Chapter 5: All Patients Receiving Renal Replacement Therapy In 2000

Summary

In England & Wales there was a 4.8% increase in the total number of patients on RRT between the 1st January 2000 and 31st December 2000. This comprised a 5.1% increase in the number of patients on dialysis and 4.6% increase in those with a functioning transplant. This compares with 4.3% increase for the centres on the Registry during 1999. These data are consistent with the annual rises shown in the 1992, 1995 and 1998 Renal Reviews.

On December 31st 2000, 1414656 patients receiving Renal Replacement Therapy from 28 renal units were enrolled in the Renal Registry in England and Wales. The number of patients in units with data for both 1998 and 1999 increased by 4.3% during 1999. For individual English and Welsh Health Authorities, the estimated dialysis prevalence varied from 329 to 693 pmp. In England and Wales, the average number of patients on RRT in each unit was 523.

The median age for all patients on treatment on 31/12/00 was 54 years, unchanged from the 2 previous years. The median age of patients on peritoneal dialysis remains lower than that of those on haemodialysis.

61% of all patients on treatment were male: this preponderance occurs at all ages.

Reporting of ethnic origin has improved. The proportion of white patients in individual units varied from 39% to 100%, Asian from 0% to 56%, and Black from 0% to 15%.

The most common primary renal disease recorded for prevalent patients under 65 years old was glomerulonephritis. In 28% of those over 65 it was not possible to give a diagnosis.

Diabetes accounted for 16% of current incident patients, but 10% of all prevalent patients. Of those classified as Type I diabetics, 27% under 65 years old were on PD compared with 31% of Type 2 diabetics and 14% of the under 65 non-diabetics. In the over 65-year-old patients, use of PD was markedly) less common (20% type I, 28% type II, 20% non-diabetic).

In England & Wales 66% of dialysis patients were on haemodialysis. The trend to an increased proportion of total patients on haemodialysis continues, but the proportion of dialysis patients on haemodialysis is now growing very slowly. Up to the age of 54 more patients are treated by transplantation than by dialysis. Haemodialysis is the predominant form of dialysis at all ages but especially in the older age groups. Connect PD has almost completely ceased. Cycling PD has not made much impact overall, but in a few units is the predominant form of PD

The one-year survival of all patients established on renal replacement therapy for at least 90 days was 83.7%, and the two-year survival 68.4%.

Introduction

On December 31st 2000, 14656 patients receiving Renal Replacement Therapy from 28 renal units in England and Wales were enrolled in the Renal Registry. This chapter describes their demographic details, diagnosis and treatment, and gives an analysis of the 1-year survival of patients who had been established for at least 3 months on RRT on 31/12/99. Anonymity has been removed. Prevalence rates are presented by Health Authority.

Overall Prevalence Rate

An overall summary of the prevalence of patients on renal replacement therapy in England and Wales is shown in table 5.1. The overall prevalence has a wide potential margin of error as it is calculated from the estimated catchment populations of the renal units. As discussed in chapter 4 there are significant errors in these estimates.

No. of units	England & Wales 28
No. of patients	14656
Population (m)*	26.44
Patients (pmp)*	554
Mean Pats/unit	523

^{*=}estimated figures

Table 5.1: Summary of adult patients registered and total population covered 31/12/2000

Renal unit activity

From table 5.2 it can be seen that there is a continuing increase in the number of prevalent patients on RRT in England and Wales, and in almost every participating unit. This increase is larger for the dialysis population than the transplant population.

Renal units	No of patients	% increase in dialysis in 2000	% increase all patients
Bristol	913	6.1	4.3
Cardiff	973	11.3	5.0
Carlisle	161	11.9	1.9
Carshalton	679	2.6	2.0
Coventry	525	6.7	5.0
Derby	119	9.4	14.4
Exeter	450	11.8	5.9
Gloucester	243	9.3	11.0
Guys	1222	1.0	6.0
Heart lands	460	3.8	2.7
Hull	446	-2.2	2.5
Leeds GI	344	10.3	
Leeds St James	817	9.9	
Leeds total	1161	10.1	4.6
Leicester	983	3.8	4.8

Renal units	No of patients	% increase in dialysis in 2000	% increase all patients
Nottingham	801	4.6	3.1
Oxford	1247	-0.6	2.5
Plymouth	421	7.1	7.1
Preston	532	9.3	8.6
Reading	182	1.8	3.4
S. Cleveland	485	6.4	6.8
Sheffield	867	7.4	6.5
Southend	158	-3.1	5.3
Sunderland	251	6.7	4.6
Swansea	314	1.3	6.8
Wolverhampton	328	8.6	8.3
Wordsley	254	0.6	0.4
Wrexham	248	3.3	3.8
York	129	1.7	6.6
E&W	14646	5.1	4.8

Table 5.2: Increase in prevalent patients, by unit,

In England & Wales there was a 4.8% increase in the total number of patients on RRT between the 1st January 2000 and 31st December 2000. This comprised a 5.1% increase in the number of patients on dialysis and a 4.6% increase in those with a functioning transplant. This compares with 4.3% increase for the centres on the Registry during 1999. These data are consistent with the annual rises shown in the 1992, 1995, and 1998 Renal Reviews.

