Chapter 5: All Patients Receiving Renal Replacement Therapy In 2001

Summary

- On 31 December 2001, a minimum of 33,363 patients in the UK were receiving renal replacement therapy, 17,637 (52.8%) of whom were treated by dialysis. This is a point prevalence of 566 per million population (pmp).

- The overall prevalence in the old health authorities ranged from 281 pmp in South Lancashire to 723 pmp in Coventry. A study of age-specific prevalence shows variations of acceptance at different ages that are hidden by the overall figure, but age and ethnic minority distributions do not fully explain the variation in prevalence.

- The median age of patients established on renal replacement therapy is 55, 1 year more than in 2000. Thirty per cent of patients are over 65 years old and 11% over 75.

- The gender ratio is unchanged, 61% of patients being male.

- Returns of data on ethnicity remain poor, although a few units have excellent returns. Overall, data were returned on 65% of patients. Of patients with ethnicity data, 83% were White, the variation between units ranging from 57% to 99%. Patients from ethnic minorities have the same distribution of dialysis modality as the overall group.

- Of prevalent White patients, 10% are diabetic, compared with 20% from ethnic minorities.

- The year-on-year growth of the number receiving renal replacement therapy appears to be around 7%. The growth is largely in haemodialysis, with a small growth in the number of transplant patients and the peritoneal dialysis number being relatively static.

- Of all patients, 37.1% are on haemodialysis, 46.6% are transplanted, and 16.3% receive peritoneal dialysis. Peritonal dialysis is more common in the young, especially young diabetics. Connect peritoneal dialysis has virtually disappeared. Cycling peritoneal dialysis has increased very little in the past year: cycling is used by 14% of patients in England & Wales, 38% in Scotland and 67% in Northern Ireland, with a large variation between units.

- The 1 year survival of established prevalent patients in England & Wales is 84% for dialysis and 97% for transplantees. For dialysis patients, 1 year survival is 90% for those under 65 and 77% for older patients. For diabetics on dialysis, the figures are 82% and 72% respectively.

Prevalence rates

Figures for the estimated number of patients receiving renal replacement therapy (RRT) in the four countries of the UK are shown in Tables 5.1 and 5.2. The results from Scotland are precise, being provided by the Scottish Renal Registry, which has complete coverage of Scotland. The results from Wales and Northern Ireland are complete as Registry data have been supplemented by data from questionnaires sent to clinicians.

It has proved difficult to estimate the prevalence for England. The figures for England include estimates of the total number of patients receiving treatment in England, and the modalities they receive, which are calculated by extrapolation from the Renal Registry units. There is a particular problem in calculating prevalence, as opposed to incidence, rates as many patients are transferred away from the parent renal unit for transplantation. Several transplant units do not refer the patients back to the parent unit, or do so at a very late stage. Manchester, Birmingham and Newcastle in particular have this practice, and these three major transplant centres were not part of the Registry in 2001. Thus, when calculating prevalence rates by health authority, or by renal unit, there is likely to be a shortfall of transplant patients. This appears to be a particular problem when calculating prevalence using health authority data, as many of the health authorities for which the Registry has complete coverage are geographically close to the three major transplant units listed.

In addition, although current referral patterns are well established and show little variability, some of the long-standing prevalent patients started treatment before the current patterns were established and stayed with their original renal units, adding further possible errors to the health authority data. For these reasons therefore, any estimate of prevalence in England has to be a minimum estimate, in the understanding that there will be a slightly greater number of patients, and the error will occur largely in the transplant population. Overall, it appeared more appropriate to derive estimates for the prevalence in England from renal unit data, accepting the estimated catchment populations of each renal unit.

The population covered by the Renal Registry is similar to that of the whole of England with regard to age.

	England	**Wales**	**Scotland**	**N Ireland**	**UK**
No. of units	31	5	11	4	**71**
No. of patients	16,850 *27,087*	1,883	3,286	1,107	**33,556****
Population (million)	49.5	2.93	5.1	1.69	**59.23**
Patients (pmp)	547	642	644	656	**566****
Mean patients/unit	531**	326	299	277	

*Estimated figures. **Includes estimated figures for England.

Table 5.1: Summary of adult patients registered and total population covered, 31/12/01

	Total	Dialysis (%)	Population
Scotland	3,286	1,684 (51)	5.1
N Ireland	1,107	587 (53)	1.7
Wales	1,883	966 (51)	2.93
England	27,087	14,400 (53)	49.5
UK	**33,363**	**17,637 (53)**	**59.23**

Table 5.2: Patients on dialysis and total RRT in the four countries of the UK, 31/12/01

The prevalence in England is lower than the rest of the UK, reflecting the lower acceptance rates over the past decade. It is also noticeable that the English units are significantly larger, treating more patients per unit, than those in the rest of the UK. Table 5.3 lists the current patients by modality treated in each renal unit participating in the Renal Registry from England & Wales. Figure 5.1 shows that some units have a very low number of transplants as their transplant patients are cared for by adjacent large transplant centres.

The estimated total for the UK is lower than that recently published by the National Kidney Research Fund but refers to a time period at least 6 months earlier. During that period, 2500 patients would be expected to start RRT. Allowing for deaths, transplants and returns from transplantation, the figures are compatible.

Treatment Centre	Dialysis No.	Transplant No.	RRT No.	% Transplant
Oxfrd	493	818	1311	62.4
Guys	463	710	1173	60.5
Livrpl	549	620	1169	53.0
Leic	605	429	1034	41.5
Crdff	422	609	1031	59.1
Ports	418	605	1023	59.1
Bristl	433	520	953	54.6
Sheff	561	385	946	40.7
StJms	375	473	848	55.8
Notts	467	355	822	43.2
Carsh	363	333	696	47.8
Camb	250	414	664	62.3
Covnt	302	248	550	45.1
Prstn	371	113	484	23.3
Extr	285	194	479	40.5
Stevn	356	109	465	23.4
Heart	313	142	455	31.2
Hull	286	152	438	34.7
SCleve	209	218	427	51.1
Plym	178	229	407	56.3
Swnse	269	103	372	27.7
LGI	187	161	348	46.3
Wolve	274	66	340	19.4
Words	156	83	239	34.7
Wrex	156	70	226	31.0
Sund	110	107	217	49.3
Bradf	117	91	208	43.8
Redng	198	6	204	2.9
Glouc	144	51	195	26.2
Truro	137	50	187	26.7
Carls	75	80	155	51.6
Sthend	123	17	140	12.1
York	101	23	124	18.5

Treatment Centre	Dialysis No.	Transplant No.	RRT No.	% Transplant
Eng	8899	7802	16701	46.7
Wls	847	782	1629	48.0
E&W	9746	8584	18330	46.8

