
Chapter 4

UK ESRD Prevalent Rates in 2008: national and centre-specific analyses

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Key Words

Comorbidity · Diabetes · Dialysis · End stage renal disease · End stage renal failure · Ethnicity · Haemodialysis · Peritoneal dialysis · Prevalence · Primary Care Trust · Renal replacement therapy · Transplantation · Treatment modality

Abstract

Introduction: This chapter describes the characteristics of adult patients on renal replacement therapy (RRT) in the UK in 2008 and the prevalence rate per million population (pmp) in Primary Care Trusts and local authorities (Council Areas or District Councils) (PCT/LAs) were calculated.

Methods: Complete data were electronically collected from all 72 renal centres within the UK. A series of cross-sectional and longitudinal analyses were performed to describe the demographics of prevalent RRT patients in 2008 at centre and national level in the UK. Age and gender standardised ratios of actual to expected for prevalence rates in PCT/LAs were calculated. **Results:** There were 47,525 adult patients receiving RRT in the UK on 31/12/2008, equating to a UK prevalence of 774 pmp. This represents an annual increase in prevalence of approximately 4.4% although there was significant variation between PCT/LA areas. The pmp growth rate from 2007 to 2008 for prevalent patients by treatment modality in the UK was 5.9% for haemodialysis (HD), a fall of 9.2% for peritoneal dialysis (PD) and growth

of 4.6% with a functioning transplant. Over the long term (1982–2007), the steady growth in transplant prevalent numbers was maintained at 4%. There was a slow but steady decline in PD patient numbers from 1999 onwards. Median RRT vintage was 5.3 years. The median age of prevalent patients was 57.3 years (HD 65.5 years, PD 61.0 years and transplant 50.4 years). For all ages, prevalence rates in males exceeded those in females peaking in the 75–79 years age group at 2,582 pmp for males and 70–74 years age group at 1,408 pmp for females. The most common identifiable renal diagnosis was biopsy-proven glomerulonephritis (16.0%), followed by diabetes (14.1%). Transplantation was the most common treatment modality (47%) followed closely by HD (43%). However, HD was increasingly common with increasing older age at the expense of transplantation. **Conclusions:** The HD and transplant population continued to expand whilst the PD population contracted. There was national, regional and dialysis centre level variation in prevalence rates. This has implications for service planning and ensuring equity of care for RRT patients.

Introduction

This chapter presents data on all adult patients on RRT in the UK in 2008. In 2008, the UK Renal Registry

(UKRR) received data returns from all 5 renal centres in Wales, all 6 in Northern Ireland and all 52 in England. Data from all 9 centres in Scotland were obtained from the Scottish Renal Registry. Data on children and young adults can be found in chapter 14 Demography of the UK Paediatric RRT population.

These analyses of prevalent RRT patients are performed annually to aid clinicians and policy makers in planning future RRT requirements in the UK. It is important to understand national, regional and centre level variation in numbers of prevalent patients as part of this planning process. In addition, variation in case mix is also reported to improve understanding of where resources should be focussed to improve equity of provision of RRT in the UK.

The term established renal failure (ERF) used within this chapter is synonymous with the terms end stage renal failure (ESRF) and end stage renal disease (ESRD), which are in more widespread international usage. Within the UK, patient groups have disliked the term 'end stage' which formerly reflected the inevitable outcome of this disease.

Methods

These analyses relate to the prevalent RRT cohort in the UK in 2008. The cohort was defined as all adult patients prevalent on RRT on the UKRR database on 31/12/2008. Population estimates were obtained from the UK Office of National Statistics (ONS) [1].

The number of prevalent RRT patients was calculated for the UK as a whole, and for each UK country, using UKRR data from all renal centres. Crude prevalence rates were calculated per million population (pmp) and standardised prevalence ratios were calculated as detailed in appendix D: methodology used for analyses of PCT/LA incidence and prevalence rates and of standardised ratios (www.renalreg.org). Briefly, data from all covered areas were used to calculate overall age and gender specific prevalence rates. The age and gender breakdown of the population in each PCT area in England or Local Authority area in Wales, in Scotland (also called Council Areas) and in Northern Ireland (also called District Councils) was obtained from the mid 2006 population estimate based on 2001 Census data from the ONS [1]. These areas will be referred to in this report as 'PCT/LA'. The population breakdown and the overall prevalence rates were used to calculate the expected age and gender specific prevalence numbers for each PCT/LA. The age and gender standardised prevalence ratio was the observed prevalence numbers divided by the expected prevalence numbers. A ratio below 1 indicated that the observed rate was less than expected given the area's population structure. This was statistically significant at the 5% level if the upper confidence limit was less than 1. Analyses were done for each of the last 6 years and, as the prevalent numbers for one year can be small for smaller areas, a combined years' analysis

was also done. The proportion of non-Whites in each PCT/LA was obtained from the ONS [1]. To enable assessment of whether a centre was an outlier, funnel plots for smaller and larger populations have been included which show the 95% confidence intervals around the national average prevalence.

Prevalent patients on RRT in 2008 were examined by time on RRT, age group, gender, ethnic origin, primary renal disease, presence of diabetes (2009 Report appendix G) and treatment modality. Some centres electronically upload ethnicity coding to their renal information technology (IT) system from the hospital Patient Administration System (PAS). Ethnicity coding in these PAS systems is based on self-reported ethnicity and uses a different coding system [2]. For the remaining centres, ethnicity coding is performed by clinical staff and recorded directly into the renal IT system (using a variety of coding systems). For all these analyses, data on ethnic origin were grouped into Whites, South Asians, Blacks, Chinese and Others. The details of regrouping of the PAS codes into the above ethnic categories are provided in appendix G Ethnicity, EDTA Primary Renal Diagnoses, EDTA Causes of Death and Treatment Timeline Modality Codes. Time on RRT was defined as median time on treatment and was calculated from the most recent start date. Patients without an accurate start date were excluded from this calculation. Analyses were done for the UK as a whole, by UK country, at centre level and split by treatment modality when appropriate. Chi-squared test, Fisher's exact test, ANOVA linear regression and Kruskal Wallis test were used as appropriate to test for significant differences between groups. The data were analysed using SAS 9.1.3.

Results

Prevalent patient numbers and changes in prevalence

The number of patients calculated for each country (table 4.1) (by adding the patient numbers in each renal centre) differ marginally from those quoted elsewhere when patients are allocated to geographical areas by their individual post codes, as some centres treat patients across national boundaries.

There were 47,525 adult patients receiving RRT in the UK at the end of 2008, giving a UK population prevalence of 774 pmp (table 4.1) compared to 746 pmp in 2007 [3]. Prevalence rates increased in all UK countries compared to 2007 [3]. Prevalence rates remained lowest in England (767 pmp) with Wales once again having the highest prevalence (827 pmp) among the four UK countries. PD prevalence decreased again in all UK countries, with the largest decrease in Wales (109 pmp in 2007 vs. 87 pmp in 2008), whilst transplant prevalence once more increased in the UK, with the largest increase in Wales (350 pmp in 2007 vs. 384 pmp in 2008). The prevalent rate for each of the UK countries (figure 4.1) shows that Northern Ireland had a higher prevalent rate for patients aged 70+ compared to the other UK countries.

Table 4.1. Prevalence of RRT in the UK on 31/12/2008

	England	N Ireland	Scotland	Wales	UK
All UK centres	39,476	1,431	4,142	2,476	47,525
Total population, mid-2008 (millions)*	51.4	1.8	5.2	3.0	61.4
Prevalence pmp HD	337	405	355	357	342
Prevalence pmp PD	69	57	63	87	69
Prevalence pmp dialysis	407	463	418	444	411
Prevalence pmp transplant	361	344	383	384	363
Prevalence pmp total	767	806	801	827	774
Confidence intervals total	760–775	764–848	777–826	795–860	767–781

* estimates from ONS web site
pmp = per million population

Prevalent patients by RRT centre

Both the number of prevalent patients in each renal centre and the distribution of their treatment modalities varied widely (table 4.2). Many factors including geography, local population density, age distribution, ethnic composition and social deprivation index of that population have contributed to this. The transplanting status of a renal centre also played a role in determining the modality distribution of prevalent patients. The 23 transplant centres had higher median prevalent numbers in all modalities than non-transplanting centres ($p < 0.001$ for all modalities), and also had a higher transplant number/dialysis number ratio (1.28 vs. 0.65, $p < 0.001$). The wide variability in this ratio both in transplanting (0.77–1.79) and non-transplanting (0.07–1.21) centres suggests considerable variation in transplant follow-up policies. Most transplant centres

transfer patients back to the referring renal centre but at varying times after transplantation.

The distribution of treatment modalities was also dependent on centre size, in terms of the number of RRT patients (although size is also correlated with being a transplanting centre). As centre size increased, the proportion of transplant patients increased at the expense of the proportion of haemodialysis patients (figure 4.2). When centres were grouped into four quartiles (Q1 to Q4) based on centre size (Q1 the quartile with the smallest centres, Q4 the quartile with the largest centres) with an equal number of centres in each, the proportion of transplanting centres increased through the quartiles (Q1 = 0%, Q2 = 6%, Q3 = 28%, Q4 = 94%). The only transplanting centre in Q2 was Plymouth and the only non-transplanting centre in Q4 was Carshalton (which had been a transplanting centre until 2003).

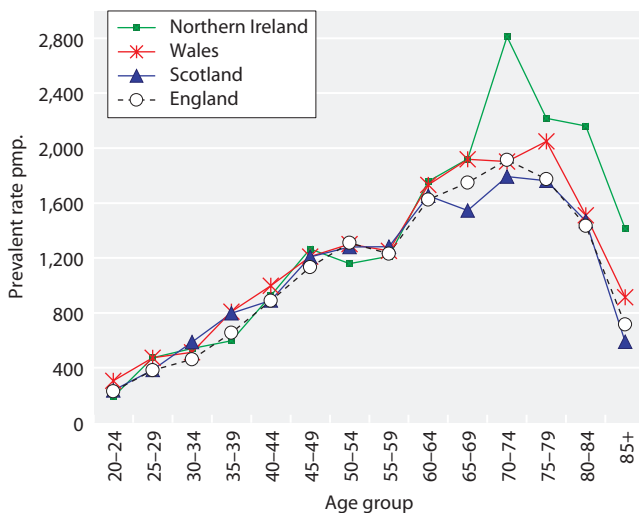


Fig. 4.1. Prevalent rate per million population by age band and UK country on 31/12/2008

Changes in prevalence

Overall growth in the prevalent UK RRT population from 2007 to 2008 was 4.4% (table 4.3) which has been fairly consistent over the last 10–15 years (figure 4.3). Over the 2005–2008 period, Scotland and Northern Ireland showed slower average yearly growth than England at 3.0%, 3.5% and 4.5% respectively. During the same period Wales showed an average growth of 6.5% although this is exaggerated as it was in part related to an error in the numbers from Wrexham during the period of changing renal IT systems.