Prevalence by Health Authority

The estimated catchment populations for each renal unit are not reliable, as discussed in chapter 4, so the prevalence related to individual renal units has not been calculated. Prevalence in health authorities with complete or near complete registry coverage has been calculated and is shown in table 5.3.

				Pre	evalence	e	
					Total		
Region	HA name	Population	HD	PD	Dial.	Trans.	RRT
Y01	Calderdale and Kirklees	583,800	180	65	245	272	518
Y01	County Durham and Darlington	607,800	168	31	199	194	393
Y01	East Riding and Hull	574,500	207	89	296	216	512
Y01	Leeds	727,400	232	70	302	268	571
Y01	North Cumbria	319,300	160	91	251	254	504
Y01	North Yorkshire	742,400	182	73	255	214	469
Y01	Sunderland	292,300	202	27	229	222	452
Y01	Tees	556,300	165	47	212	306	518
Y01	Wakefield	318,800	201	97	298	257	555
Y02	Barnsley	228,100	197	79	276	298	574
Y02	Doncaster	290,500	231	76	307	207	513
Y02	Leicestershire	928,700	202	146	348	300	649
Y02	Lincolnshire	623,100	159	143	302	212	514
Y02	North Derbyshire	370,200	159	73	232	213	446
Y02	North Nottinghamshire	388,900	221	113	334	216	550
	Y01 Y01 Y01 Y01 Y01 Y01 Y01 Y01 Y02 Y02 Y02 Y02 Y02	Y01 Calderdale and Kirklees Y01 County Durham and Darlington Y01 East Riding and Hull Y01 Leeds Y01 North Cumbria Y01 North Yorkshire Y01 Sunderland Y01 Tees Y01 Wakefield Y02 Barnsley Y02 Doncaster Y02 Leicestershire Y02 Lincolnshire Y02 North Derbyshire	Y01 Calderdale and Kirklees 583,800 Y01 County Durham and Darlington 607,800 Y01 East Riding and Hull 574,500 Y01 Leeds 727,400 Y01 North Cumbria 319,300 Y01 North Yorkshire 742,400 Y01 Sunderland 292,300 Y01 Tees 556,300 Y01 Wakefield 318,800 Y02 Barnsley 228,100 Y02 Doncaster 290,500 Y02 Leicestershire 928,700 Y02 Lincolnshire 623,100 Y02 North Derbyshire 370,200	Y01 Calderdale and Kirklees 583,800 180 Y01 County Durham and Darlington 607,800 168 Y01 East Riding and Hull 574,500 207 Y01 Leeds 727,400 232 Y01 North Cumbria 319,300 160 Y01 North Yorkshire 742,400 182 Y01 Sunderland 292,300 202 Y01 Tees 556,300 165 Y01 Wakefield 318,800 201 Y02 Barnsley 228,100 197 Y02 Doncaster 290,500 231 Y02 Leicestershire 928,700 202 Y02 Lincolnshire 623,100 159 Y02 North Derbyshire 370,200 159	Region HA name Population HD PD Y01 Calderdale and Kirklees 583,800 180 65 Y01 County Durham and Darlington 607,800 168 31 Y01 East Riding and Hull 574,500 207 89 Y01 Leeds 727,400 232 70 Y01 North Cumbria 319,300 160 91 Y01 North Yorkshire 742,400 182 73 Y01 Sunderland 292,300 202 27 Y01 Tees 556,300 165 47 Y01 Wakefield 318,800 201 97 Y02 Barnsley 228,100 197 79 Y02 Leicestershire 928,700 202 146 Y02 Lincolnshire 623,100 159 143 Y02 North Derbyshire 370,200 159 73	RegionHA namePopulationHDPDDial.Y01Calderdale and Kirklees583,80018065245Y01County Durham and Darlington607,80016831199Y01East Riding and Hull574,50020789296Y01Leeds727,40023270302Y01North Cumbria319,30016091251Y01North Yorkshire742,40018273255Y01Sunderland292,30020227229Y01Tees556,30016547212Y01Wakefield318,80020197298Y02Barnsley228,10019779276Y02Doncaster290,50023176307Y02Leicestershire928,700202146348Y02Lincolnshire623,100159143302Y02North Derbyshire370,20015973232	Region HA name Population HD PD Dial. Trans. Y01 Calderdale and Kirklees 583,800 180 65 245 272 Y01 County Durham and Darlington 607,800 168 31 199 194 Y01 East Riding and Hull 574,500 207 89 296 216 Y01 Leeds 727,400 232 70 302 268 Y01 North Cumbria 319,300 160 91 251 254 Y01 North Yorkshire 742,400 182 73 255 214 Y01 Sunderland 292,300 202 27 229 222 Y01 Tees 556,300 165 47 212 306 Y02 Barnsley 228,100 197 79 276 298 Y02 Doncaster 290,500 231 76 307 207 Y02 Leicestershire