Table 5.3: Prevalent RRT patients in each unit, 31 December 2001

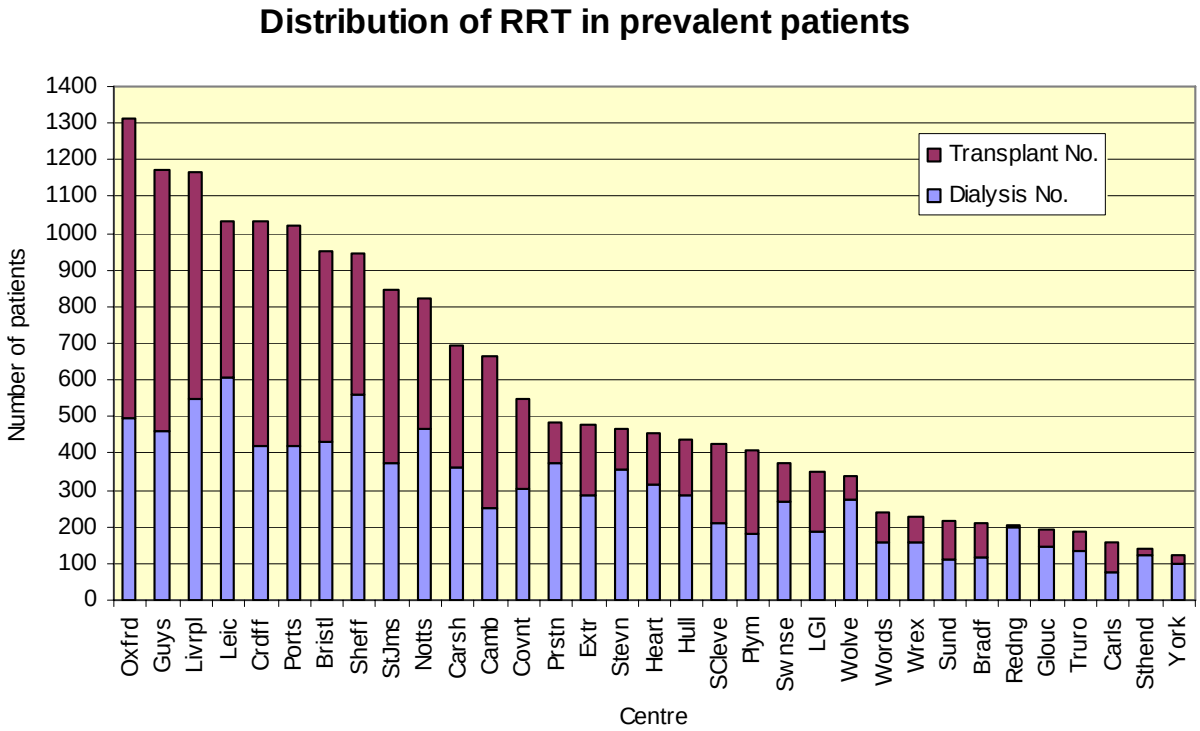

Figure 5.1: Modality changes with time in the UK

Prevalence by health authority

Details of the prevalence of RRT patients in the old health authorities fully covered by the Registry, with a split into older and younger age ranges, are shown in Table 5.4. Patients are allocated to a health authority by postcode of residence. The prevalence ratio is calculated as for the acceptance ratio (see Chapter 4). The variation in prevalence between authorities is illustrated.

			All patients				18–65	65+
Reg–ion	Health authority	Population	Pat count	pmp	Prevalence ratio	95%CI	pmp	pmp
Y01	Bradford	483,300	280	579	112	108–115	725	1,026
Y01	Calderdale and Kirklees	583,800	338	579	112	109–114	726	897
Y01	County Durham and Darlington	607,800	283	466	90	87–92	530	858
Y01	East Riding and Hull	574,500	275	479	92	90–95	567	823
Y01	Leeds	727,400	408	561	108	106–110	636	1,114
Y01	North Cumbria	319,300	173	542	104	99–109	636	864
Y01	North Yorkshire	742,400	341	459	88	86–91	521	790
Y01	Sunderland	292,300	143	489	94	89–100	572	925
Y01	Tees	556,300	304	546	105	102–108	661	948
Y01	Wakefield	318,800	166	521	100	95–105	575	1,080
Y02	Barnsley	228,100	135	592	114	107–121	723	993

Reg–ion	Health authority	Population	All patients Pat count	pmp	Prevalence ratio	95%CI	18–65 pmp	65+ pmp
Y02	Doncaster	290,500	154	530	102	97–108	637	899
Y02	Leicestershire	928,700	593	639	123	121–125	737	1,241
Y02	Lincolnshire	623,100	332	533	103	100–105	619	1,076
Y02	North Derbyshire	370,200	177	478	92	88–96	505	956
Y02	North Nottinghamshire	388,900	229	589	113	109–118	689	994
Y02	Nottingham	642,700	430	669	129	126–131	731	1,425
Y02	Rotherham	254,400	164	645	124	118–130	774	1,087
Y02	Sheffield	531,100	278	523	101	98–104	650	767
Y02	South Humber	308,600	150	486	94	89–99	514	1,060
Y07	Coventry	304,300	220	723	139	134–145	854	1,402
Y07	Solihull	205,600	90	438	84	77–92	439	1,038
Y07	South Staffordshire	592,100	189	319	61	59–64	352	662
Y07	Walsall	261,200	110	421	81	75–87	371	1,235
Y07	Warwickshire	506,700	311	614	118	115–121	704	1,100
Y07	Wolverhampton	241,600	160	662	128	121–134	743	1,379
Y08	East Lancashire	511,200	166	325	63	60–65	357	736
Y08	Liverpool	461,500	267	579	111	108–115	717	979
Y08	Morecambe Bay	310,300	97	313	60	55–65	311	685
Y08	North Cheshire	311,900	137	439	85	80–90	530	782
Y08	North-West Lancashire	466,300	173	371	71	68–75	406	678
Y08	Sefton	287,700	137	476	92	86–97	566	735
Y08	South Lancashire	312,700	88	281	54	50–59	306	605
Y08	St Helens and Knowsley	333,000	167	502	97	92–101	628	791
Y09	Bedfordshire	556,600	304	546	105	102–108	613	1,240
Y09	Cambridgeshire	468,000	313	669	129	125–132	791	1,192
Y09	Hertfordshire	1,033,600	418	404	78	76–79	424	938
Y11	Berkshire	800,200	402	502	97	95–99	576	1,070
Y11	Buckinghamshire	681,900	366	537	103	101–106	565	1,393
Y11	IOW, Portsmth & SE Hamps	671,700	369	549	106	103–108	625	1,029
Y11	North and Mid Hampshire	556,900	215	386	74	72–77	482	592
Y11	Northamptonshire	615,800	338	549	106	103–108	633	1,098
Y11	Oxfordshire	616,700	334	542	104	102–107	615	1,126
Y11	Southampton & SW Hampshire	542,300	246	454	87	85–90	540	730
Y12	Avon	999,300	617	617	119	117–121	672	1,257
Y12	Cornwall and Isles of Scilly	490,400	315	642	124	120–127	644	1,298
Y12	Gloucestershire	557,300	261	468	90	87–93	525	862
Y12	North and East Devon	479,300	256	534	103	100–106	596	897
Y12	Somerset	489,300	255	521	100	97–104	606	845
Y12	South and West Devon	589,100	357	606	117	114–119	683	1,037
Y12	Wiltshire	605,500	274	453	87	85–90	515	872
	Units from England	**25,632,200**	**13305**	**519**				
W00	Gwent	557,200	351	630	121	118–124	748	1,103
W00	Bro Taf	739,600	479	648	125	123–127	738	1,309
W00	Dyfed Powys	479,400	239	499	96	93–99	520	978
W00	North Wales	657,500	345	525	101	99–103	621	832
W00	Morgannwg	499,700	308	616	119	116–122	701	1,104
	Units from Wales	**2933400**	**1722**	**587**				
	England & Wales	**28,565,600**	**15027**	**526**			**600**	**997**

Table 5.4: Variation in overall prevalence between old health authorities

The overall variation in prevalence ranges from 281 pmp in South Lancashire to 723 pmp in Coventry. A study of the age-specific prevalence shows variations hidden by the overall figure. Thus, for the under-65s, the prevalence in South Lancashire is 306 pmp and that in Coventry 854 pmp. For older patients, North and Mid Hampshire is lowest at 592 pmp and Nottingham highest at 1425 pmp. Walsall has a relatively low prevalence at 421 pmp but a high prevalence among the elderly of 1235 pmp. The overall low Walsall rate probably reflects a low proportion of elderly people in the population.

Although, in general, areas with a high prevalence in the elderly have a high prevalence among the young, there are variations (Figure 5.2). Where there is a large ethnic minority population, which is likely to be relatively young, a high prevalence in younger patients would be expected. This does not, however, explain all the variation seen.

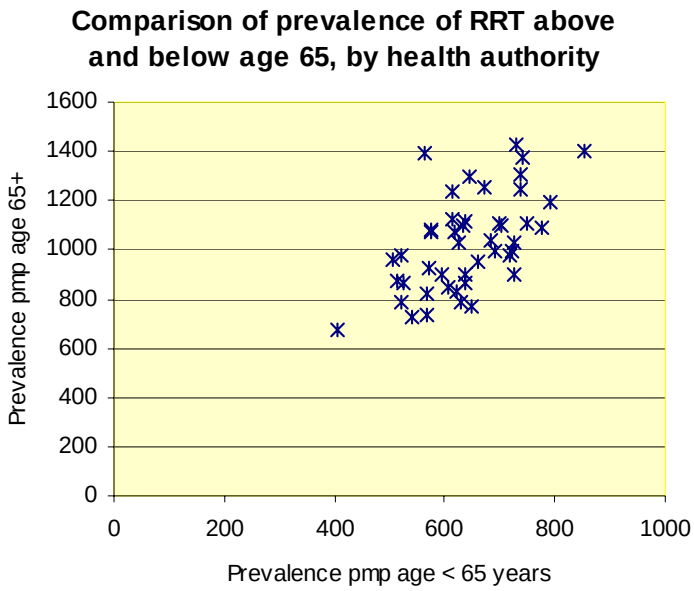

Figure 5.2: Comparison of prevalence of RRT in health authorities by age

Change in prevalence 1998–2001

Table 5.5 illustrates the serial changes in prevalence rate in the old health authorities from which the Registry has reliable data for 3 or 4 years.

