic renal disease in the 2000–2004 period was from 17 to 20 pmp.

HD was the very first modality of RRT in 71.0% of patients, PD in 26.5% and preemptive transplant in 2.3%, which compares with 58% starting HD in 1998.

The estimated prevalence of RRT in the UK at the end of 2004 was 638 pmp. The maximal prevalence rate occurred in the age band 80–85 years (2,065 pmp) in men and in the 65–74 year age band in women (1,073 pmp).

The annual increase in prevalence in the 38 renal units participating in the Registry since 2000 was 5.9%.

17% of 18–44 year old patients are preemptively listed for transplantation. Within one year of starting dialysis, 45% of patients under the age of 65 years are listed for transplantation. Within two years this proportion has increased to 57% and by five years to 66%.

The differences between centres in the proportion of diabetic patients less than 65 years with established renal failure that have a renal transplant varies from 5–62% of patients: this may indicate differences in the policy of listing diabetic patients.

One and five year death censored allograft survival is no different for patients with diabetes mellitus than for patients with glomerulonephritis. However, there is an increased risk of death one year after transplantation. By five years the increased risk of death is more than double that of patients with glomerulonephritis.

Transplanted patients are less socially deprived than both new registrants to the waiting list and prevalent patients on the waiting list. Social deprivation is also lower in recipients of living donor transplants than deceased donor transplants.

There is no significant variation between centres in attained Hb when post transplant eGFR is >30, but when eGFR is <30 some renal units fail to maintain adequate Hb in many patients.

Including PD patients, 77% of prevalent patients were having dialysis therapy delivered by definitive access. For HD patients only, definitive access was used in 69%.

45% of all patients commenced RRT using definitive access. Of patients commencing on HD, only 31% commenced with definitive access. Of those known to the renal units for more than 1 year, only half started HD with definitive access.

5% of HD patients were in-patients, which suggests that over 320,000 bed days are utilised by HD patients per annum across the UK. Of these episodes, 29% were considered to be related to vascular access.

The number of Staphylococcal systemic infections was 13/100 patients per annum. The figures for MRSA alone were 4/100 patients per annum which suggests that HD patients contribute 8–10% of all UK cases of MRSA bacteraemia.

Improvements in Hb continued in 2004. At the end of 2004, 85% of HD patients and 90% of PD patients had a Hb  $>10\,\text{g/dl}$ . This compares with 84% of HD and 88% of PD patients in 2003. 68% of HD patients and 75% of PD patients achieve a Hb above the European guideline minimum of 11 g/dl.

Compared to 2003, the percentage of patients treated with EPO in 2004 was unchanged for HD (91% vs. 91%) and higher for PD (80% vs. 77%). EPO doses were higher in patients on HD (mean 9,500 units/wk; median 8,000 units/wk) than in PD (mean 6,000 units/wk; median 4,000 units/wk).

There is a continuing year-on-year trend towards improvement in phosphate control in dialysis patients. The target of <1.8 mmol/L was achieved in 63% of patients overall, (69% on PD and 61% on HD).

Older dialysis patients are more likely to achieve target serum phosphate than younger ones. This effect was linear with age.

Achievement of the parathyroid hormone target of  $<32\,\mathrm{pmol/L}$  in dialysis patients was poor at 63%.

Analysis of aluminium monitoring practices in renal units suggests that compliance with the RA monitoring standard (all HD patients 3 monthly) is poor, with some centres possibly having abandoned routine monitoring of aluminium in dialysis patients or doing it annually. It is suggested that the role of aluminium monitoring in dialysis patients needs re-evaluation.

During the last 7 years there has been no significant improvement in systolic or diastolic BP.

Cholesterol levels have fallen progressively over the last 7 years with 81% of HD patients, 65% of PD patients and 57% of transplant patients achieving a serum cholesterol <5 mmol/L.

The 2003 one-year incident patient survival, adjusted to age 60, on HD and PD was 85.7%

and 92.5% respectively, compared with 83.8% and 89.6% for 2002.

5-year survival of incident patients in the UK on RRT is 42.6%: 64% for those under 65 and 14.5% for older patients.

The one year after 90 day survival for all renal units falls within 3 standard deviations from the national mean: 2 units have survival more than 2 standard deviations above the mean and 2 units lower than 2 standard deviations from the mean.

There was no excess of co-morbidity amongst patients referred for RRT within 3 months compared to those referred earlier. Estimated GFR at start of RRT tended to be higher amongst those with co-morbidity compared to those with no co-morbidity.

20% of patients with diabetic nephropathy were referred <3 months before starting RRT and 46% within a year. Patients with diabetic nephropathy from socially deprived areas were referred later than those from more affluent areas.

19% of patients with diabetic nephropathy were recorded as smokers at the start of RRT.

Patients with diabetic nephropathy had lower serum cholesterol values than other patients on PD and HD.

The paediatric Registry reported that a greater proportion of the paediatric population are on dialysis than in previous years.

There remains a high incidence and prevalence of ERF in South Asian children, partly accounted for by an increased incidence of genetic diseases in this group.

22% of children have one or more paediatric specific co-morbidities at presentation with ERF; most common of these is developmental delay affecting 8.7%. Intellectual disability affects 17% of the paediatric ERF population with 7% having moderate or severe impairment.

28% of paediatric dialysis patients have been on dialysis for 2 or more consecutive years and 7% have had 5 or more consecutive years of dialysis.