HA					Pre	valence Total	2	
Code	Region	HA name	Population	HD	PD		Trans.	RRT
QCP	Y02	Nottingham	642,700	272	143	415	238	653
QCQ	Y02	Rotherham	254,400	236	79	315	248	562
QCR	Y02	Sheffield	531,100	265	51	316	196	512
QDL	Y02	South Humber	308,600	279	81	360	230	590
QCJ	Y02	Southern Derbyshire	567,500	199	132	331	277	608
QEA	Y07	Coventry	304,300	289	131	420	256	677
QEC	Y07	Dudley	311,500	167	164	331	196	526
QEG	Y07	Solihull	205,600	190	68	258	156	413
QEK	Y07	Walsall	261,200	226	96	322	57	379
QEL	Y07	Warwickshire	506,700	189	132	321	288	610
QEM	Y07	Wolverhampton	241,600	373	145	518	161	679
QCX	Y08	East Lancashire	511,200	147	80	227	131	358
QC4	Y08	Morecambe Bay	310,300	122	81	203	126	329
QCY	Y08	North-West Lancashire	466,300	139	107	246	165	412
QAD	Y10	Croydon	338,200	157	98	255	186	441
QAH	Y10	Lambeth, Southwark and Lewisham	745,200	191	121	312	204	515
QA7	Y11	Berkshire	556,600	138	192	330	363	693
QA8	Y11	Buckinghamshire	618,900	163	87	250	273	524
QAK	Y11	East Surrey	419,900	93	74	167	236	402
QCC	Y11	Northamptonshire	615,800	172	96	268	245	513
QCE	Y11	Oxfordshire	616,700	133	84	217	274	491
QD8	Y12	Avon	999,300	223	72	295	297	592
QDY	Y12	Gloucestershire	557,300	217	90	307	336	642
QDX	Y12	North and East Devon	479,300	169	100	269	273	542
QD5	Y12	Somerset	489,300	200	80	280	221	501
QD6	Y12	South and West Devon	589,100	205	109	314	273	587
HA	Dagia-	IIA nome	Donulotica	HD	DD near	Dial	Tx	RRT
Code	W00	HA name Gwent	Population 557 200	prev 174	PD prev	prev 276	prev 343	prev
QW1	W00 W00	Bro Taf	557,200	204	102 95	276	343	619 632
QW2	W00 W00		739,600 499,700	204 174	95 110	284	274	558
QW5	WUU	Morgannwg	499,700	1/4	110	284	2/4	<i>33</i> 8

Table 5.3: Prevalence of renal replacement therapy by Health authority.

Change in prevalence 1998 –2000 by Health Authority

Even where the Registry does not have complete coverage of a health authority, the proportion of population covered by the same renal unit is probably constant on a year-to-year basis.

HA			Prev	Prev	Prev	% change %	% change
code	Region	HA text	2000pmp	1999pmp	1998pmp	99-00	98-99
QDE	Y01	County Durham and Darlington	393	344	336	14.4	2.5
QDF	Y01	East Riding and Hull	512	463	447	10.5	3.5
QDK	Y01	North Cumbria	504	501	485	0.6	3.2
QDN	Y01	Sunderland	452	438	431	3.1	1.6