HA Code	Region	Health authority	Population	1998 pmp	1999 pmp	2000 pmp	2001 pmp	2001 Pat count
QDT	Y01	Calderdale and Kirklees	583,800	346.0	335.7	519.0	579.0	338
QDE	Y01	Durham &Darlington	607,800	335.6	343.9	393.2	465.6	283
QDF	Y01	East Riding and Hull	574,500	447.3	463.0	511.7	478.7	275
QDK	Y01	North Cumbria	319,300	485.4	501.1	504.2	541.8	173
QDN	Y01	Sunderland	292,300	431.1	437.9	451.6	489.2	143
QDP	Y01	Tees	556,300	465.6	481.8	517.7	546.5	304
QCG	Y02	Barnsley	228,100	460.3	508.5	574.3	591.8	135
QCK	Y02	Doncaster	290,500	423.4	464.7	512.9	530.1	154
QCL	Y02	Leicestershire	928,700	599.8	601.9	649.3	638.5	593
QCM	Y02	Lincolnshire	623,100	425.3	455.8	513.6	532.8	332
QCH	Y02	North Derbyshire	370,200	397.1	405.2	445.7	478.1	177
QCN	Y02	North Nottinghamshire	388,900	465.4	496.3	550.3	588.8	229
QCP	Y02	Nottingham	642,700	577.3	623.9	653.5	669.1	430
QCQ	Y02	Rotherham	254,400	448.1	459.9	562.1	644.7	164
QCR	Y02	Sheffield	531,100	408.6	442.5	512.1	523.4	278
QDL	Y02	South Humber	308,600	531.4	544.4	589.8	486.1	150
QEA	Y07	Coventry	304,300	670.4	663.8	677.0	723.0	220
QEG	Y07	Solihull	205,600	364.8	355.1	413.4	437.7	90
QEJ	Y07	South Staffordshire	592,100		256.7	324.3	319.2	189
QEK	Y07	Walsall	261,200		333.1	379.0	421.1	110
QEL	Y07	Warwickshire	506,700	519.0	554.6	609.8	613.8	311

QEM	Y07	Wolverhampton	241,600		591.9	678.8	662.3	160
QCX	Y08	East Lancashire	511,200	270.0	275.8	361.9	324.7	166
QC4	Y08	Morecambe Bay	310,300	225.6	235.3	328.7	312.6	97
QCY	Y08	North-West Lancashire	466,300	300.2	315.2	411.8	371.0	173
QCC	Y11	Northamptonshire	615,800	444.9	462.8	513.2	548.9	338
QCE	Y11	Oxfordshire	616,700	431.3	454.0	491.3	541.6	334
QD8	Y12	Avon	999,300	534.4	550.4	592.4	617.4	617
QDY	Y12	Gloucestershire	557,300	457.6	511.4	642.4	468.3	261
QDX	Y12	North and East Devon	479,300	463.2	502.8	546.6	534.1	256
QD5	Y12	Somerset	489,300			500.7	521.2	255
QD6	Y12	South and West Devon	589,100	502.5	534.7	587.3	606.0	357
QD7	Y12	Wiltshire	605,500	341.9	336.9	353.4	452.5	274
QW1	W00	Gwent	557,200	549.2	559.9	622.8	629.9	351
QW2	W00	Bro Taf	739,600	532.7	581.4	632.8	647.6	479

Table 5.5: Changes in prevalence in health authorities, 1998–2001

Age

The median age for all patients on treatment on 31 December 2001 was 55 years (Table 5.6). This is 1 year older than in the last report, with the median age of transplanted patients and haemodialysis (HD) patients rising by 1 year. The median age of patients on peritoneal dialysis (PD) remains lower than that of those on HD. Northern Ireland patients appear to be older. The age profile of prevalent patients is shown in Figure 5.3. In the UK, 30% are over 65 and 11% over 75.

	Transplants	PD	HD	All
England & Wales	49	58	64	**55**
Range between units	44–54	51–63	57–71	51–64
Northern Ireland	–	–	–	**62**
Scotland	–	–	–	**54**