This prevalent growth disguises the differential growth in the different RRT modalities of HD, PD and Transplant over this period and these data are shown in table 4.4. From 2007 to 2008, there was pmp growth of prevalent patients on HD by 5.9% and those with a functioning transplant of 4.6%, but a 9.2% decrease in

Table 4.2. Number of prevalent RRT patients per treatment modality by centre on 31/12/2008

Country	Centre	HD	PD	Dialysis	Transplant	RRT	
England	B Heart	411	33	444	150	594	
	B QEH*	807	149	956	758	1,714	
	Basldn	139	34	173	44	217	
	Bradfd	194	33	227	187	414	
	Brightn	327	96	423	299	722	
	Bristol*	453	88	541	706	1,247	
	Camb*	358	45	403	524	927	
	Carlis	81	21	102	101	203	
	Carsh	630	128	758	491	1,249	
	Chelms	102	43	145	57	202	
	Colchr	118		118		118	
	Covnt*	317		78	395	350	745
	Derby	240		79	319	70	389
	Donc	80		39	119	35	154
	Dorset	211		55	266	247	513
	Dudley	139		54	193	77	270
	Exeter	319		83	402	306	708
	Glouc	160		35	195	129	324
	Hull	319		76	395	301	696
	Ipswi	104		53	157	137	294
	Kent	324		81	405	309	714
	L Barts*	633		230	863	663	1,526
	L Guys*	517		54	571	860	1,431
	L Kings	415		82	497	287	784
	L RFree*	646		91	737	773	1,510
	L St. G*	226		56	282	342	624
	L West*	1,236		44	1,280	1,290	2,570
	Leeds*	487		102	589	753	1,342
	Leic*	733		162	895	765	1,660
	Liv Ain	127		3	130		130
	Liv RI*	403		106	509	691	1,200
	M Hope	314		136	450	308	758
	M RI*	417		101	518	904	1,422
	Middlbr	292		24	316	366	682
	Newc*	271		52	323	578	901
	Norwch	303		64	367	200	567
	Nottm*	395		123	518	426	944
	Oxford*	358		122	480	826	1,306
	Plymth*	128		52	180	263	443
	Ports*	450		93	543	725	1,268
	Prestn	443		63	506	367	873
	Redng	260		80	340	238	578
	Sheff*	606		78	684	532	1,216
	Shrew	184		37	221	104	325
Stevng	364		40	404	176	580	
Sthend	131		16	147	57	204	
Stoke	272		78	350	253	603	
Sund	162		23	185	158	343	
Truro	142		29	171	122	293	
Wirral	179		37	216		216	
Wolve	301		62	363	126	489	
York	121		21	142	132	274	
Wales	Bangor	82	30	112		112	
	Cardff*	491	125	616	794	1,410	
	Clwyd	74	10	84	62	146	
	Swanse	346	69	415	170	585	
	Wrexm	76	25	101	122	223	

Table 4.2. Continued

Country	Centre	HD	PD	Dialysis	Transplant	RRT
Scotland	Abrdn	207	37	244	212	456
	Airdrie	159	13	172	73	245
	D & Gall	53	16	69	44	113
	Dundee	161	26	187	183	370
	Dunfn	111	25	136	84	220
	Edinb*	272	76	348	347	695
	Glasgw*	639	64	703	865	1,568
	Inverns	91	29	120	92	212
	Klmarnk	142	42	184	79	263
	N Ireland	Antrim	133	19	152	68
Belfast*		261	51	312	414	726
Derry		54	6	60	36	96
Newry		98	12	110	48	158
Tyrone		89	9	98	38	136
Ulster		84	5	89	6	95
Total		England	17,349	3,564	20,913	18,563
	N Ireland	719	102	821	610	1,431
	Scotland	1,835	328	2,163	1,979	4,142
	Wales	1,069	259	1,328	1,148	2,476
	UK	20,972	4,253	25,225	22,300	47,525

* Transplant centres

Centres prefixed 'L' are London centres.

The numbers of patients calculated for each country quoted above differ marginally from those quoted elsewhere when patients are allocated to areas by their individual post codes, as some centres treat patients from across national boundaries.

patients on PD. During the period 2005–2008 there has been a 5.3% pmp growth in HD, 6.3% pmp fall in PD, and 4.7% pmp growth in prevalent transplant patients in the UK (table 4.4).

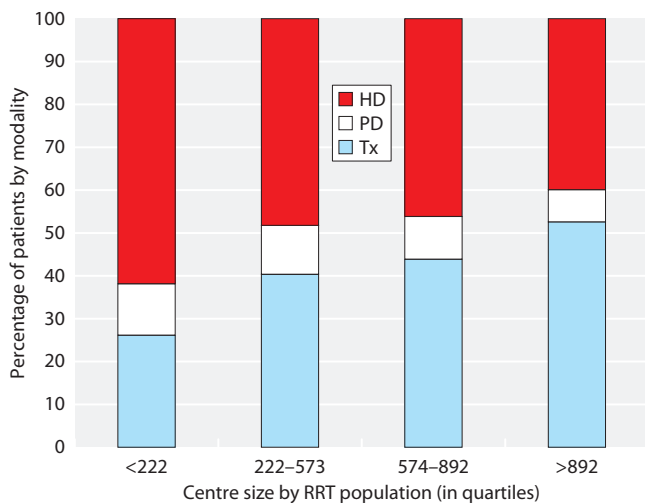


Fig. 4.2. Distribution of treatment modalities in relation to the number of prevalent RRT patients (displayed in quartiles) on 31/12/2008

There were large variations between centres as well as countries. In 2007–2008 growth increased by more than 20% in 5 centres (table 4.3), the greatest growth being 52.4% in Derry and 50.7% in Dumfries. In 2008, transplant patients were allocated not to the transplant centre, but to the centre responsible for patient care, which may have been the original non-transplanting referral centre. This resulted in a decline in transplant patient numbers at some transplant centres and an increase at other renal centres. There was a decrease in prevalent patient numbers in 16 centres, and most of the decreases were due either to the reduction in prevalent PD patient numbers or the reallocation of transplant patients to the centre where they were followed up. A few centres also had large increases in transplant patient numbers, due to the reallocation of transplant patients. The decline in prevalent patients on PD was evident at 40 of the 72 renal centres in the UK.

The long-term (1982–2007) UK prevalence pattern by treatment modality is shown in figure 4.3. The steady growth in transplant numbers was maintained but haemodialysis patient numbers have increased more rapidly associated with a slow contraction in home-based therapies, particularly PD.

Table 4.3. Number of prevalent patients on RRT by centre 2005–2008

Centre	Date				% change 2007–2008
	31/12/2005	31/12/2006	31/12/2007	31/12/2008	
Abrdn	415	428	452	456	0.9
Airdrie	171	233	230	245	6.5
Antrim	188	200	198	220	11.1
B Heart	538	578	576	594	3.1
B QEH	1,514	1,555	1,626	1,714	5.4
Bangor	101	103	98	112	14.3
Basldn	168	186	208	217	4.3
Belfast	738	750	744	726	−2.4
Bradfd	361	365	395	414	4.8
Brightn	615	647	684	722	5.6
Bristol	1,158	1,200	1,234	1,247	1.1
Camb	816	905	935	927	−0.9
Cardff	1,267	1,334	1,438	1,410	−1.9
Carlisle	183	188	198	203	2.5
Carsh	994	1,101	1,162	1,249	7.5
Chelms	134	155	194	202	4.1
Clwyd	83	79	152	146	−3.9
Colchr	n/a	84	100	118	18.0
Covnt	636	675	717	745	3.9
D & Gall	69	76	75	113	50.7
Derby	279	301	313	389	24.3
Derry	n/a	34	63	96	52.4
Donc ^a	n/a	n/a	108	154	42.6
Dorset	382	395	452	513	13.5
Dudley	257	261	261	270	3.4
Dundee	355	362	376	370	−1.6
Dunfn	150	156	220	220	0.0
Edinb	669	701	720	695	−3.5
Exeter	580	621	664	708	6.6
Glasgw	1,583	1,541	1,600	1,568	−2.0
Glouc	280	319	323	324	0.3
Hull	585	610	674	696	3.3
Inverns	198	199	207	212	2.4
Ipswi	290	283	284	294	3.5
Kent		546	617	714	15.7
Klmarnk	180	211	210	263	25.2
L Barts	1,332	1,415	1,473	1,526	3.6
L Guys	1,220	1,315	1,395	1,431	2.6
L Kings	633	669	711	784	10.3
L Rfree	1,310	1,382	1,437	1,510	5.1
L St.G	544	595	576	624	8.3
L West ^b	2,280	2,152	2,162	2,570	18.9
Leeds	1,300	1,366	1,379	1,342	−2.7
Leic ^c	1,427	1,497	1,593	1,660	4.2
Liv Ain	81	98	114	130	14.0
Liv RI	1,293	1,360	1,274	1,200	−5.8
M Hope	612	714	759	758	−0.1
M RI	1,420	1,400	1,402	1,422	1.4
Middlbr	589	639	687	682	−0.7
Newc	863	898	902	901	−0.1
Newry	155	148	147	158	7.5
Norwch	408	436	494	567	14.8
Nottm	887	922	971	944	−2.8
Oxford	1,192	1,286	1,328	1,306	−1.7
Plymth	367	411	421	443	5.2