HA code	Region	HA text	Prev 2000pmp	Prev 1999pmp		% change 99-00	% change 98-99
QDP	Y01	Tees	518	482	466	7.5	3.5
QCG	Y02	Barnsley	574	509	460	12.9	10.5
QCK	Y02	Doncaster	513	465	423	10.4	9.8
QCL	Y02	Leicestershire	649	602	600	7.9	0.4
QCM	Y02	Lincolnshire	512	456	425	12.3	7.2
QCH	Y02	North Derbyshire	446	405	397	10.0	2.0
QCN	Y02	North Nottinghamshire	550	496	465	10.9	6.6
QCP	Y02	Nottingham	653	624	577	4.7	8.1
QCQ	Y02	Rotherham	562	460	448	22.2	2.6
QCR	Y02	Sheffield	512	442	409	15.7	8.3
QDL	Y02	South Humber	590	544	531	8.3	2.4
QD9	Y07	Birmingham	259	237	226	9.2	4.8
QEA	Y07	Coventry	677	664	670	2.0	-1.0
QEC	Y07	Dudley	526	494	472	6.5	4.8
QEE	Y07	Sandwell	182	169	145	8.2	16.7
QEG	Y07	Solihull	413	355	365	16.4	-2.7
QEK	Y07	Walsall	379	333		13.8	
QEL	Y07	Warwickshire	610	555	519	10.0	6.8
QEM	Y07	Wolverhampton	679	592		14.7	
QEN	Y07	Worcestershire	162	145	145	11.5	0.0
QCX	Y08	East Lancashire	360	276	270	30.5	2.2
QC4	Y08	Morecambe Bay	329	235	226	39.7	4.3
QCY	Y08	North-West Lancashire	412	315	300	30.6	5.0
QC1	Y08	South Lancashire	182	134		35.7	
QER	Y09	Cambridgeshire	143	122	111	17.5	9.6
QED	Y09	Herefordshire	149	137	137	8.7	0.0
QAY	Y09	South Essex	237	213		11.3	
QAD	Y10	Croydon	361	355	322	1.7	10.1
QAJ	Y10	Merton, Sutton and Wandsworth	241	220	214	9.4	3.0
QA8	Y11	Buckinghamshire	466	431	422	8.2	2.1
QAK	Y11	East Surrey	360	348	324	3.4	7.4
QCC	Y11	Northamptonshire	512	463	445	10.5	4.0
QCE	Y11	Oxfordshire	491	454	431	8.2	5.3
QD8	Y12	Avon	592	550	534	7.6	3.0
QDY	Y12	Gloucestershire	641	511	458	25.3	11.8
QDX	Y12	North and East Devon	547	503	463	8.7	8.6
QD5	Y12	Somerset	501	472	431	6.1	9.5
QD6	Y12	South and West Devon	584	535	502	9.2	6.4
QD7	Y12	Wiltshire	347	337	342	2.9	-1.4
QW1	W00	Gwent	617	560	549	10.3	2.0
QW2	W00	Bro Taf	631	581	533	8.6	9.1

Table 5.4: Change of prevalence of RRT by Health authority, 1998-2000.

In England & Wales there was a 4.8% increase in the total number of patients on RRT between the 1st January 2000 and 31st December 2000. This comprised a 5.1% increase in the number of patients on dialysis and a 4.6% increase in those with a functioning transplant. This compares with 4.3% increase for the centres on the Registry during 1999. The figures for individual health authorities are shown in table 5.4.

Age

The median age for all patients on treatment on 31/12/200 was 54 years (table 5.5), which is unchanged from the previous year. The median age of patients on peritoneal dialysis remains lower than that of those on haemodialysis.

	Transplants	Peritoneal dialysis	Haemodialysis	All
Median age E&W	48	58	63	54
Range between units	44 - 52	46 - 62	56 - 70	50 - 66

Table 5.5: Median age and treatment modality

The age distribution of prevalent patients is shown in figure 5.1

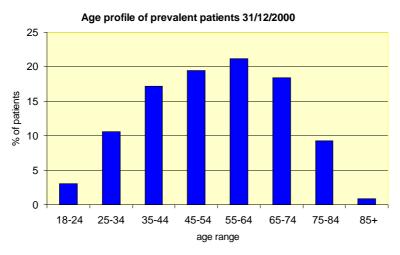


Figure 5.1: Age profile of prevalent patients

In England and Wales, 28% of patients were aged 65 or over and 10% were over the age of 75. This is unchanged from last year.

The younger age distribution of transplant patients is shown in figure 5.2

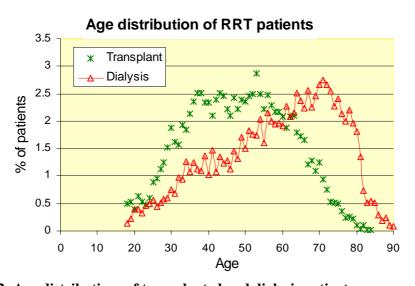


Figure 5.2: Age distributions of transplanted and dialysis patients

Figure 5.3 demonstrates the wide variation in median age (56 to 69) of dialysis patients in individual units. Whilst differences in local populations may account for some of this variation, referral and acceptance policies, survival rates and available resources are also likely to have a major impact.

Median age of dialysis patients alive 31/12/00 E&W Sheff StJms Covnt Words Derby Notts Carsh LGI Prstn Hull Wolve Guys Leic Sthend Redng SCleve Swnse Oxfrd Carls Heart Plym Wrex Extr Bristl Sund York Glouc

60

Age

65

Figure 5.3: Median age of dialysis patients alive 31.12.00

55

50

70

Gender

Overall 61% of all patients on treatment were male: the male preponderance occurs at all ages. The ration was similar in all age groups (figure 5.4). While the numbers are small the high proportion of males in the older age groups occurs in spite of the greater proportion of women in the general population at that age.