Table 5.6: Median age, country and treatment modality

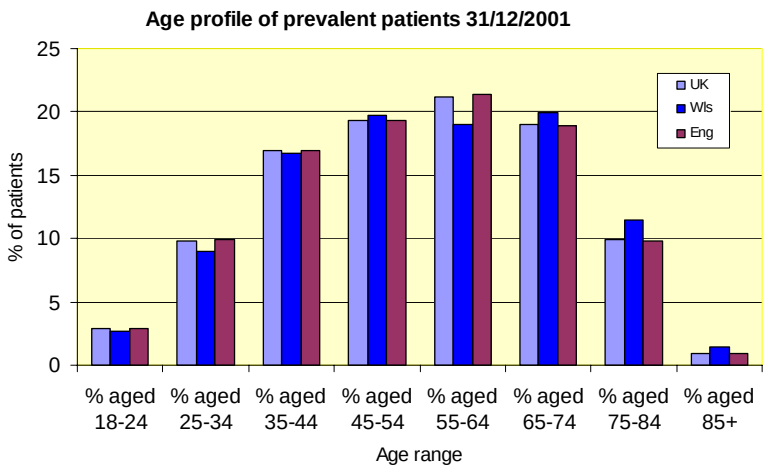

Figure 5.3: Age profile of prevalent patients

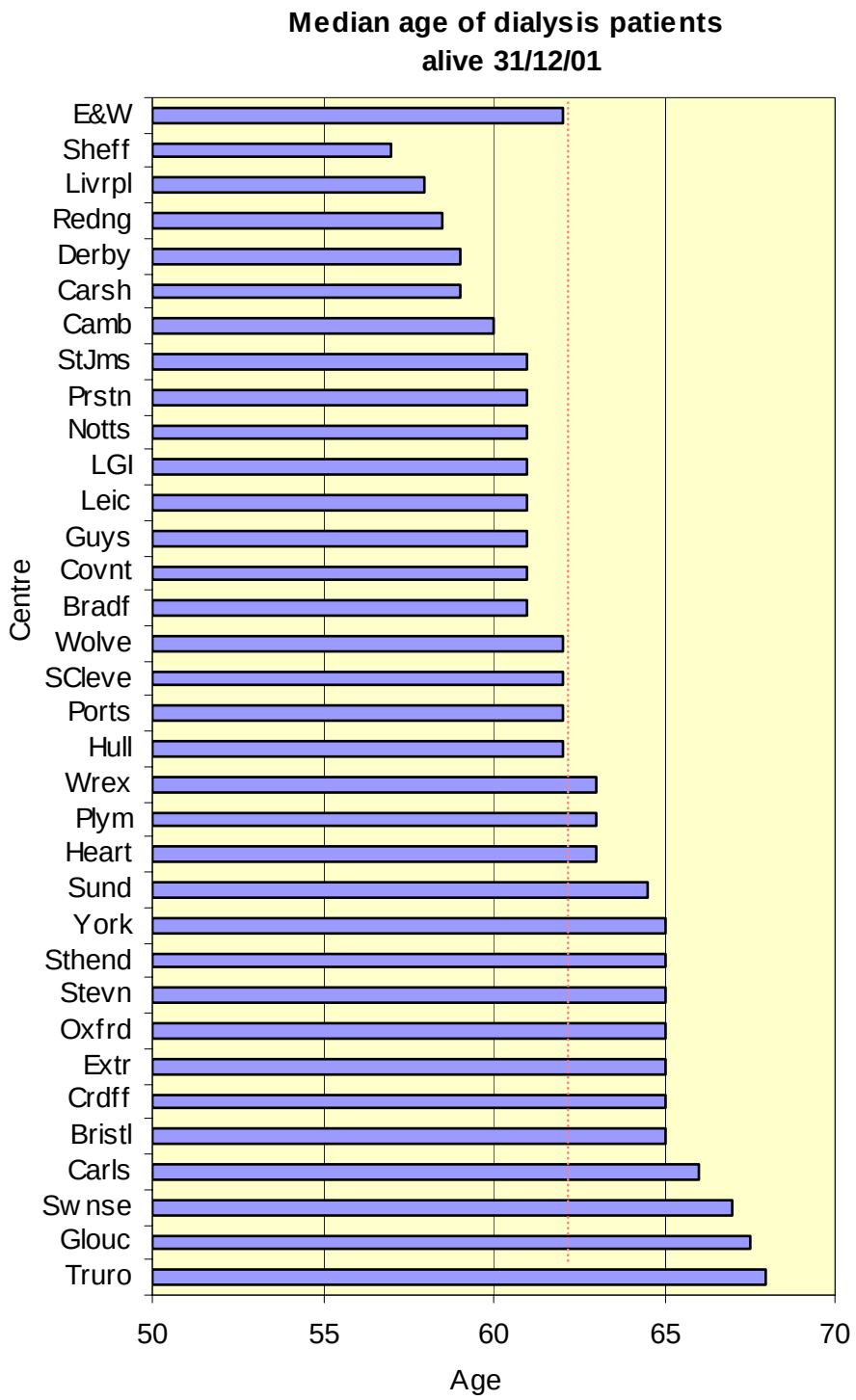

Figure 5.4: Median age of dialysis patients alive at 31 December 2001

Figure 5.4 demonstrates the wide variation in the median age of dialysis patients between individual units. This difference is significant (chi squared $p<0.0001$). Possible reasons for this include differences in local population, referral and acceptance policies, survival rates and available resources.

Gender

Overall, 61% of all patients on treatment were male, the male preponderance occurring at all ages (Figure 5.5). In particular, of the 102 patients who were aged over 85 on 31 December 1999, 72% were male compared with 62% in the previous year. Although the numbers are small, this is a high proportion of males in the older age groups considering the greater proportion of women in the general population at that age. Age/gender-specific rates will be calculated next year using Census data

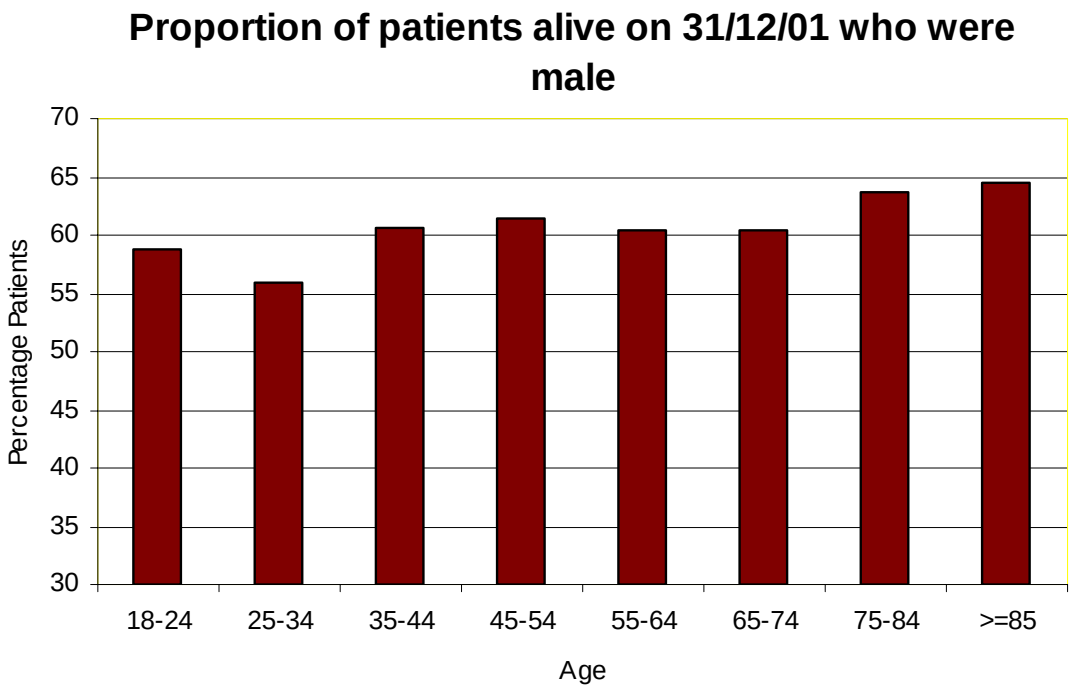

Figure 5.5: Percentage of male patients according to age

Ethnicity

With some exceptions (notably Exeter), few units managed to improve the data on ethnicity for existing patients (Table 5.7).

Treatment centre	% Return	% White	% Black	% Asian	% Chinese	% Other
Sheff	100	94.1	1.6	3.2	0.7	0.4
Words	100	90.4	0.8	8.4	0.4	
Prstn	99	89.0	0.8	10.0		0.2
Wolve	99	77.3	6.3	15.8	0.6	
Heart	98	75.1	5.8	17.5	0.9	0.7
Plym	98	96.0	2.5	0.5	0.5	0.5
Redng	98	72.5	7.5	17.0	1.5	1.5

Treatment centre	% Return	% White	% Black	% Asian	% Chinese	% Other
Bristl	96	92.8	3.3	2.5	0.8	0.7
Hull	96	98.8	0.5	0.2	0.2	0.2
Leic	96	81.2	2.3	15.2	0.2	1.0
Carsh	94	70.6	5.2	5.7	0.8	17.7
Notts	94	88.5	4.5	6.1		0.9
Covnt	93	82.4	2.5	14.5	0.4	0.2
Guys	92	80.0	14.5	3.9	1.5	0.1
Sthend	92	94.6	3.1	2.3		
Sund	92	98.5	1.0		0.5	
Extr	91	99.5	0.5			
St Jms	88	87.4	3.1	9.0		0.5
Swnse	87	98.8	0.3	0.6		0.3
S Cleve	78	94.9		4.2	0.9	
Derby	77	87.7	3.5	6.1	0.9	1.8
Bradf	*58*	*66.9*	*0.8*	*30.6*		*1.7*
Wrex	*57*	*59.4*	*39.8*		*0.8*	
Livrpl	44					
Crdff	31					
Truro	24					
York	19					
Camb	16					
Carls	16					
Glouc	6					
Oxfrd	4					
Stevn	3					
LGI	2					
Ports	1					
Eng	*67*	*82.8*	*8.3*	*6.9*	*0.5*	*1.5*

Table 5.7: Ethnicity

The median age of ethnic minority patients was 55.6 years, compared with a slightly younger median age of 54 for all patients. Considering the younger median age of ethnic patients starting RRT, this higher median age of prevalent ethnic patients may indicate a higher survival rate, similar to that shown in the USA Black RRT population when compared with the White population. This is shown in this report to be true for UK incident patients (see Chapter 17). The gender ratio in the ethnic minority group was the same as for the White population, 62% of patients being male.

Within the ethnic minorities group, 67% of dialysis patients were on HD, which was similar to the percentage for non-ethnic population in England & Wales. The rate of PD is surprising, as several units have reported difficulties in establishing patients on PD, particularly with many units having PD education programmes available only in English.

Diabetes was reported as the primary renal disease causing renal failure in 20% of prevalent patients from the ethnic minority groups, compared with 10% in patients whose ethnicity was reported as White.

Primary renal disease

Details of primary renal disease, based on the original EDTA coding classification, are shown in Table 5.8. Unlike with incident patients, the single most common diagnosis in those under 65 years old was glomerulonephritis, followed by pyelonephritis (which includes outflow obstruction). In as many as 30% of those aged over 65, it was not possible to give a diagnosis. Missing data were much more common in patients over 65 – 10% missing, compared with 3% in patients aged under 65. Diabetes accounted for just over 10% of patients in both age groups, a much lower proportion than the 18% in current incident patients.