Table 4.3. Continued

Centre	Date				% change 2007–2008
	31/12/2005	31/12/2006	31/12/2007	31/12/2008	
Ports	1,085	1,144	1,182	1,268	7.3
Prestn	765	828	858	873	1.7
Redng	410	530	553	578	4.5
Sheff ^a	1,164	1,230	1,171	1,216	3.8
Shrew	235	260	291	325	11.7
Stevng	557	604	547	580	6.0
Sthend	181	188	193	204	5.7
Stoke	550	588	591	603	2.0
Sund	277	269	344	343	−0.3
Swanse	462	499	544	585	7.5
Truro	269	289	281	293	4.3
Tyrone	165	160	149	136	−8.7
Ulster	44	61	85	95	11.8
Wirral	191	199	216	216	0.0
Wolve	438	448	449	489	8.9
Wrexmd	137 ^d	130 ^d	217	223	2.8
York	200	223	231	274	18.6
England	34,585	36,462	37,610	39,476	5.0
N Ireland	1,290	1,353	1,386	1,431	3.2
Scotland	3,790	3,907	4,090	4,142	1.3
Wales	2,050	2,145	2,449	2,476	1.1
UK	41,715	43,867	45,535	47,525	4.4

^a Doncaster previously part of Sheffield centre

^b Hammersmith + Charing Cross amalgamated with St Marys

^c Oxford transferred Northamptonshire LA to Leicester

^d Wrexham data suspect from previous renal IT system

Prevalence of RRT in Primary Care Trusts (PCT) in England or Local Authority (LA) areas in Wales, Scotland (Council Areas) and Northern Ireland (District Councils)

The need for RRT depends on many factors including social and demographic factors such as age, gender, social deprivation and ethnicity. Hence comparison of

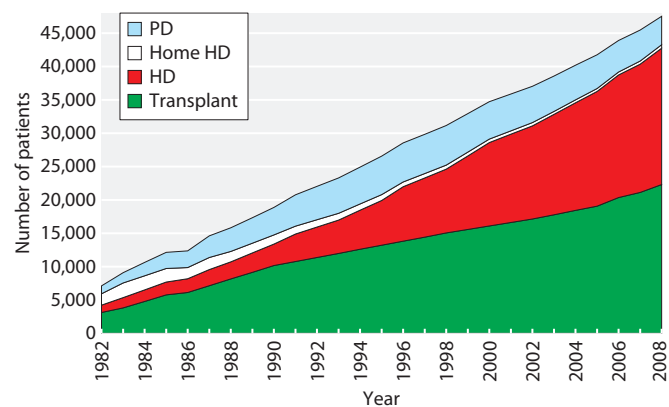


Fig. 4.3. Growth in prevalent patients, by treatment modality at the end of each year 1982–2008

crude prevalence rates by geographical area can be misleading. This section, as in previous reports, uses age and gender standardisation and ethnic minority profile to compare RRT prevalent rates. The impact of social deprivation was analysed in the 2003 UKRR Report [4].

Prevalence rates have been reported in relation to the catchment area populations of PCTs in England. Data by equivalent local authority areas for the other UK countries continues to be reported (called Local Authorities in Wales, Council Areas in Scotland and District Councils in Northern Ireland) and described as PCT/LA. There were substantial variations in the crude PCT/LA prevalence from 409 per million population (pmp) (Shetland Islands, population 22,000) to 1,492 pmp (Brent Teaching, population 271,400). There were similar variations in standardised prevalence ratios (SPR) from 0.50 (Shetland Islands) to 2.49 (Heart of Birmingham Teaching, population 271,400) (table 4.5). PCT/LAs with small populations have wide confidence limits for SPR (figures 4.4 and 4.5), making difficult the interpretation of data from a single year. The annual standardised prevalence ratio was inherently

Table 4.4. Change in RRT prevalence rates pmp 2005–2008 by modality

Year	HD prevalence pmp	PD prevalence pmp	Dialysis prevalence pmp	Transplant prevalence pmp	RRT prevalence pmp	% prevalence pmp growth			
						HD	PD	Tx	RRT
2005	293	84	377	316	693				
2006	311	78	389	336	725	6.1	-7.1	6.3	4.5
2007	323	76	399	347	746	3.9	-2.6	3.3	2.9
2008	342	69	411	363	774	5.9	-9.2	4.6	3.8
Average annual growth during 2005–2008						5.3	-6.3	4.7	3.7

more stable than the annual standardised acceptance ratio, although some areas have shown progressive annual increases (e.g. Bolton, Bury, Oldham) (chapter 3). These areas with progressive increases in SPRs started with low ratios in 2003.

Factors associated with variation in standardised prevalence ratios in PCTs in England, Local Authorities in Wales, Scotland and Northern Ireland (PCT/LA)

Geographical considerations and ethnicity were the major factors underlying the variation in SPR (table 4.5). In 2008, there were 52 PCT/LAs with a significantly low SPR, 128 with a normal SPR and 52 with a significantly high SPR. This is not dissimilar to last year's report [3]. The geographical distribution of these is summarised in table 4.6. North West England, East of England, the South East and South West of England all had a significantly higher proportion of areas with a low SPR compared with the UK as a whole. In London there were a significantly higher proportion of areas with a high SPR, and the West Midlands (41%) and Wales (27%) had a relatively higher percentage of PCT/LAs with high SPRs but this did not reach significance.

PCT/LAs with a high SPR had significantly higher ethnic minority populations than those with low or normal SPRs ($p < 0.0001$) (figures 4.6, 4.7a and b). Mean SPR was significantly higher in the 47 PCT/LAs with an ethnic minority population greater than 10% than in those with lower ethnic minority populations (1.38 vs. 0.96: $p < 0.0001$). The SPR ($r = 0.283$, $p < 0.001$) was correlated with ethnicity. For each 10% increase in ethnic minority population the age standardised prevalence ratio increased by 0.18.

In figure 4.7a, the relationship between the ethnic composition of a PCT/LA and its SPR is demonstrated. Figure 4.7b excludes those centres with <1% ethnic minority populations.

None of the 47 PCTs (all within England) with ethnic minority populations greater than 10% had low SPR, whereas 37 had high SPRs. In contrast only 15 of the 185 PCT/LAs with ethnic minority populations less than 10% had high SPRs. Six of these were in Wales (Caerphilly, Cardiff, Merthyr Tydfil, Neath and Port Talbot, Rhondda-Cynon-Taff, Swansea), 3 in Scotland (Glasgow City, Inverclyde, North Ayrshire) and 4 in Northern Ireland (Antrim, Belfast, Carrickfergus, Castlereagh). The only PCTs in England with ethnic minority populations less than 10% and with high SPRs, were Bristol and Bexley. The factors contributing to these regional disparities remained unclear but social deprivation was likely to be an important factor.

Case mix in prevalent RRT patients

Time on RRT

For patients who recovered for >90 days and then restarted RRT, median time from the start of RRT was calculated from the most recent start date. Table 4.7 shows the median time, in years, of the prevalent RRT patients on 31/12/2008 since starting RRT. Median time on RRT of the whole cohort was 5.3 years. Patients with functioning transplants had survived a median of 10.4 years on RRT whilst the median time on RRT of HD and PD patients was much less (2.9 and 2.0 years respectively). The dialysis population was older (table 4.8) and would be expected to have shorter survival than the transplant patients. There has been little change over the last few years [3].

Age

The median age of prevalent UK patients on RRT was 57.3 years on 31/12/2008 (table 4.8). This has changed little in the last few years but there were marked differences between modalities. The median age of HD patients (65.5 years) was greater than those on PD (61.0 years) and substantially higher than those

Table 4.5. Prevalence of RRT and standardised prevalence ratios in Primary Care Trusts/Local Authorities

O/E = standardised prevalence rate ratio

^a per million population

Blank cells – no data returned to the Registry for that year

Areas with significantly low prevalence ratios in 2008 are italicised in greyed areas, those with significantly high prevalence ratios in 2008 are bold in greyed areas

% non-White = the sum of % South Asian and Black from the 2001 UK census

PCT/LA = Primary Care Trust (England), Local Authority (Wales), Council Area (Scotland), District Council (Northern Ireland)