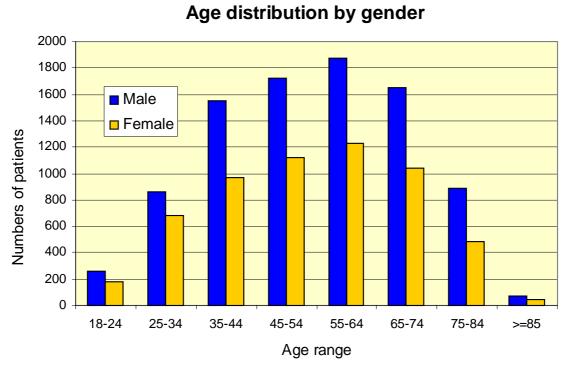


Figure 5.4: Age distribution by gender.

Ethnicity

Reporting of ethnic origin has improved. It is not currently a health service policy to collect ethnicity data in Scotland or Wales, so ethnicity data were not available from the Scottish or Welsh units. Of the English units, 4 provided little or no data at all while information was complete on at least 84% of patients in 21 units (table 5.6). The proportion of white patients in individual units varied from 39% to 100%, Asian from 0% to 56%, and Black from 0% to 15%.

	% with data complete	% White	% Black	% Asian	% Chinese	% Other
Exeter	100	100	0	0.	0	0
Gloucester	100	100	0	0	0	0
Sheffield	100	94	1	3	1	0
Preston	100	88	1	10	0	1
Wordsley	100	89	2	9	0	0
Heart lands	100	76	5	18	1	0
Wolverhampton	99	78	6	14	1	0

	% with data	% White	% Black	% Asian	% Chinese	% Other
	complete					
Southend	99	95	3	2	0	0
Bristol	98	93	3	2	1	1
Plymouth	98	97	1	0	0	0
Reading	98	73	7	17	2	2
Hull	97	99	0	0	0	0
St James	96	88	3	9	0	0
Sunderland	96	99	1	0	0	0
Coventry	94	81	2	16	0	0
Leicester	92	39	2	56	1	2
Nottingham	92	88	5	7	0	1
Guys	92	80	15	4	1	0
Carshalton	86	71	5	5	1	18
S. Cleveland	85	96	0	4	0	1
Derby	84	86	2	9	1	1
Cardiff	27					
York	13					
Carlisle	13					
Swansea	9					
Oxford	3					
Leeds GI	3					
Wrexham	0					
E&W	75	84.2	3.7	10.1	0.5	1.5

Table 5.6: Ethnicity

The percentages of patients with a functioning transplant belonging to each ethnic minority group are listed in table 5.7. There is a slightly lower percentage of the Asian and Black population with a transplant. This may be considered surprising in view of the relatively low age distribution of the ethnic minority patients, but difficulties in tissue matching and the higher incidence of diabetics with increased co-morbidity in this population may reduce the opportunities for transplantation.

% White	% Black	% Asian	% Chinese	% Other
86.8	2.2	8.8	0.5	1.6

Table 5.7: Percentage of transplanted patients in each ethnic group.

Primary Renal Disease

Details of primary renal disease, based on the original EDTA coding classification are shown in table 5.8. In as many as 27.9% of those over 65 it was not possible to give a diagnosis. Missing data were much more common in patients over 65 with 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 16% in current incident patients.

Diagnosis	% All patients	Inter unit range	% Age < 65	%Age ≥ 65	M : F Ratio
Aetiology uncertain *	22.	3 - 31	21	28	1.7
Glomerulonephritis**	16	3 - 25	18	9	2.3
Pyelonephritis	14	1 - 21	15	11	1.1
Diabetes	11	6 - 20	10	11	1.5
Renal Vascular disease	3	3 - 14	2	10	2.4
Hypertension	6	1 - 15	6	6	2.4
Polycystic kidney	9	1 - 10	10	4	1.0
Not sent	5	0 - 79	4	11	1.8
Other	13	3 - 21	14	10	1.3
Total Number of Patients	14033		11140	2893	1.55

^{* -} includes patients listed as "glomerulonephritis not biopsy proven".

Table 5.8: Primary renal disease in all patients, and according to age and gender

Diabetes

Diabetes was recorded as the primary diagnosis in 10% of all prevalent patients. The median age of type I diabetics was 51, and type II diabetics 65. Further details are given in table 5.9.

	Type I	Type II	Non-Diabetics
M: F ratio	1.40	1.62	1.54
Median Age on 31/12/00	51	65	54
Median Age started ESRF	47	63	45
Median years on treatment	2.6	2.2	
% on HD	39	61	
% on PD	27	26	
% transplanted	34	13	

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

From table 5.10 it is clear that at any age diabetics are less likely to have received a transplant than other patients. Although more younger dialysing diabetics are on haemodialysis than peritoneal dialysis, the ratio of HD to PD is lower than in other patients. For older diabetics, the proportion on haemodialysis is very high.