Diagnosis	% All patients	Interunit range(%)	% Age <65	% Age ≥65	M:F ratio
Aetiology uncertain*	22.4	11–35	21.1	27.1	1.7
Glomerulonephritis**	15.3	5–21	17.4	7.9	2.3
Pyelonephritis	14.1	7–18	14.9	10.7	1.0
Diabetes	10.6	5–19	10.7	11.1	1.5
Polycystic kidney	3.3	4–13	1.6	9.9	2.1
Hypertension	6.1	0–17	5.9	7.4	2.4
Renal vascular disease	9.1	0–16	10.3	4.6	1.1
Not sent	5.5	0–42	4.0	10.8	1.8
Other	13.5	7–21	14.2	10.5	1.3
All patients total	18,479		13,910	3,826	1.5

Table 5.8: Primary renal disease in all prevalent patients, with age and gender

*Includes patients listed as 'glomerulonephritis not biopsy proven'.

**Biopsy proven.

Diabetes

The median age and modalities of diabetics compared with other patients are shown in Tables 5.9a and b.

	Type I	Type II	All diabetes	Non-diabetics
Number	1,356	605	1,961	15,489
M:F ratio	1.4	1.6	1.2	1.56
Median age on 31/12/01	51	65	56	55
Median age started end-stage	46	62	53	45
renal failure	2.9	2.04	2.64	5.8
Median years on treatment				
% HD	39.1	61.5	46.0	34.4
% PD	25.2	25.6	25.4	15.1
% Transplant	36.6	12.9	28.6	50.5

Table 5.9a: Type of diabetes – median age, gender ratio and modality

	Type I <65	Type II <65	Non-diabetics <65	Type I ≥65	Type II ≥65	Non-diabetics ≥65
Number	1,107	289	11,003	248	316	4,486
% HD	33	55	34	68	67	57
% PD	26	24	15	23	27	19
% Transplant	42	21	50	9	6	24

Table 5.9b: Type of diabetes – age, sex ratio and treatment

Of those type I diabetics on dialysis and aged under 65, 44% are on PD, compared with 31% of under-65 non-diabetics and 30% of type II diabetics. In the over-65s, the use of PD was less common in the type I diabetics but broadly similar in the three groups (25% in type I diabetics, 25% in non-diabetics and 29% in type II diabetics).

Modalities of treatment

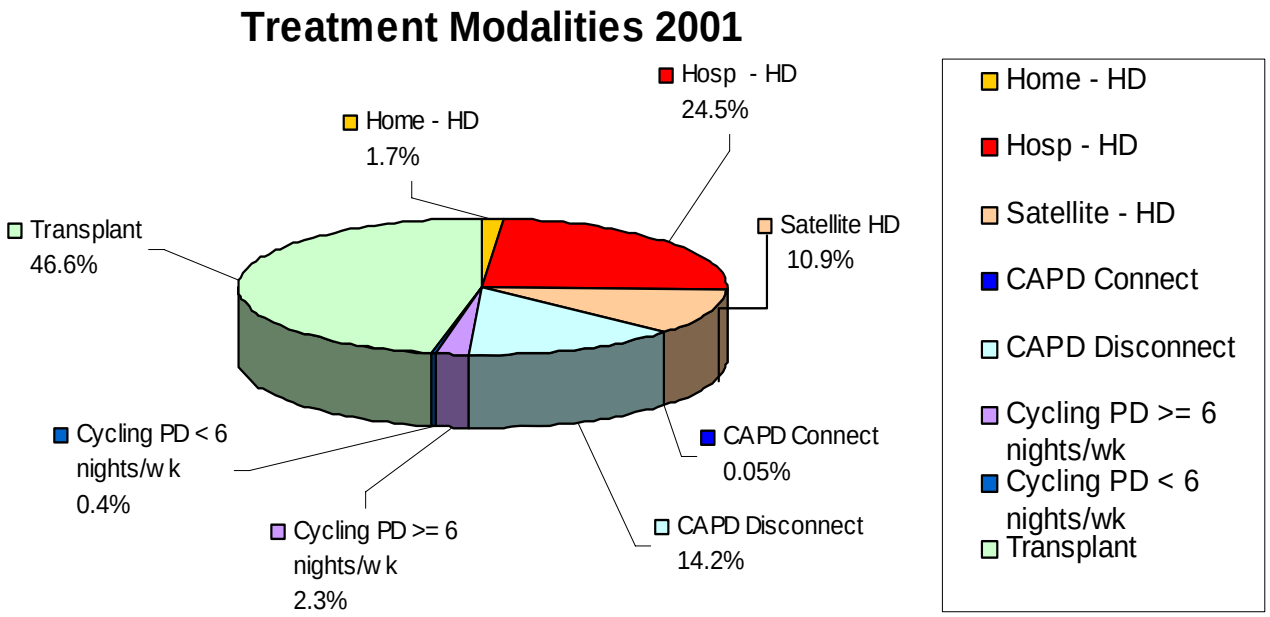

Figure 5.6: Percentage of patients on each dialysis modality, 31 December 2001
CAPD, continuous ambulatory PD

At the end of 2001, 16.8% of RRT patients were on PD: this was a fall from 17.4% in 2001 and accounts for 31.4% of all dialysis patients. Figure 5.6 shows that very few patients in the UK remain on connect PD. The use of cycling PD has not increased since last year. Home HD fell from 4.7% in 2000 to 3.5% of HD patients in 2001. So few patients are now on 'standard' CAPD that it should no longer be called 'standard', 'connect PD' being a better term. In England & Wales, 66% of dialysis patients were on HD, compared with 73% in Scotland.

The variations in patterns of treatment with age are shown in Figure 5.7. Up to the age of 54, more patients are treated by transplantation than by dialysis. HH is the predominant form of dialysis at all ages but especially in the older age groups.

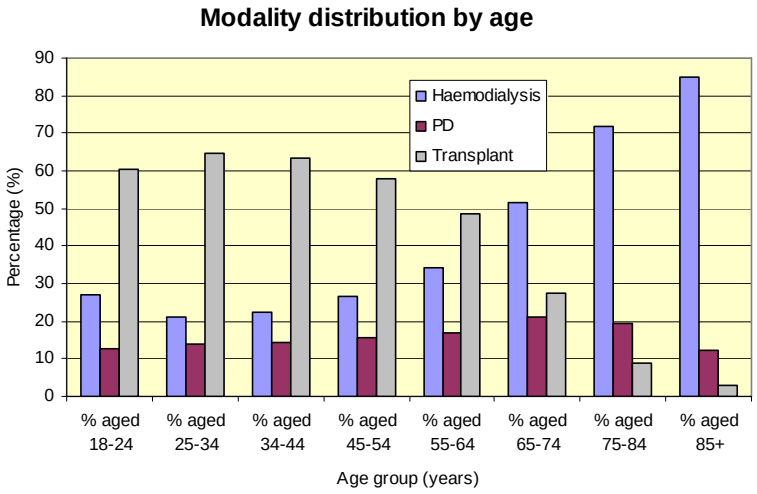

Figure 5.7: Patients on each modality according to age

Haemodialysis

The proportion of dialysis patients treated by HD as opposed to PD varied widely from unit to unit and cannot be explained by age alone (Figure 5.8). The percentage of patients on HD treated in satellite units in England & Wales was 30% (Figure 5.9).