Region	PCT/LA	Mid-2006 population	2003 O/E	2004 O/E	2005 O/E	2006 O/E	2007 O/E	2008				2003–2008 O/E	% non- White
								O/E	LCL	UCL	pmp ^a		
NE England	<i>County Durham</i>	500,400	0.93	0.94	0.96	0.93	0.90	0.88	0.80	0.98	721	0.92	1.0
	Darlington	99,100	0.89	0.92	0.93	0.80	0.82	0.84	0.66	1.07	676	0.86	2.1
	Gateshead	190,500	1.07	1.04	0.99	0.93	0.88	0.85	0.71	1.00	688	0.95	1.6
	Hartlepool	91,100	0.92	1.04	0.96	1.03	0.90	0.92	0.73	1.18	724	0.96	1.1
	Middlesbrough	138,500	1.17	1.08	1.00	1.07	1.08	1.08	0.90	1.30	801	1.08	6.3
	Newcastle	270,400	0.96	0.90	0.92	0.91	0.94	0.97	0.85	1.12	714	0.93	6.9
	North Tees	189,200	0.76	0.84	0.87	0.95	0.86	0.85	0.71	1.01	655	0.86	2.7
	North Tyneside	195,100	1.05	1.05	1.06	1.02	0.97	0.91	0.77	1.07	743	1.00	1.9
	<i>Northumberland</i>	309,900	0.92	0.93	0.88	0.82	0.81	0.78	0.68	0.89	674	0.85	1.0
	Redcar and Cleveland	139,200	0.91	1.00	0.98	1.00	1.02	0.97	0.80	1.17	797	0.98	1.1
	South Tyneside	151,000	0.93	0.95	0.97	0.99	0.96	0.90	0.75	1.08	728	0.95	2.7
Sunderland Teaching	280,600	1.06	1.05	0.98	0.92	0.89	0.92	0.80	1.05	727	0.96	1.9	
NW England	<i>Ashton, Leigh and Wigan</i>	305,500	0.54	0.57	0.62	0.68	0.90	0.81	0.70	0.93	638	0.70	1.3
	Blackburn with Darwen	141,200	1.01	1.04	1.11	1.13	1.33	1.24	1.04	1.48	857	1.16	22.0
	<i>Blackpool</i>	142,800	0.75	0.73	0.69	0.62	0.76	0.78	0.64	0.96	651	0.72	1.6
	Bolton	262,500	0.69	0.69	0.78	0.81	1.06	1.01	0.88	1.16	773	0.85	11.0
	Bury	182,900	0.28	0.38	0.42	0.46	0.89	0.84	0.71	1.01	651	0.57	6.1
	<i>Central and Eastern Cheshire</i>	451,200					0.79	0.74	0.66	0.83	612	0.76	1.6
	<i>Central Lancashire</i>	451,600	0.70	0.72	0.77	0.73	0.80	0.83	0.74	0.93	658	0.76	5.6
	<i>Cumbria</i>	496,000	0.81	0.78	0.76	0.75	0.74	0.74	0.66	0.82	633	0.76	0.7
	East Lancashire	384,500	0.86	0.91	0.89	0.92	1.06	1.01	0.90	1.13	783	0.95	8.1
	Halton and St Helens	297,000	0.89	0.88	0.90	0.97	1.00	0.93	0.82	1.07	731	0.93	1.2
	Heywood, Middleton and Rochdale	206,400					0.99	0.99	0.84	1.16	736	0.99	11.4
	Knowsley	151,500	1.25	1.25	1.17	1.12	1.08	1.01	0.84	1.22	759	1.14	1.6
	Liverpool	436,200	1.23	1.22	1.16	1.15	1.09	1.11	1.00	1.23	816	1.15	5.7
	Manchester	451,900					1.08	1.16	1.04	1.29	744	1.12	19.0
	<i>North Lancashire</i>	329,000	0.81	0.78	0.70	0.66	0.75	0.70	0.61	0.81	593	0.73	1.7
	Oldham	219,800	0.44	0.50	0.49	0.60	0.92	0.92	0.78	1.08	678	0.67	13.9
	Salford	217,800	0.69	0.62	0.60	0.64	0.80	0.86	0.73	1.02	647	0.71	3.9
	<i>Sefton</i>	277,500	0.94	0.89	0.90	0.88	0.85	0.83	0.72	0.95	692	0.88	1.6
	<i>Stockport</i>	280,800					0.85	0.86	0.75	0.99	694	0.86	4.3
	Tameside and Glossop	247,700					0.97	0.92	0.79	1.06	706	0.94	4.9
<i>Trafford</i>	212,100					0.77	0.75	0.63	0.89	585	0.76	8.4	
Warrington	194,300	0.89	0.89	0.80	0.81	0.88	0.84	0.71	1.00	664	0.85	2.1	
Western Cheshire	235,100	0.97	1.02	0.96	0.91	0.89	0.92	0.80	1.07	766	0.94	1.6	
<i>Wirral</i>	311,100	1.13	1.11	1.06	1.02	0.94	0.86	0.76	0.99	704	1.01	1.7	
Yorkshire & Humber	Barnsley	223,700	1.22	1.23	1.13	1.10	1.04	1.04	0.90	1.20	831	1.12	0.9
	Bradford and Airedale	493,000	1.26	1.23	1.23	1.12	1.17	1.18	1.07	1.30	832	1.19	21.7
	Calderdale	198,600	1.06	1.08	1.07	1.08	1.08	1.09	0.93	1.26	846	1.08	7.0
	Doncaster	290,400	1.12	1.10	1.02	1.02	0.93	0.94	0.83	1.08	754	1.02	2.3
	<i>East Riding of Yorkshire</i>	331,100	0.84	0.81	0.80	0.80	0.79	0.82	0.72	0.93	710	0.81	1.2
	Hull	256,200	0.92	0.95	0.96	0.96	1.00	0.93	0.80	1.08	679	0.96	2.3
	Kirklees	398,400	1.23	1.21	1.16	1.19	1.12	1.06	0.95	1.18	793	1.16	14.4

Table 4.5. Continued

Region	PCT/LA	Mid-2006	2003	2004	2005	2006	2007	2008				2003–2008 % non-	
		population	O/E	O/E	O/E	O/E	O/E	O/E	LCL	UCL	pmp ^a	O/E	White
Yorkshire & Humber	Leeds	750,300	1.02	1.00	1.00	1.01	0.96	0.92	0.84	1.00	666	0.98	8.1
	North East Lincolnshire	159,900	0.90	0.96	0.95	0.98	0.97	0.97	0.81	1.16	769	0.96	1.4
	North Lincolnshire	155,200	0.99	0.94	0.89	0.94	0.92	0.89	0.74	1.07	741	0.93	2.5
	<i>North Yorkshire and York</i>	<i>783,200</i>	<i>0.82</i>	<i>0.81</i>	<i>0.81</i>	<i>0.80</i>	<i>0.81</i>	<i>0.81</i>	<i>0.75</i>	<i>0.89</i>	<i>677</i>	<i>0.81</i>	<i>1.4</i>
	Rotherham	253,000	1.23	1.26	1.18	1.09	1.07	1.12	0.99	1.28	893	1.15	3.1
	Sheffield	526,100	1.08	1.12	1.07	1.09	1.08	1.07	0.97	1.18	806	1.08	8.8
	<i>Wakefield District</i>	<i>321,000</i>	<i>0.86</i>	<i>0.85</i>	<i>0.85</i>	<i>0.88</i>	<i>0.84</i>	<i>0.81</i>	<i>0.70</i>	<i>0.92</i>	<i>642</i>	<i>0.85</i>	<i>2.3</i>
East Midlands	Bassetlaw	111,000	0.74	0.78	0.81	0.79	0.93	0.86	0.69	1.07	712	0.82	1.4
	Derby City	236,400	1.17	1.16	1.11	1.11	1.01	1.10	0.96	1.27	829	1.11	12.6
	<i>Derbyshire County</i>	<i>720,800</i>	<i>0.90</i>	<i>0.86</i>	<i>0.84</i>	<i>0.83</i>	<i>0.86</i>	<i>0.88</i>	<i>0.81</i>	<i>0.96</i>	<i>731</i>	<i>0.86</i>	<i>1.5</i>
	Leicester City	289,700	1.85	1.85	1.82	1.76	1.76	1.76	1.59	1.96	1,187	1.80	36.1
	<i>Leicestershire County and Rutland</i>	<i>673,600</i>	<i>0.97</i>	<i>0.99</i>	<i>0.93</i>	<i>0.93</i>	<i>0.92</i>	<i>0.90</i>	<i>0.83</i>	<i>0.99</i>	<i>733</i>	<i>0.94</i>	<i>5.1</i>
	<i>Lincolnshire</i>	<i>688,700</i>	<i>0.79</i>	<i>0.81</i>	<i>0.81</i>	<i>0.78</i>	<i>0.78</i>	<i>0.76</i>	<i>0.70</i>	<i>0.84</i>	<i>658</i>	<i>0.79</i>	<i>1.4</i>
	<i>Northamptonshire</i>	<i>669,200</i>	<i>0.92</i>	<i>0.74</i>	<i>0.90</i>	<i>0.88</i>	<i>0.89</i>	<i>0.90</i>	<i>0.82</i>	<i>0.98</i>	<i>692</i>	<i>0.87</i>	<i>4.9</i>
	Nottingham City	286,400	1.32	1.30	1.23	1.19	1.14	1.15	1.01	1.31	758	1.22	15.1
	Nottinghamshire County	657,500	1.06	1.06	1.05	1.01	1.00	0.98	0.90	1.06	798	1.02	2.8
West Midlands	Birmingham East and North	395,900		1.55	1.58	1.59	1.48	1.51	1.38	1.66	1,076	1.54	22.3
	Coventry Teaching	306,600	1.39	1.32	1.24	1.20	1.18	1.20	1.06	1.35	868	1.25	16.0
	<i>Dudley</i>	<i>305,200</i>	<i>0.77</i>	<i>0.99</i>	<i>0.96</i>	<i>0.91</i>	<i>0.91</i>	<i>0.87</i>	<i>0.76</i>	<i>1.00</i>	<i>711</i>	<i>0.90</i>	<i>6.4</i>
	Heart of Birmingham Teaching	271,400		2.48	2.48	2.47	2.46	2.49	2.25	2.74	1,470	2.48	59.9
	<i>Herefordshire</i>	<i>178,000</i>		<i>0.90</i>	<i>0.88</i>	<i>0.84</i>	<i>0.80</i>	<i>0.74</i>	<i>0.62</i>	<i>0.89</i>	<i>652</i>	<i>0.83</i>	<i>0.9</i>
	<i>North Staffordshire</i>	<i>211,400</i>					<i>0.83</i>	<i>0.82</i>	<i>0.70</i>	<i>0.97</i>	<i>686</i>	<i>0.82</i>	<i>1.5</i>
	Sandwell	287,700		1.48	1.45	1.44	1.42	1.48	1.33	1.66	1,119	1.45	20.3
	Shropshire County	289,500		0.89	0.89	0.87	0.86	0.91	0.80	1.04	788	0.88	1.2
	Solihull	203,000	0.88	1.04	1.00	1.04	0.94	0.89	0.76	1.05	724	0.96	5.4
	South Birmingham	339,400		1.45	1.43	1.35	1.30	1.30	1.16	1.45	934	1.36	15.1
	<i>South Staffordshire</i>	<i>603,500</i>					<i>0.89</i>	<i>0.90</i>	<i>0.82</i>	<i>0.99</i>	<i>741</i>	<i>0.90</i>	<i>2.7</i>
	Stoke on Trent	247,600					1.08	1.04	0.90	1.19	808	1.06	5.1
	Telford and Wrekin	161,800		0.92	0.82	0.91	1.05	1.02	0.85	1.21	766	0.95	5.2
	Walsall Teaching	254,700	0.88	1.36	1.34	1.30	1.26	1.30	1.15	1.47	1,017	1.25	13.6
	Warwickshire	522,300	1.04	1.12	1.09	1.05	1.04	0.99	0.90	1.09	816	1.05	4.4
Wolverhampton City	236,900	1.27	1.36	1.34	1.28	1.21	1.22	1.07	1.40	946	1.28	22.2	
<i>Worcestershire</i>	<i>553,000</i>		<i>0.85</i>	<i>0.86</i>	<i>0.82</i>	<i>0.81</i>	<i>0.82</i>	<i>0.74</i>	<i>0.90</i>	<i>682</i>	<i>0.83</i>	<i>2.4</i>	
East of England	<i>Bedfordshire</i>	<i>403,600</i>	<i>0.84</i>	<i>0.86</i>	<i>0.82</i>	<i>0.85</i>	<i>0.80</i>	<i>0.82</i>	<i>0.73</i>	<i>0.93</i>	<i>637</i>	<i>0.83</i>	<i>6.7</i>
	<i>Cambridgeshire</i>	<i>589,600</i>	<i>0.86</i>	<i>0.89</i>	<i>0.92</i>	<i>0.92</i>	<i>0.88</i>	<i>0.82</i>	<i>0.74</i>	<i>0.91</i>	<i>639</i>	<i>0.88</i>	<i>4.1</i>
	<i>East and North Hertfordshire</i>	<i>527,800</i>	<i>0.77</i>	<i>0.79</i>	<i>0.90</i>	<i>0.85</i>	<i>0.83</i>	<i>0.82</i>	<i>0.74</i>	<i>0.91</i>	<i>631</i>	<i>0.83</i>	<i>5.0</i>
	<i>Great Yarmouth and Waveney</i>	<i>210,600</i>		<i>0.42</i>	<i>0.40</i>	<i>0.43</i>	<i>0.51</i>	<i>0.76</i>	<i>0.65</i>	<i>0.90</i>	<i>665</i>	<i>0.51</i>	<i>1.3</i>
	Luton	187,200	1.18	1.15	1.28	1.28	1.30	1.35	1.16	1.56	935	1.26	28.1
	<i>Mid Essex</i>	<i>361,400</i>		<i>0.84</i>	<i>0.83</i>	<i>0.85</i>	<i>0.88</i>	<i>0.86</i>	<i>0.76</i>	<i>0.97</i>	<i>686</i>	<i>0.85</i>	<i>2.4</i>
	<i>Norfolk</i>	<i>738,900</i>		<i>0.92</i>	<i>0.93</i>	<i>0.93</i>	<i>0.93</i>	<i>0.89</i>	<i>0.82</i>	<i>0.97</i>	<i>774</i>	<i>0.92</i>	<i>1.5</i>
	<i>North East Essex</i>	<i>315,400</i>						<i>0.84</i>	<i>0.73</i>	<i>0.95</i>	<i>694</i>	<i>0.84</i>	<i>2.6</i>
	Peterborough	163,400	0.95	1.00	1.00	1.04	1.04	0.97	0.81	1.16	716	1.00	10.3
	South East Essex	329,900		0.96	0.93	0.96	0.94	0.92	0.81	1.04	761	0.94	3.0
	South West Essex	388,300		0.91	0.93	0.95	0.97	0.97	0.87	1.09	742	0.95	3.8
	<i>Suffolk</i>	<i>585,300</i>		<i>0.82</i>	<i>0.82</i>	<i>0.82</i>	<i>0.82</i>	<i>0.80</i>	<i>0.72</i>	<i>0.88</i>	<i>658</i>	<i>0.81</i>	<i>3.1</i>
	<i>West Essex</i>	<i>274,700</i>		<i>0.80</i>	<i>0.84</i>	<i>0.80</i>	<i>0.74</i>	<i>0.68</i>	<i>0.58</i>	<i>0.80</i>	<i>542</i>	<i>0.77</i>	<i>4.2</i>
West Hertfordshire	530,600	0.43	0.40	0.59	0.78	0.84	1.01	0.92	1.11	780	0.70	7.6	
London	Barking and Dagenham	165,400		1.13	1.14	1.14	1.14	1.15	0.97	1.37	774	1.14	14.8
	Barnet	328,400			1.12	1.25	1.45	1.49	1.34	1.65	1,075	1.34	26.0