Modality	Type I < 65	Type II < 65	Non-diabetics < 65	Type I ≥ 65	Type II ≥ 65	Non-diabetics ≥ 65
% HD	31	50	25	70	75	55
% PD	27	31	14	20	28	20
% transplant	42	19	61	7	5	25

Table 5.10: Treatment modality by age and diabetic status.

^{** -} biopsy proven.

Modalities of Treatment

Treatment Modalities 2000 □ Home - HD ■ Hosp - HD ☐ Home - HD 26.1% 1.7% ■ Hosp - HD ■ Satellite - HD □ Transplant ■ Satellite HD 46.9% 7.8% CAPD Connect □ CAPD Disconnect □ Cycling PD >= 6 ■ CAPD Connect nights/wk ■ Cycling PD < 6 0.1% ■ Cýcling PD < 6</p> nights/w k nights/wk 0.6% ■ CAPD Disconnect ☐ Cycling PD >= 6 □ Transplant 14.2% nights/w k 2.5%

Figure 5.5: Treatment modalities 31/12/200.

The number of patients on renal replacement therapy continues to rise, but the percentage of patients with a functioning transplant has continued to fall for the last 4 years. There are even fewer patients left on connect PD (0.1% 2000 and 0.7% 1999). Cycling PD has increased from 1.6% to 3.1% of all renal replacement therapy (figure 5.5).

	18-24	25-34	34-44	45-54	55-64	65-74	75-84	85+
Haemodialysis	2	7	11	14	19	26	19	*
Peritoneal Dialysis	3	8	13	19	23	22	11	*
Transplant	4	14	23	24	22	11	2	*

^{*-} number very small

Table 5.11: Percentage on each modality according to age

In England & Wales 66% of dialysis patients were on haemodialysis. The variations in patterns of treatment with age are shown in figure 5.6 and table 5.11. Up to the age of 54 more patients are treated by transplantation than by dialysis. Haemodialysis is the predominant form of dialysis at all ages but more so in the older age groups.

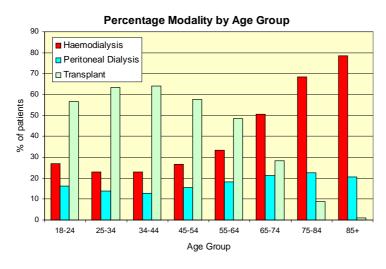


Figure 5.6: In each age group, percentage of patients on each modality.

Haemodialysis

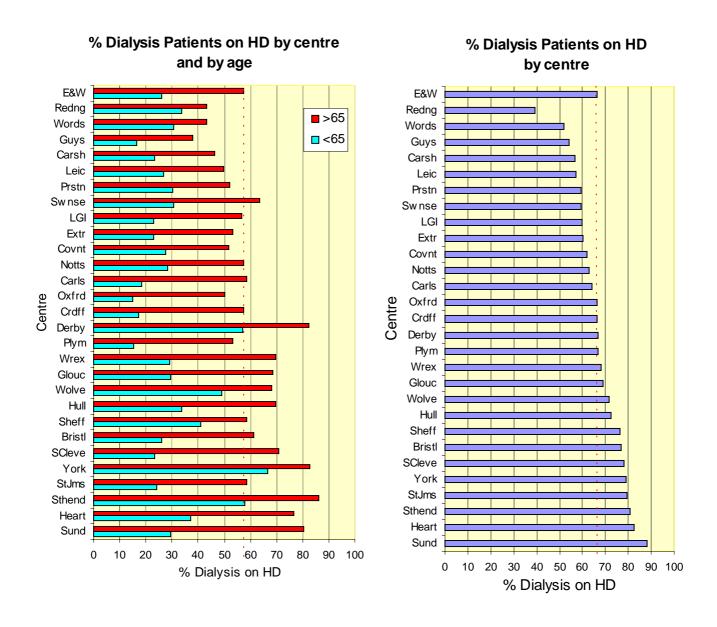


Figure 5.7: Percentage dialysis patients on haemodialysis by centre and age.

The proportion of dialysis patients treated by haemodialysis as opposed to peritoneal dialysis varied widely from unit to unit and cannot be explained by age alone (Figure 5.7)

The percentage of patients on haemodialysis treated in satellite units in England & Wales was 22%: home haemodialysis was only 5% of haemodialysis (figure 5.8).

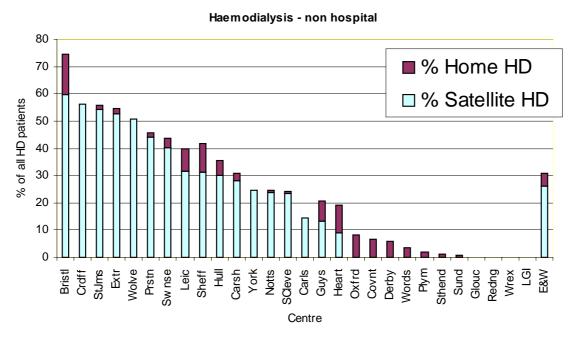


Figure 5.8: Proportion of HD patients treated by home and satellite dialysis, by centre.