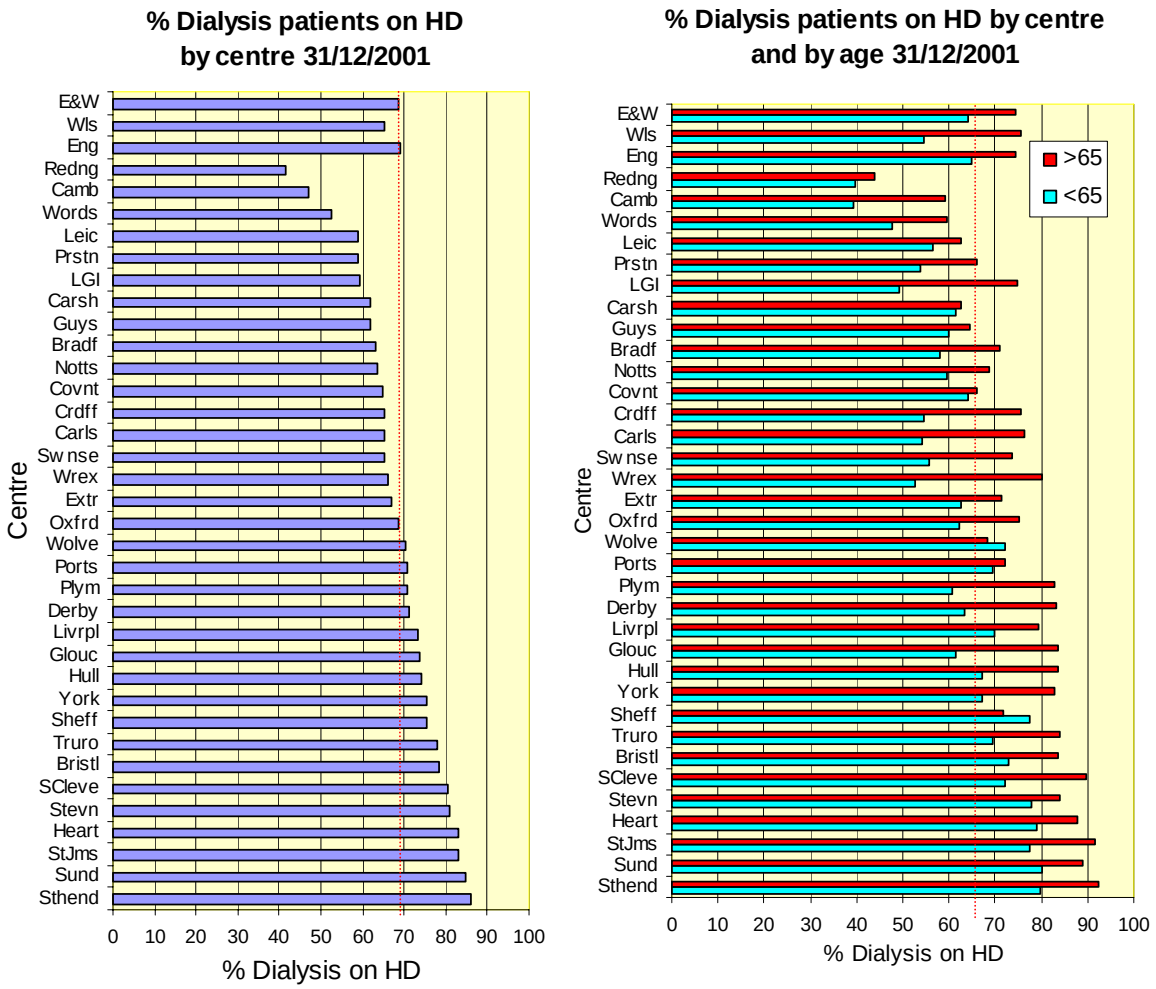

Figure 5.8: Proportion of patients treated by HD according to centre and age

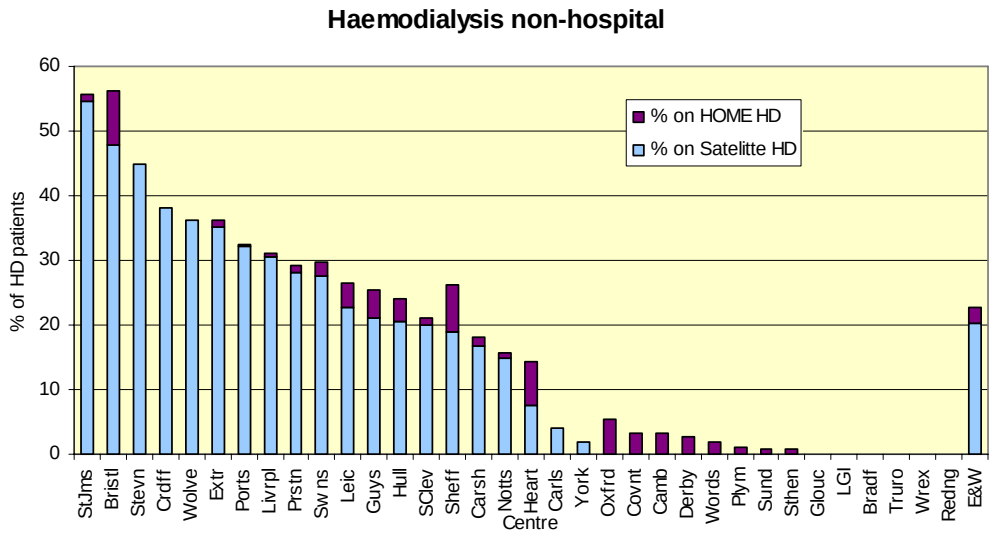

Figure 5.9: Percentage of HD patients treated at home and in satellite units

Peritoneal dialysis

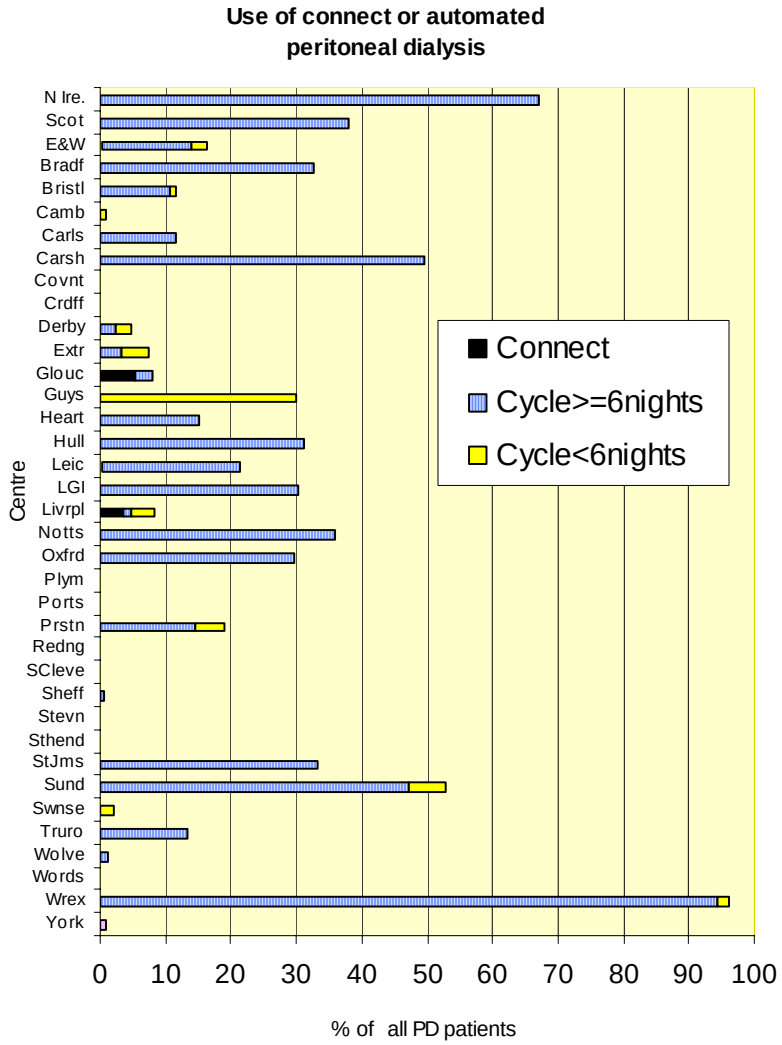

Figure 5.10: Use of connect and automated PD as a percentage of total PD

The percentages of patients on each of the main types of PD in individual units are shown in Figure 5.10. Connect PD has virtually disappeared. Cycling PD was more widely used in Scotland (38%) than in England and Wales, and most frequently used in Northern Ireland (67%). There was a wide variation in the percentage of patients treated with one or other form of cycling PD between centres.

A relatively high proportion (38%) of patients with a primary diagnosis of diabetes were treated by PD, as shown in Table 5.10. This may partly relate to the younger age of diabetic patients as PD is more common in younger than older patients.