Table 4.5. Continued

Region	PCT/LA	Mid-2006 population	2003 O/E	2004 O/E	2005 O/E	2006 O/E	2007 O/E	2008				2003–2008 % non-	
								O/E	LCL	UCL	pmp ^a	O/E	White
London	Bexley	221,600	1.23	1.17	1.13	1.17	1.17	1.17	1.02	1.34	903	1.17	8.6
	Brent Teaching	271,400				1.29	1.95	2.14	1.94	2.36	1,492	1.81	54.7
	Bromley	299,400	1.00	1.01	1.00	0.99	0.94	0.97	0.85	1.10	762	0.98	8.4
	Camden	227,200			0.98	1.05	1.13	1.17	1.01	1.36	761	1.09	26.8
	City and Hackney Teaching	216,200				1.40	1.44	1.38	1.19	1.59	865	1.41	39.7
	Croydon	337,000	1.12	1.16	1.21	1.19	1.37	1.39	1.25	1.55	1,009	1.25	29.8
	Ealing	306,400	1.37	1.45	1.41	1.48	1.61	1.91	1.73	2.10	1,328	1.55	41.3
	Enfield	285,400			1.49	1.48	1.42	1.42	1.26	1.59	1,023	1.45	22.9
	Greenwich Teaching	222,600	1.04	0.93	1.13	1.14	1.17	1.25	1.08	1.44	845	1.12	22.9
	Hammersmith and Fulham	171,400	1.41	1.44	1.28	1.32	1.28	1.32	1.12	1.55	881	1.34	22.2
	Haringey Teaching	225,600			1.52	1.54	1.54	1.60	1.41	1.82	1,046	1.55	34.4
	Harrow	214,600					1.63	1.81	1.61	2.03	1,342	1.72	41.2
	<i>Havering</i>	<i>227,500</i>					<i>0.79</i>	<i>0.77</i>	<i>0.66</i>	<i>0.91</i>	<i>624</i>	<i>0.78</i>	<i>4.8</i>
	Hillingdon	250,100		0.89	0.99	1.05	1.00	1.34	1.18	1.52	964	1.07	20.9
	Hounslow	218,600		1.57	1.46	1.42	1.40	1.67	1.47	1.89	1,153	1.51	35.1
	Islington	185,500			1.39	1.51	1.43	1.39	1.19	1.61	906	1.43	24.6
	Kensington and Chelsea	178,000					0.77	0.94	0.79	1.13	691	0.86	21.4
	Kingston	156,000					1.05	1.15	0.97	1.37	821	1.10	15.5
	Lambeth	272,200	1.33	1.36	1.34	1.34	1.64	1.62	1.44	1.82	1,040	1.45	37.6
	Lewisham	255,600	1.56	1.66	1.67	1.70	1.74	1.71	1.52	1.91	1,135	1.68	34.1
	Newham	248,300		1.47	1.66	1.77	1.80	1.80	1.59	2.03	1,067	1.71	60.6
	Redbridge	251,800		1.15	1.25	1.24	1.24	1.39	1.22	1.57	985	1.26	36.5
	<i>Richmond and Twickenham</i>	<i>179,500</i>					<i>0.67</i>	<i>0.74</i>	<i>0.61</i>	<i>0.90</i>	<i>552</i>	<i>0.71</i>	<i>9.0</i>
Southwark	269,000	1.59	1.56	1.59	1.58	1.69	1.73	1.54	1.93	1,123	1.63	37.0	
Sutton and Merton	382,000					1.19	1.21	1.09	1.35	877	1.20	18.1	
Tower Hamlets	212,500		1.15	1.19	1.23	1.31	1.39	1.20	1.62	814	1.26	48.6	
Waltham Forest	222,100					1.36	1.54	1.50	1.32	1,009	1.47	35.5	
Wandsworth	279,200					1.40	1.39	1.23	1.57	903	1.39	22.0	
Westminster	231,700					1.00	1.09	0.94	1.26	760	1.04	26.8	
SE England	Berkshire East	382,200	1.03	1.06	1.03	1.10	1.20	1.19	1.07	1.32	863	1.11	16.0
	Berkshire West	445,400	1.01	1.03	0.97	1.03	1.11	1.10	0.99	1.22	815	1.04	7.3
	Brighton and Hove City	251,500		0.86	0.84	0.85	0.85	0.86	0.74	1.00	636	0.85	5.7
	Buckinghamshire	500,700	1.01	0.98	0.98	0.97	0.95	0.93	0.84	1.03	729	0.96	7.7
	<i>East Sussex Downs and Weald</i>	<i>330,200</i>		<i>0.86</i>	<i>0.82</i>	<i>0.78</i>	<i>0.81</i>	<i>0.75</i>	<i>0.66</i>	<i>0.86</i>	<i>657</i>	<i>0.80</i>	<i>2.3</i>
	<i>Eastern and Coastal Kent</i>	<i>720,400</i>					<i>0.87</i>	<i>0.92</i>	<i>0.84</i>	<i>1.00</i>	<i>744</i>	<i>0.89</i>	<i>2.4</i>
	<i>Hampshire</i>	<i>1,265,900</i>	<i>0.78</i>	<i>0.79</i>	<i>0.76</i>	<i>0.78</i>	<i>0.76</i>	<i>0.78</i>	<i>0.73</i>	<i>0.83</i>	<i>633</i>	<i>0.77</i>	<i>2.2</i>
	<i>Hastings and Rother</i>	<i>176,200</i>		<i>0.85</i>	<i>0.78</i>	<i>0.77</i>	<i>0.71</i>	<i>0.72</i>	<i>0.60</i>	<i>0.87</i>	<i>630</i>	<i>0.76</i>	<i>2.4</i>
	<i>Isle of Wight National Health Service</i>	<i>138,200</i>	<i>0.77</i>	<i>0.76</i>	<i>0.65</i>	<i>0.64</i>	<i>0.60</i>	<i>0.58</i>	<i>0.46</i>	<i>0.73</i>	<i>521</i>	<i>0.66</i>	<i>1.3</i>
	Medway	251,900					0.90	0.94	0.81	1.09	699	0.92	5.4
	Milton Keynes	230,100	0.99	0.98	0.96	0.89	0.96	0.97	0.83	1.13	691	0.95	9.1
	Oxfordshire	607,400	1.13	1.11	1.05	1.05	0.96	0.91	0.83	1.00	687	1.03	5.0
	Portsmouth City Teaching	196,300	1.12	1.09	1.02	0.96	0.96	0.95	0.80	1.13	672	1.01	5.3
	Southampton City	229,100	0.91	0.93	0.92	0.89	0.90	0.94	0.80	1.11	655	0.92	7.6
	<i>Surrey</i>	<i>1,073,400</i>		<i>0.77</i>	<i>0.76</i>	<i>0.77</i>	<i>0.86</i>	<i>0.88</i>	<i>0.82</i>	<i>0.95</i>	<i>704</i>	<i>0.81</i>	<i>4.9</i>
	<i>West Kent</i>	<i>662,600</i>					<i>0.88</i>	<i>0.91</i>	<i>0.83</i>	<i>0.99</i>	<i>721</i>	<i>0.89</i>	<i>3.9</i>
<i>West Sussex</i>	<i>770,600</i>		<i>0.80</i>	<i>0.79</i>	<i>0.78</i>	<i>0.82</i>	<i>0.84</i>	<i>0.77</i>	<i>0.91</i>	<i>707</i>	<i>0.81</i>	<i>3.4</i>	
SW England	<i>Bath and North East Somerset</i>	<i>175,600</i>	<i>0.72</i>	<i>0.85</i>	<i>0.89</i>	<i>0.87</i>	<i>0.87</i>	<i>0.81</i>	<i>0.67</i>	<i>0.98</i>	<i>638</i>	<i>0.84</i>	<i>2.8</i>
	<i>Bournemouth and Poole</i>	<i>297,900</i>		<i>0.87</i>	<i>0.83</i>	<i>0.83</i>	<i>0.85</i>	<i>0.83</i>	<i>0.72</i>	<i>0.95</i>	<i>681</i>	<i>0.84</i>	<i>2.6</i>
	Bristol	410,700	1.39	1.38	1.32	1.32	1.23	1.28	1.15	1.41	898	1.31	8.2