Peritoneal Dialysis

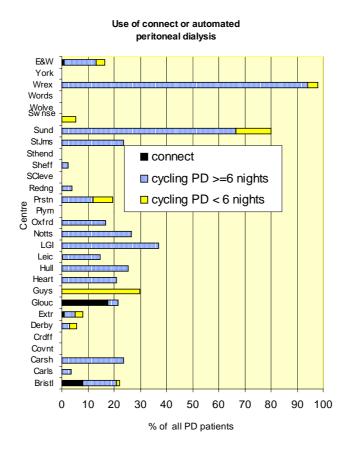


Figure 5.9: Use of connect and automated PD as percentage of total PD.

The percentages of patients on each of the main types of peritoneal dialysis in individual units are shown in Figure 5.9. Only one centre used significant amounts of Connect PD, 2 other centres used it in less than 10% of PD patients. It was not used at all in the remaining centres. Cycling PD/APD is used in 18% of PD patients. There was a wide variation between units from 98% to 0% in the percentage of patients treated with one or other form of cycling PD.

Modality and primary diagnosis

There was wide variation in the probability of transplantation according to primary diagnosis (table 5.12), but there were no differences in the percentage of dialysis patients on either PD or HD by primary renal diagnosis. Diabetic patients, with a poorer overall survival make up a lower percentage of transplanted patients and as shown in last years report. Diabetics aged under 65 were less likely to be transplanted than others of a similar age.

Diagnosis	% on HD	% on PD	% Transplanted
Aetiology uncertain*	23	21	22
Glomerulonephritis	12	15	19
Pyelonephritis	12	12	18
Diabetes	14	16	6
Reno-vascular disease	5	4	1
Hypertension	6	5	5
Polycystic Kidney	7	6	12
Not sent	8	9	2
Other	13	12	15

^{* =} Includes patients listed as "glomerulonephritis not biopsy proven

Table 5.12: Proportion of patients on each modality by diagnostic category.

Modality and gender

						% cycling	
	%Home	% Hosp	% Satellite	% connect	% disconnect	, ,	% cycling PD
	HD	HD	HD	PD	PD	nights	< 6 nights
Male	3.8	45.9	17.4	0.2	28.0	3.7	1.0
Female	2.2	45.8	16.9	0.3	28.5	4.8	1.4

Table 5.13: Treatment modality and gender

Home haemodialysis was more common in males than females (table 5.13); this is consistent with last year's data. Cycling PD was slightly more common in females.

	Age < 65	Age < 65	Age < 65	Age \geq 65	Age \geq 65	Age \geq 65
	HD	PD	Transp	HD	PD	Transp
Male	26.6	15.0	58.4	56.8	23.1	20.1
Female	25.7	18.9	55.4	58.6	18.1	23.2

Table 5.14: Treatment modality, age, and gender

In patients aged 65 and over, PD was more common in males, in comparison to being less common in those aged less than 65 years (table 5.14).

Change in treatment modalities 1997 –2000

The pool of renal units participating in the Registry has changed over the last 4 years so changes in treatment modality are difficult to interpret. There seems to be a trend towards more haemodialysis, relatively stable numbers on peritoneal dialysis, with the proportion with a transplant falling (table 5.15).

						CAPD	Cycling	Cycling PD		
At year	Home -	Hosp -	Satellite -	Total	CAPD	Disconn	PD >= 6	< 6	Total	
end	HD	HD	HD	HD	Conn.	ect	nights/wk	nights/wk	PD	Transplant
1997	3.7	19.67	9.03	32.4	2.68	12.91	1.02	0.04	16.65	50.95
1998	2.4	23.6	5.6	31.6	0.9	16.6	0.9	0.1	18.5	49.9
1999	2.0	21.9	10.9	34.8	0.7	15.0	1.6	0.5	17.8	47.3
2000	1.7	26.1	7.8	35.6	0.1	14.2	2.5	0.6	17.4	46.9

Table 5.15: Proportion of patients with different modalities of RRT 1997-2000

Long term trends

Both England & Wales and Scotland have shown an increasing percentage of patients being treated with haemodialysis (figure 5.10), with the steepest rise being since 1995. The 2000 data show this trend may be levelling in England & Wales. This may be due to capacity problems, with the Registry noting an increased use of twice weekly dialysis (chapter 6). The England data for 1992 and 1995 were from the national review.