Diagnosis	% on PD
Diabetes	36
Aetiology uncertain*	29
Glomerulonephritis	35
Polycystic kidney	31
Pyelonephritis	31
Hypertension	30
Renal vascular disease	28
Other	29
Not sent	27

Table 5.10: Proportion of patients on PD, by diagnostic category
*Includes patients listed as 'glomerulonephritis not biopsy proven'.

Modality and gender

There were no differences in the type of treatment according to gender except that 4.5% of males, compared with 2.5% of females, were on home HD.

Change in treatment modality 2000–01

	% HD home	% HD hospital	% HD satellite	% HD total	% PD standard	% PD disconnect	% PD cycling	% PD total	% With Transplant
1st qtr 2000	1.8	24.1	8.9	34.8	0.2	16.4	2.8	19.4	45.9
1st qtr 2001	1.4	24.1	9.9	35.4	0.1	14.7	2.6	17.4	47.2
4th qtr 2001	1.3	24.5	10.9	36.7	0.04	14.1	2.7	16.8	46.5

Table 5.11: Proportion of patients with different modalities of RRT, 2000 and 2001

	1999	2000	2001
4th qtr 2000	11447	12447	13222

Table 5.12: Number of patients in the same 23 centres on RRT, 1999–2001

Comparing only the 23 England & Wales centres for which there were data from1999, there was a 15.25% overall percentage increase in the number of patients over 2 years (Table 5.11). The year-on-year growth is running at 7–8%; the rise is largely in the number of HD patients, with a small rise in transplantees and the PD number remaining almost static.

Long-term trends

In England & Wales, 68% of dialysis patients were on HD, compared with 73% in Scotland.

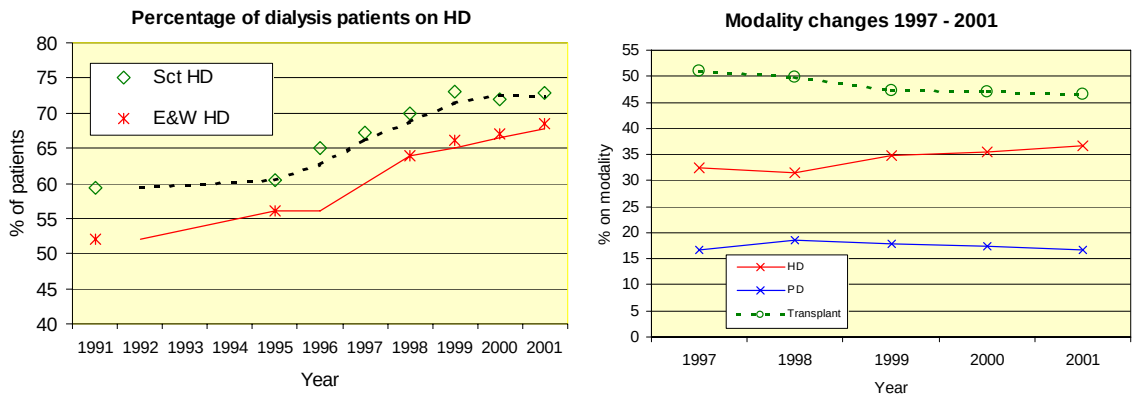

Figure 5.11: Percentage of dialysis patients on HD, by year

England & Wales show an increasing percentage of patients being treated with HD, the steepest rise being since 1995. These percentages are occurring on the background of an increasing prevalent pool so the number on HD has risen even more steeply. This rise is continuing in England & Wales, although there is still a lower percentage of patients on HD than in Scotland. The English data for 1992 and 1995 came from the national review. The data show a continuing slow decline in the overall percentage of patients with a functioning transplant.

Survival of patients established on RRT

This section analyses the 1 year survival of all patients established on RRT for at least 90 days on 1 January 2001, and the 2 year survival of similar patients alive on 1 January 2000.

	E&W 2000	Eng 2001	Wales 2001	E&W 2001
No. of patients	6846	8342	779	9121
No. of deaths	1073	1233	106	1339
Kaplan–Meier 1 year survival	83.4	84.3	84.2	84.3
(95% CI)	82.3–84.5	83.3–85.3	80.4–88.0	83.3–85.3

Table 5.13: One-year survival of dialysis patients alive on 1/01/00 and 1/01/01

	Transplant censored at dialysis			Transplant including dialysis returns		
	England	Wales	E&W	England	Wales	E&W
No. of patients	5896	745	6641	5896	745	6641
No. of deaths	154	15	169	169	16	185
KM 1 yr survival	97.3	98.0	97.4	97.1	97.8	97.2
(95% CI)	96.9–97.8	96.9–99.0	97.0–97.8	96.7–97.5	96.8–98.9	96.8–97.6

Table 5.14: Survival during 2001 of transplant patients alive on 1 January 2001

	Dialysis aged less than 65			Dialysis aged 65 and over		
	England	**Wales**	**E&W**	**England**	**Wales**	**E&W**
No. of patients	4710	410	5120	3449	369	3818
N. of deaths	438	36	474	785	70	855
KM 1 yr survival	90.1	90.3	90.1	77.0	80.9	77.4
(95% CI)	89.2–90.9	87.3–93.3	89.2–90.9	75.6–78.4	76.9–84.9	76.1–78.7

Table 5.15: Survival during 2001 of dialysis patients alive on 1 January 2001, by age

	Diabetic <65			Non-diabetic <65		
	England	**Wales**	**E&W**	**England**	**Wales**	**E&W**
No. of patients	721	65	786	3986	344	4330
No. of deaths	127	12	139	311	24	335
KM 1 yr survival	81.7	79.8	81.6	91.6	92.4	91.7
(95% CI) 2001	78.8–84.6	69.5–90.0	78.9–84.3	90.7–92.5	89.4–95.3	90.8–92.5
KM 1 yr survival			78.7			92.1
(95% CI) 2000			75.1–82.4			91.1–93.2

Table 5.16: Survival during 2001 of dialysis patients, diabetic and non-diabetic, aged <65

	Diabetic ≥ 65			Non-diabetic ≥.65c		
	England	**Wales**	**E&W**	**England**	**Wales**	**E&W**
No. of patients	408	46	454	3041	323	3364
No of deaths	120	9	129	665	61	726
KM 1 yr survival	70.4	80.4	71.5	77.9	80.9	78.2
(95% CI) 2001	66.0–74.9	69.0–91.9	67.3–75.6	76.4–79.4	76.6–85.2	76.8–79.6
KM 1 yr survival			71.7			76.0
(95% CI) 2000			66.4–77.1			74.1–77.9

Table 5.17: Survival during 2001 of dialysis patients, diabetic and non–diabetic, aged ≥65

The overall survival of prevalent patients shows little change, with a trend towards improvement (Table 5.13). Transplanted patients have a lower mortality than even the younger dialysis patients (Tables 5.14 and 5.15), but these patients are a selected younger, fit population with a median age of 48 years, compared with one of 55 years in the dialysis population, and less comorbidity. Comparing transplant patients with non-diabetic dialysis patients aged less than 55 (Tables 5.16 and 5.17), there is still a lower mortality, with a 97.4% versus 92.1% survival during 2001.

There was a significant difference in survival between non-diabetic and diabetic patients, the difference in mortality remaining consistent when analysed by 10 year age band (Table 5.18).

	<55 Non-diabetic			55–64 Non-diabetic		
	England	**Wales**	**E&W**	**England**	**Wales**	**E&W**
No. of patients	2609	224	2833	1379	121	1500
No. of deaths	142	10	152	169	14	183
KM 1 yr survival (95% CI)	94.0 93.1–95.0	95.0 91.9–98.0	94.1 93.2–95.0	87.1 85.3–88.9	88.0 82.1–93.9	87.2 85.5–88.9
	65–74 Non-diabetic			**≥75 Non-diabetic**		
	England	**Wales**	**E&W**	**England**	**Wales**	**E&W**
No. of patients	1700	161	1861	1341	162	1503
No. of deaths	302	27	329	363	34	397
KM 1 yr survival (95% CI)	82.0 80.1–83.8	83.2 77.4–89.0	82.1 80.3–83.8	72.8 70.4–75.2	78.7 72.4–85.1	73.4 71.2–75.7

Table 5.18: Survival during 2001 of non–diabetic dialysis patients, by age

Survival by Centre

Figure 5.12 shows the adjusted 1 year survival by centre for all dialysis patients alive on 1/1/2001.