Table 4.5. Continued

Region	PCT/LA	Mid-2006 population	2003 O/E	2004 O/E	2005 O/E	2006 O/E	2007 O/E	2008				2003–2008 % non-	
								O/E	LCL	UCL	pmp ^a	O/E	White
SW England	Cornwall and Isles of Scilly	526,200	1.00	1.06	0.98	0.99	0.96	0.96	0.87	1.05	836	0.99	1.0
	<i>Devon</i>	<i>740,600</i>	<i>0.82</i>	<i>0.85</i>	<i>0.81</i>	<i>0.84</i>	<i>0.85</i>	<i>0.87</i>	<i>0.81</i>	<i>0.95</i>	<i>760</i>	<i>0.84</i>	<i>1.1</i>
	<i>Dorset</i>	<i>403,100</i>		<i>0.80</i>	<i>0.81</i>	<i>0.78</i>	<i>0.78</i>	<i>0.80</i>	<i>0.71</i>	<i>0.89</i>	<i>729</i>	<i>0.79</i>	<i>1.2</i>
	<i>Gloucestershire</i>	<i>578,500</i>	<i>0.89</i>	<i>0.92</i>	<i>0.92</i>	<i>0.93</i>	<i>0.89</i>	<i>0.82</i>	<i>0.75</i>	<i>0.91</i>	<i>676</i>	<i>0.89</i>	<i>2.9</i>
	North Somerset	201,200	1.11	1.14	1.04	0.99	0.91	0.92	0.79	1.08	785	1.01	1.4
	Plymouth Teaching	247,900	1.19	1.12	1.05	1.16	1.13	1.09	0.95	1.25	827	1.12	1.6
	<i>Somerset</i>	<i>518,800</i>	<i>0.91</i>	<i>0.90</i>	<i>0.88</i>	<i>0.87</i>	<i>0.83</i>	<i>0.82</i>	<i>0.74</i>	<i>0.91</i>	<i>698</i>	<i>0.86</i>	<i>1.2</i>
	South Gloucestershire	254,200	1.09	1.08	1.04	1.04	0.97	0.95	0.82	1.10	751	1.03	2.4
	Swindon	192,600	0.94	1.03	0.96	0.97	0.90	0.88	0.74	1.05	665	0.94	4.8
	Torbay	133,000	0.88	0.97	0.88	0.85	0.79	0.93	0.77	1.12	820	0.88	1.2
<i>Wiltshire</i>	<i>448,600</i>	<i>0.69</i>	<i>0.65</i>	<i>0.68</i>	<i>0.69</i>	<i>0.72</i>	<i>0.73</i>	<i>0.65</i>	<i>0.83</i>	<i>595</i>	<i>0.70</i>	<i>1.6</i>	
Wales	Blaenau Gwent	69,500	1.29	1.23	1.21	1.13	1.17	1.04	0.80	1.34	835	1.17	0.8
	Bridgend	132,600	1.18	1.20	1.20	1.27	1.33	1.19	1.00	1.41	958	1.23	1.4
	Caerphilly	171,300	1.20	1.19	1.18	1.19	1.19	1.23	1.06	1.44	963	1.20	0.9
	Cardiff	317,500	1.30	1.32	1.24	1.24	1.25	1.16	1.03	1.31	813	1.25	8.4
	Carmarthenshire	177,800	1.13	1.15	1.11	1.10	1.02	1.04	0.89	1.21	889	1.09	0.9
	Ceredigion	77,100	0.86	0.93	0.87	0.77	0.79	0.85	0.65	1.11	713	0.84	1.4
	Conwy	111,300	1.03	1.02	0.91	0.91	0.93	0.90	0.73	1.11	809	0.94	1.0
	Denbighshire	95,900	0.94	0.94	1.04	0.89	0.89	0.87	0.69	1.09	740	0.92	1.2
	Flintshire	150,000	1.07	1.06	1.03	1.01	1.01	0.98	0.82	1.17	793	1.02	0.8
	Gwynedd	118,200	1.26	1.08	1.06	0.98	1.05	1.01	0.83	1.23	838	1.07	1.2
	Isle of Anglesey	68,800	0.95	0.93	1.00	0.97	0.89	0.99	0.77	1.28	858	0.96	0.7
	Merthyr Tydfil	55,800	1.48	1.68	1.61	1.84	1.94	1.60	1.27	2.02	1,272	1.70	1.0
	Monmouthshire	87,800	1.18	1.16	1.19	1.05	0.98	1.02	0.81	1.27	877	1.09	1.1
	Neath Port Talbot	137,100	1.20	1.20	1.14	1.15	1.16	1.19	1.01	1.41	985	1.17	1.1
	Newport	140,500	1.31	1.27	1.19	1.14	1.21	1.07	0.89	1.28	819	1.19	4.8
	Pembrokeshire	116,800	0.97	0.94	1.00	0.95	0.91	0.95	0.78	1.16	822	0.95	0.9
	Powys	130,900	0.47	0.90	0.93	0.88	0.85	0.86	0.71	1.05	772	0.83	0.9
	Rhondda, Cynon, Taff	234,100	1.26	1.37	1.31	1.31	1.35	1.36	1.20	1.54	1,068	1.33	1.2
Swansea	227,000	1.34	1.32	1.27	1.21	1.19	1.15	1.00	1.32	925	1.24	2.2	
Torfaen	91,000	1.29	1.26	1.19	1.14	1.20	1.09	0.88	1.36	879	1.19	0.9	
Vale of Glamorgan	123,200	0.98	1.08	0.94	0.97	0.93	0.86	0.69	1.06	690	0.96	2.2	
Wrexham	131,000	1.43	1.33	1.20	1.15	1.02	0.97	0.80	1.18	779	1.17	1.1	
Scotland	Aberdeen City	207,000	1.08	1.19	1.15	1.09	1.07	1.07	0.93	1.25	841	1.11	2.9
	Aberdeenshire	236,300	0.94	0.93	0.95	0.94	0.95	0.95	0.82	1.10	779	0.94	0.7
	Angus	109,500	1.24	1.31	1.28	1.22	1.13	1.12	0.92	1.35	959	1.21	0.8
	Argyll & Bute	91,200	0.99	0.99	0.89	0.90	0.91	0.84	0.67	1.07	746	0.92	0.8
	Clackmannanshire	48,800	0.83	0.83	0.93	0.81	0.87	0.92	0.66	1.28	738	0.87	0.8
	Dumfries & Galloway	148,000	1.20	1.06	1.05	0.98	0.90	0.95	0.80	1.13	851	1.01	0.7
	Dundee City	142,100	1.32	1.25	1.30	1.35	1.31	1.18	1.00	1.40	936	1.28	3.7
	East Ayrshire	119,300	1.03	1.01	1.08	1.14	1.06	1.07	0.88	1.29	872	1.07	0.7
	East Dunbartonshire	105,700	1.33	1.22	1.11	1.07	0.99	0.89	0.71	1.11	738	1.09	3.1
	East Lothian	92,600	1.07	1.07	0.95	0.93	0.98	0.86	0.68	1.10	713	0.97	0.7
	East Renfrewshire	89,000	1.16	1.14	1.20	1.14	1.09	1.03	0.82	1.29	831	1.12	3.8
	Edinburgh, City of	463,300	1.00	1.02	0.97	0.95	0.93	0.93	0.83	1.04	693	0.96	4.1
	Eilean Siar	25,900	0.72	0.91	0.58	0.59	0.88	0.78	0.49	1.24	695	0.74	0.6
	Falkirk	149,500	1.06	0.99	1.03	0.99	1.09	1.05	0.88	1.25	836	1.04	1.0
	Fife	359,200	0.96	0.96	0.99	0.95	0.93	0.95	0.84	1.07	766	0.96	1.3
	Glasgow City	580,600	1.45	1.37	1.34	1.29	1.25	1.20	1.10	1.31	878	1.31	5.5