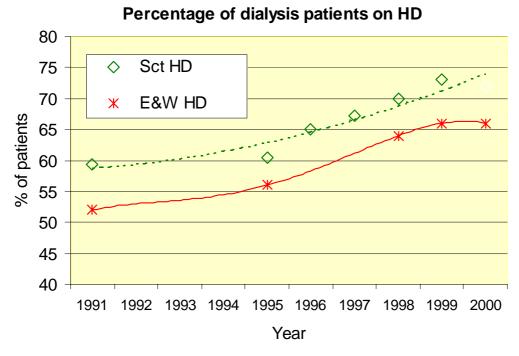


Figure 5.10: Percentage of dialysis patients on haemodialysis by year

Survival on renal replacement therapy

The one-year survival of all patients established on renal replacement therapy for at least 90 days on 1/1/200 was analysed, and the two-year survival of similar patients alive on 1/1/1999. The median age of the prevalent patients in both 1999 and 2000 was 61 years.

	Dialysis	patients	Transplant patients		
	1999	2000	1999	2000	
K-M 1 yr survival	84.8	83.7	97.5%	97.3%	
(95% CI)	83.8 - 85.8	82.7 - 84.7	97.0 - 97.9	96.8- 97.7	
K-M 2 yr survival	68.4				
(95% CI)	66.9 - 69.9				

Table 5.16: Survival of all dialysis patients

There was a slightly different group of centres on the Registry in 2000 from that in 1999, thus the apparent slightly lower survival in 2000 is difficult to interpret.

As expected the transplanted patients have a lower mortality than dialysis patients, but these patients are a selected younger fit population with a lower median age. Comparing transplant patients with non-diabetic dialysis patients aged less than 55 (tables 5.16, 5.17) there is still better survival of 97.3% v 92.1% survival during 2000. The relatively poor prognosis of diabetic patients is demonstrated.

	Diabetic	Non-diabetic	All
KM 1 yr survival < 65	78.7%	92.1%	89.9
(95% CI) 2000	75.1 – 82.4	91.1 – 93.2	88.8 – 90.9
-M 1 yr survival \geq 65	71.7%	76.0%	75.4
(95% CI) 2000	66.4 - 77.1	74.1 – 77.9	73.7 - 77.2

Table 5.17: Survival of dialysis patients alive on 1/1/2000, by age <65 and >65 years.

The marked deterioration in prognosis with advancing age is shown in table 5.18. The trend is similar in diabetics (table 5.19).

	KM		
	survival	Stand Error	95% CI
18-34	96.4%	0.84%	94.7% - 98.0%
35-44	92.4%	1.09%	90.3% - 94.6%
45-54	89.0%	1.08%	86.8% - 91.1%
55-64	86.0%	1.03%	84.0% - 88.0%
65-74	78.2%	1.12%	76.0% - 80.4%
75-84	71.5%	1.52%	68.5% - 74.5%
85+	68.0%	5.38%	57.5% - 78.6%

Table 5.18: Survival of all prevalent dialysis patients by age band

		Non dia	abetic		Diab	etic
	KM survival	Stand Error	95% CI	KM survival	Stand Error	95% CI
<55	93.9%	0.60%	92.7% - 95.1%	81.5%	2.32%	77.0% - 86.1%
55-64	88.7%	1.07%	86.6% - 90.8%	78.4%	2.85%	72.8% - 84.0%
65-74	79.0%	1.25%	76.5% - 81.4%	74.2%	3.00%	68.3% - 80.1%
>=75	71.9%	1.57%	68.8% - 75.0%	62.9%	6.28%	50.6% - 75.2%

Table 5.19: Survival during 2000 of dialysis patients by age and diabetes

Prevalent survival by centre

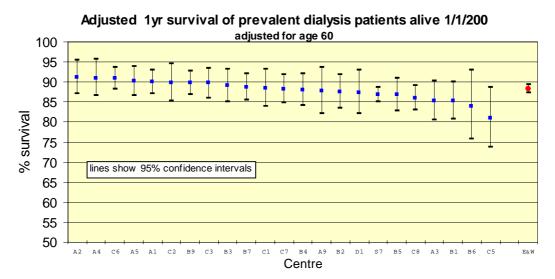


Figure 5.11: Survival of prevalent patients alive 1/1/2000
There was no significant difference in the year 2000 prevalent survival by centre.

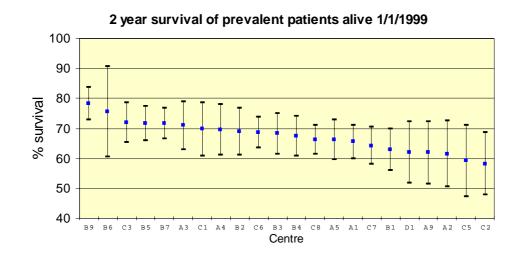


Figure 5.12: 2year survival of prevalent patients alive 1/1/1999 Figure 5.12 it should be noted is unadjusted data