Changes in 1 year survival 1997 – 2001

Figure 5.13 shows the one year survival by centre for the period 1997 – 2001. Overall there is a significant trend in both England and Wales for improved 1 year survival. Several centres like E9, F0, F2, F4 show an improving trend while E1,E3, H1, H4 show no significant change. Reasons for these differences need to be discussed between centres.

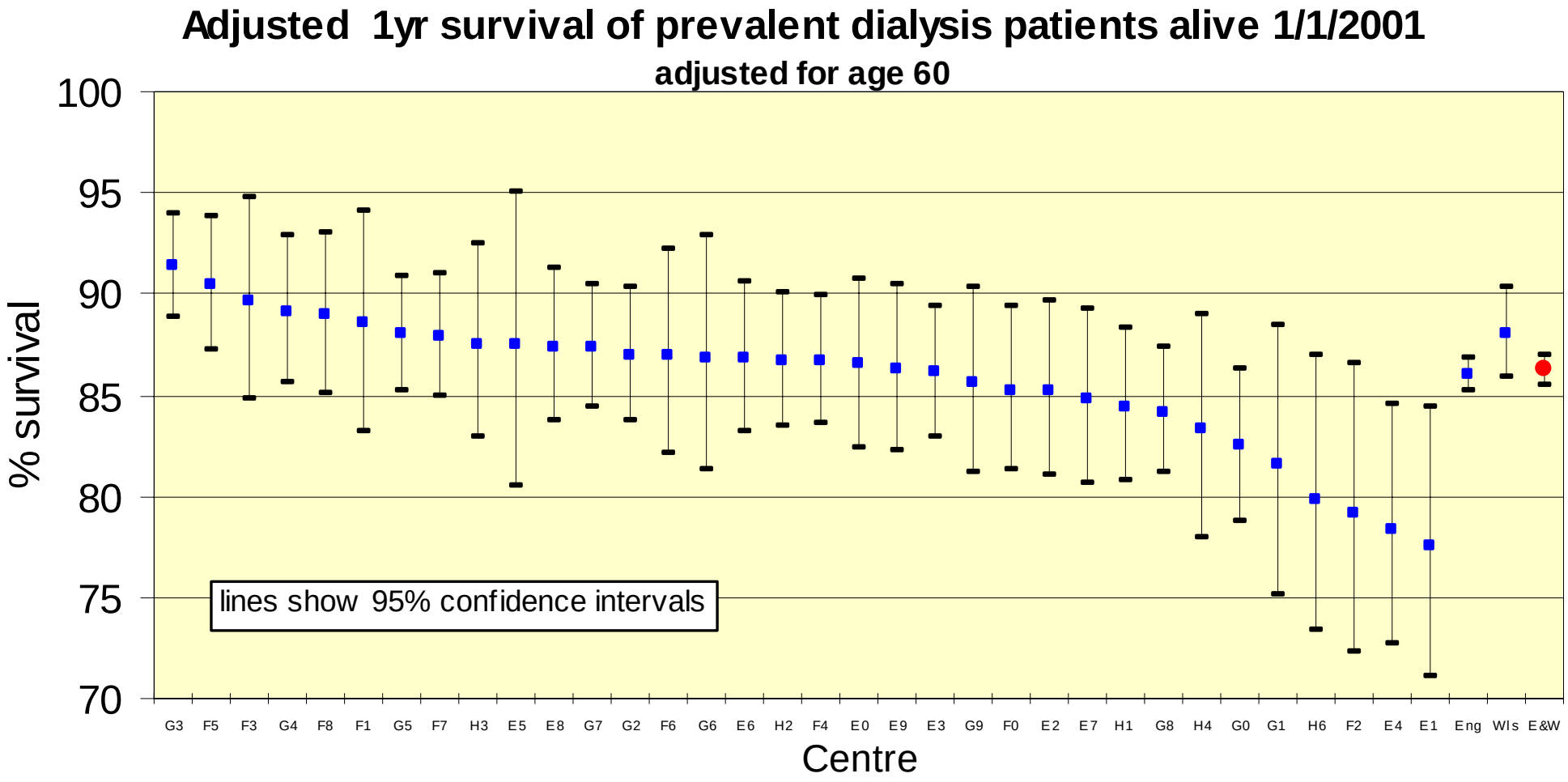

Figure 5.12 one year prevalent dialysis survival by centre 2001

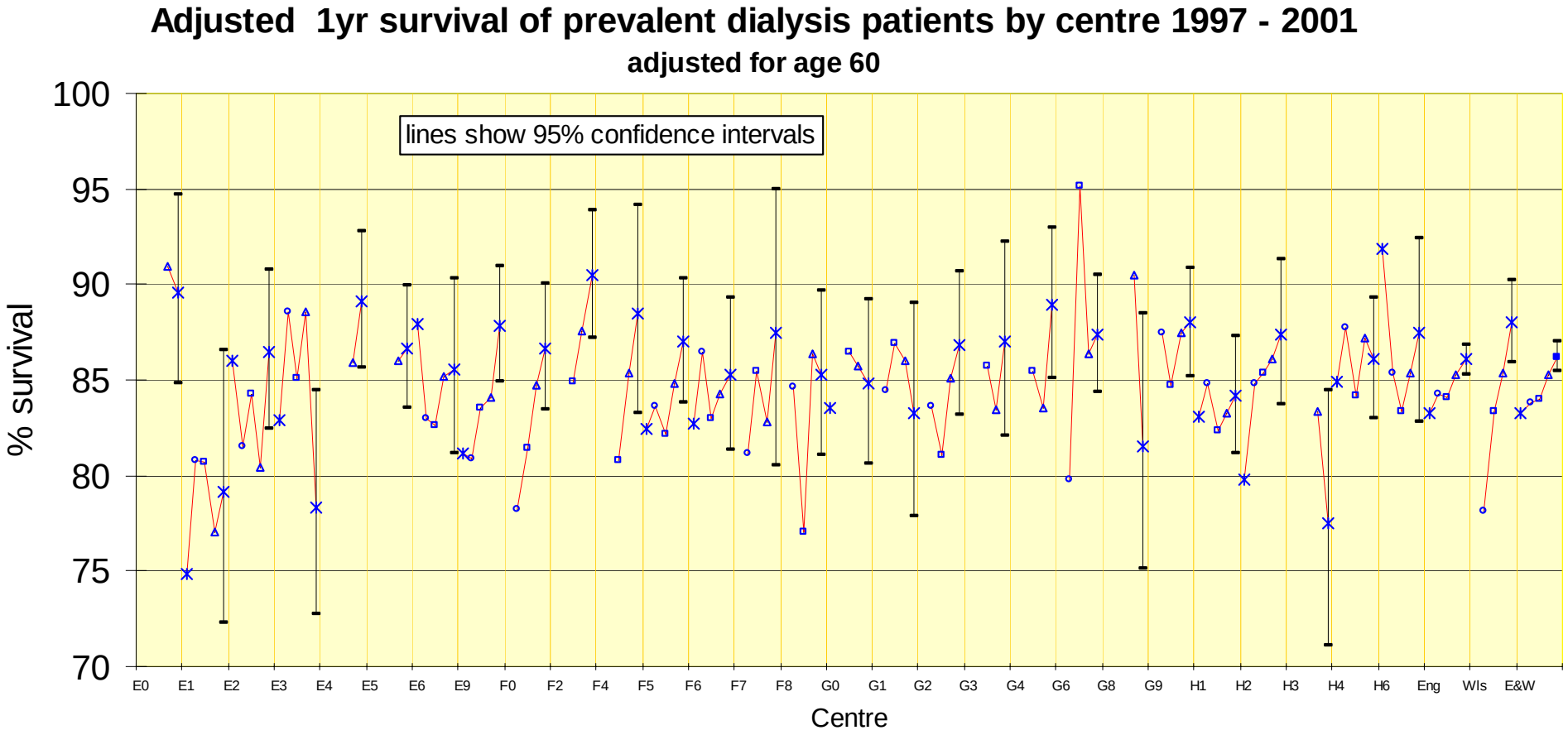

Figure 5.13 Change in 1 year survival 1997 - 2001