Table 4.5. Continued

Region	PCT/LA	Mid-2006 population	2003 O/E	2004 O/E	2005 O/E	2006 O/E	2007 O/E	2008				2003–2008 % non-	
								O/E	LCL	UCL	pmp ^a	O/E	White
Scotland	Highland	215,400	1.04	1.11	1.16	1.10	1.07	1.10	0.96	1.26	938	1.10	0.8
	Inverclyde	81,300	1.45	1.40	1.37	1.25	1.15	1.30	1.05	1.61	1,058	1.31	0.9
	Midlothian	79,000	1.14	1.19	1.14	1.25	1.17	1.10	0.87	1.40	886	1.17	0.9
	Moray	86,700	0.90	0.90	1.03	1.09	0.98	0.98	0.77	1.23	819	0.98	0.9
	North Ayrshire	135,300	1.19	1.23	1.22	1.33	1.24	1.28	1.08	1.51	1,050	1.25	0.7
	North Lanarkshire	323,700	1.23	1.20	1.11	1.07	1.02	0.99	0.88	1.13	763	1.10	1.3
	Orkney Islands	20,000	1.12	1.14	1.13	1.13	0.86	1.05	0.66	1.67	900	1.07	0.4
	Perth & Kinross	140,200	1.05	1.02	0.93	0.90	0.89	0.86	0.71	1.05	742	0.93	1.0
	Renfrewshire	169,300	1.25	1.22	1.22	1.14	1.08	1.04	0.88	1.23	839	1.15	1.2
	Scottish Borders	110,300	0.79	0.82	0.81	0.80	0.90	0.95	0.77	1.16	825	0.85	0.6
	<i>Shetland Islands</i>	<i>22,000</i>	<i>0.68</i>	<i>0.80</i>	<i>0.61</i>	<i>0.50</i>	<i>0.71</i>	<i>0.50</i>	<i>0.26</i>	<i>0.96</i>	<i>409</i>	<i>0.62</i>	<i>1.1</i>
	South Ayrshire	111,900	1.13	1.03	1.08	1.07	1.00	1.00	0.82	1.22	876	1.05	0.7
	South Lanarkshire	307,700	1.21	1.17	1.09	1.04	0.98	0.97	0.86	1.10	777	1.07	1.1
	<i>Stirling</i>	<i>87,600</i>	<i>0.95</i>	<i>0.92</i>	<i>0.88</i>	<i>0.84</i>	<i>0.78</i>	<i>0.72</i>	<i>0.55</i>	<i>0.96</i>	<i>571</i>	<i>0.84</i>	<i>1.5</i>
	West Dunbartonshire	91,100	1.00	1.01	0.93	0.98	0.90	0.88	0.68	1.12	692	0.94	0.7
West Lothian	165,700	1.08	1.01	1.03	0.98	0.95	0.92	0.77	1.11	694	0.99	1.3	
N Ireland	Antrim	51,500			1.43	1.51	1.47	1.50	1.15	1.96	1,049	1.48	0.5
	Ards	76,000			1.38	1.29	0.99	0.90	0.69	1.18	711	1.13	0.9
	Armagh	56,400			1.39	1.30	1.14	1.23	0.93	1.62	869	1.26	0.5
	Ballymena	61,400			1.13	1.11	1.04	1.07	0.81	1.41	814	1.09	1.3
	Ballymoney	29,300			0.80	0.80	1.00	0.85	0.54	1.35	614	0.87	0.6
	Banbridge	45,400			0.96	1.11	1.07	1.20	0.88	1.64	859	1.09	0.4
	Belfast	267,600			1.23	1.22	1.25	1.20	1.05	1.36	848	1.23	0.4
	Carrickfergus	39,800			1.89	1.85	1.94	1.80	1.38	2.35	1,357	1.87	0.3
	Castlereagh	65,600			1.51	1.54	1.36	1.31	1.03	1.66	1,037	1.42	0.4
	Coleraine	56,900			1.08	1.04	1.05	0.97	0.71	1.31	738	1.03	0.3
	Cookstown	34,600			0.77	0.78	0.73	0.64	0.39	1.07	434	0.73	1.3
	Craigavon	86,800			1.25	1.10	1.12	1.02	0.80	1.31	726	1.12	0.6
	Derry	107,800			1.21	1.26	1.24	1.13	0.91	1.41	742	1.21	0.8
	Down	68,400			1.13	1.18	1.19	1.10	0.84	1.44	789	1.15	0.7
	Dungannon	52,700			0.70	0.69	0.73	0.83	0.58	1.19	569	0.74	0.7
	Fermanagh	60,600			0.89	1.06	1.01	1.00	0.75	1.34	743	0.99	0.8
	Larne	31,400			1.50	1.40	1.31	1.32	0.94	1.85	1,051	1.38	0.4
	Limavady	33,900			1.15	1.13	1.15	1.09	0.74	1.61	737	1.13	0.6
	Lisburn	113,300			1.16	1.11	1.06	1.14	0.92	1.39	803	1.11	0.7
	Magherafelt	42,900			1.35	1.43	1.12	1.13	0.80	1.59	769	1.25	0.7
	Moyle	17,000			0.83	0.96	0.81	0.77	0.41	1.42	588	0.84	0.3
	Newry & Mourne	93,600			1.33	1.16	1.02	1.01	0.79	1.29	684	1.12	0.4
	Newtownabbey	81,400			1.21	1.26	1.20	1.12	0.88	1.41	848	1.19	0.3
	North Down	79,000			1.05	0.98	1.04	1.04	0.82	1.32	835	1.03	1.0
	Omagh	51,200			1.30	1.22	1.17	1.16	0.86	1.58	801	1.21	0.4
	Strabane	39,200			1.08	1.14	1.18	1.19	0.85	1.68	842	1.15	0.8

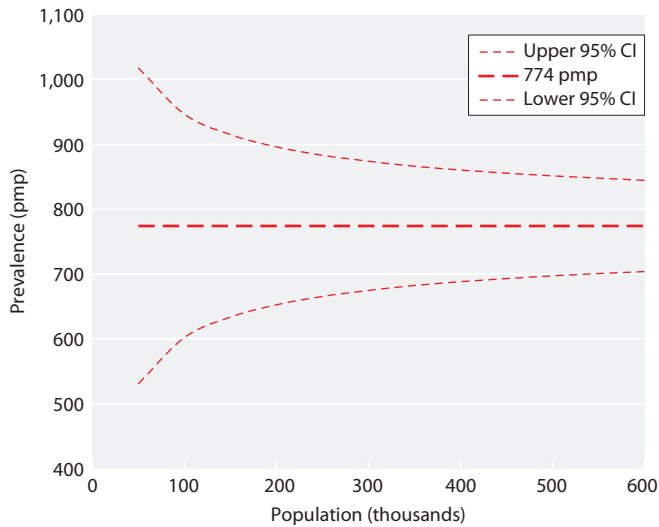


Fig. 4.4. 95% confidence limits for prevalence of 774 pmp for population sizes 50,000–600,000

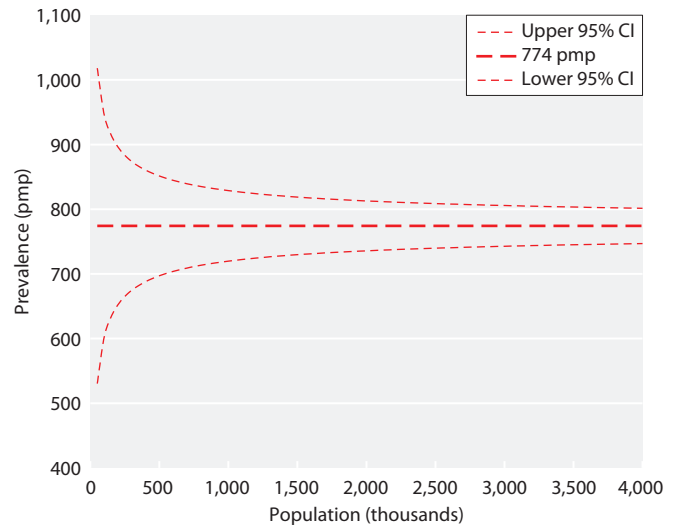


Fig. 4.5. 95% confidence limits for prevalence of 774 pmp for population sizes 50,000–4 million

of transplanted patients (50.4 years). These represented slightly older ages compared with 2007, with the biggest increase in the median age for patients on PD (60.3 years in 2007). Northern Ireland and Wales had a higher proportion (37% and 36% respectively) of prevalent patients on RRT who were aged over 65 years, when compared with England (33%) or Scotland (31%). As a result HD patients in Northern Ireland and Wales and PD patients in Wales were slightly older than in the rest of the UK.

There were however wide inter-centre variations in the median age of patients on RRT (52.0 to 69.9 years). Prevalent dialysis patients in Truro had the highest median age (72.4 years), and London Barts and Manchester RI had the lowest median ages (57.8 years and 58.1 years respectively). The median age of all patients with ERF in transplanting centres was less than in non-transplanting centres (55.7 vs. 60.3 years, $p < 0.001$). The median age of HD patients was slightly

Table 4.6. Summary of the regional distribution of PCT/LA areas with significantly low, normal or significantly high values of SPR and mean (weighted by PCT/LA size) % non-Whites per region on 31/12/2008

Region	SPR group			Total	Mean % non-White	Weighted mean % non-White
	Low	Normal	High			
NE England	2	10	0	12	2.5	2.4
NW England	10	12	2	24	5.9	5.6
Yorkshire & Humber	3	10	1	14	5.5	6.5
East Midlands	4	3	2	9	9.0	6.6
West Midlands	5	5	7	17	12.0	11.4
East of England	9	4	1	14	6.0	4.9
London	2	5	24	31	28.5	28.9
SE England	8	8	1	17	5.4	4.9
SW England	7	6	1	14	2.4	2.3
England	50	63	39	152	10.7	9.1
Wales	0	16	6	22	1.6	2.1
Scotland	2	27	3	32	1.4	2.0
N Ireland	0	22	4	26	0.6	0.6
All Regions	52	128	52	232	7.4	8.0

SPR = standardised prevalence ratio (appendix D, www.renalreg.org)

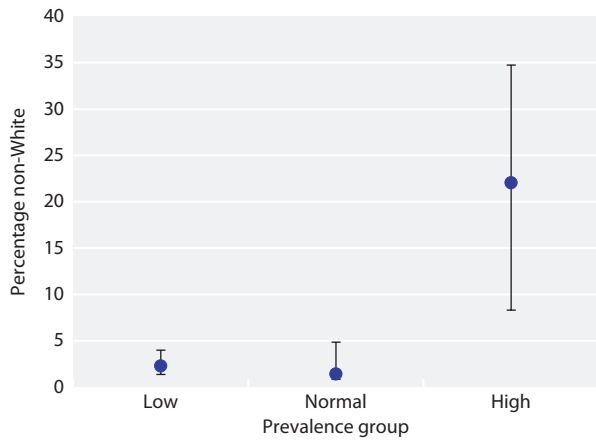


Fig. 4.6. Percentage non-Whites in PCT/LAs with significantly low, normal and significantly high SPR values (median and inter-quartiles) on 31/12/2008

less in transplanting than in non-transplanting centres (65.0 vs. 66.6, $p < 0.04$), but there was no significant difference in the median ages of PD and transplant patients. This implies that a major factor accounting for the lower median age of RRT patients in transplanting centres was the higher number of transplants patients under follow-up in transplant centres. Transplant centres also tend to

Table 4.7. Median vintage of prevalent RRT patients on 31/12/2008

Modality	Number of patients	Median time treated (years)
Haemodialysis	20,445	2.9
Peritoneal dialysis	4,194	2.0
Transplant	20,844	10.4
All modalities	45,483	5.3

Median time on RRT is calculated from the most recent start date. Patients with an initial treatment modality of transferred in or transferred out were excluded from the calculation of median time on RRT, since their treatment start date is not accurately known

be situated in the major cities where there is also a larger proportion of the population from the ethnic minorities (who are younger). The differing age distributions of the transplant and dialysis populations are illustrated in figure 4.8, demonstrating that the age peak for prevalent dialysis patients is around 20 years later than for prevalent transplant patients.

In the UK on 31/12/2008, 59% of patients aged under 65 years on RRT had a functioning transplant (table 4.14) compared with only 22% aged 65 years and over. This was similar in all four UK countries.

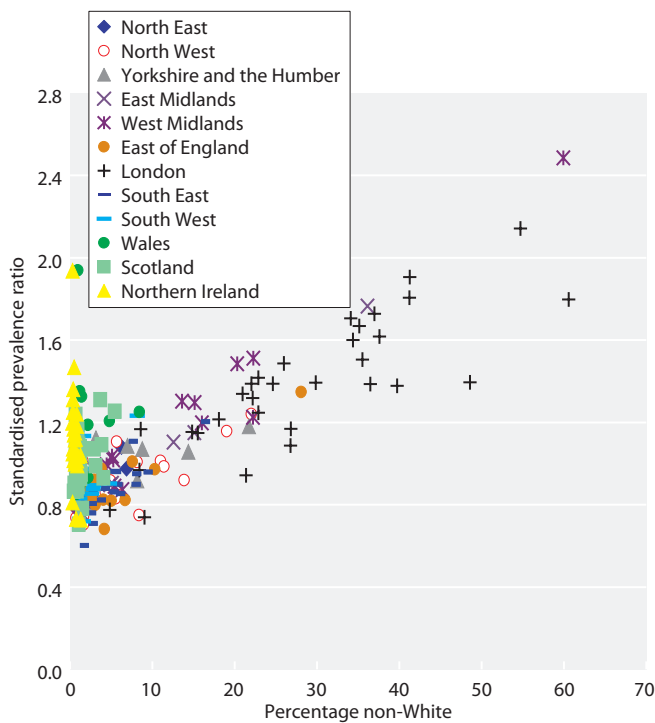


Fig. 4.7a. Ethnicity and standardised prevalence ratios for all PCT/LAs by percentage non-White with available data

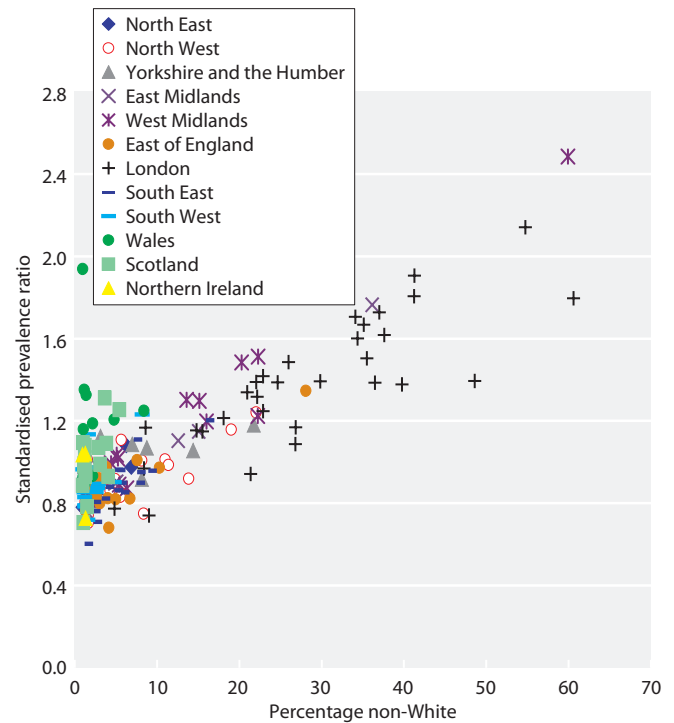


Fig. 4.7b. Ethnicity and standardised prevalence ratios for all PCT/LAs by percentage non-White (excluding low percentage ethnic minority areas <1%)

Table 4.8. Median age of prevalent RRT patients by treatment modality by renal centre on 31/12/2008

Centre	Median age HD	Median age PD	Median age transplant	Median age all	Centre	Median age HD	Median age PD	Median age transplant	Median age all
Abrdn	64.4	51.2	51.7	56.0	L Rfree	64.2	57.5	49.0	55.1
Airdrie	61.4	49.0	45.8	55.8	L St.G	67.4	68.9	51.2	58.3
Antrim	70.8	65.4	49.1	64.3	L West	65.3	62.7	51.6	57.3
B Heart	66.2	64.0	51.7	62.9	Leeds	66.2	54.8	50.0	55.3
B QEH	65.0	57.6	50.3	56.5	Leic	64.3	63.6	49.8	57.7
Bangor	66.6	69.2		68.2	Liv Ain	62.5	37.1		62.5
Basldn	63.7	68.6	47.0	62.5	Liv RI	60.7	56.2	49.8	53.4
Belfast	63.7	52.9	48.6	53.4	M Hope	61.7	58.3	48.3	55.5
Bradfd	61.8	50.8	48.6	54.4	M RI	59.0	56.5	49.3	52.0
Brightn	70.2	65.0	52.1	62.0	Middlbr	67.3	57.5	50.0	57.5
Bristol	67.6	60.4	51.7	58.4	Newc	61.9	58.9	52.1	56.1
Camb	69.5	58.5	49.5	55.8	Newry	66.4	54.6	53.8	62.4
Cardff	67.3	62.1	49.7	56.5	Norwch	68.9	61.7	49.5	62.2
Carlis	67.3	58.3	51.4	58.3	Nottm	65.8	59.2	47.7	55.6
Carsh	68.0	61.8	49.5	59.8	Oxford	65.5	62.8	50.4	55.7
Chelms	69.5	66.9	52.3	62.8	Plymth	71.5	64.7	52.4	59.0
Clwyd	62.1	57.1	53.5	59.6	Ports	66.9	61.9	50.3	56.5
Colchr	68.7			68.7	Prestn	64.0	55.5	51.6	58.2
Covnt	64.3	64.7	48.4	55.7	Redng	68.9	59.4	53.9	60.0
D & Gall	70.8	62.2	47.2	61.1	Sheff	65.9	63.4	50.7	58.2
Derby	66.2	63.6	54.6	63.3	Shrew	66.9	57.5	51.1	60.2
Derry	65.5	65.6	50.0	60.6	Stevng	65.9	61.8	51.7	60.1
Donc	66.7	61.4	52.9	60.7	Sthend	68.1	60.5	56.8	63.5
Dorset	67.4	69.5	55.5	62.0	Stoke	64.4	58.9	48.9	56.2
Dudley	63.5	59.9	58.4	59.9	Sund	62.2	55.6	50.5	55.5
Dundee	68.3	60.9	51.9	60.3	Swanse	68.3	65.4	53.0	62.8
Dunfn	62.5	64.5	50.3	57.7	Truro	74.1	63.9	55.0	64.6
Edinb	61.5	55.8	50.9	55.6	Tyrone	66.8	63.4	43.0	62.0
Exeter	70.7	65.9	49.3	60.5	Ulster	70.7	50.4	53.4	69.9
Glasgw	63.3	59.5	49.2	54.4	Wirral	64.6	61.9		64.5
Glouc	71.9	61.9	52.7	61.5	Wolve	66.9	58.2	47.3	60.7
Hull	65.4	59.0	49.6	57.5	Wrexm	63.6	67.6	50.6	55.8
Inverns	66.6	65.0	48.4	56.6	York	67.5	72.4	50.1	57.3
Ipswi	61.1	61.4	52.1	56.6	England	65.4	60.8	50.5	57.3
Kent	66.6	60.0	51.2	59.3	N Ireland	66.8	59.8	49.1	59.2
Klmarnk	65.7	60.6	47.4	59.1	Scotland	64.1	59.7	49.7	56.1
L Barts	57.8	58.0	49.6	53.8	Wales	67.0	64.2	50.8	59.1
L Guys	62.9	58.2	49.8	53.1	UK	65.5	61.0	50.4	57.3
L Kings	61.9	61.8	50.2	56.4					

Blank cells – not applicable

Gender

In 2008, the highest prevalence rates of RRT occurred in the 55–64 year age group for both males and females (figure 4.9). There were however wide inter-centre variations in the male:female ratio of the RRT prevalent population, ranging from 1.2 in Liverpool Aintree to more than 2 in Ipswich, Dudley and Bangor.

Standardising the age of the UK RRT prevalent patients by using the age and gender distribution of the UK population by PCT/LA (from ONS mid-2006

population estimates), allowed estimation of crude prevalence rates by age and gender (figure 4.10). This shows a progressive increase in prevalence rate, peaking at 1,925 pmp in the age group 70–74 years. Crude prevalence rates in males exceeded those of females for all age groups, peaking in age group 75–79 years at 2,582 pmp and for females in age group 70–74 years at 1,408 pmp.

The male:female ratio of the crude prevalence rate was stable with increasing age at around 1.5 until age

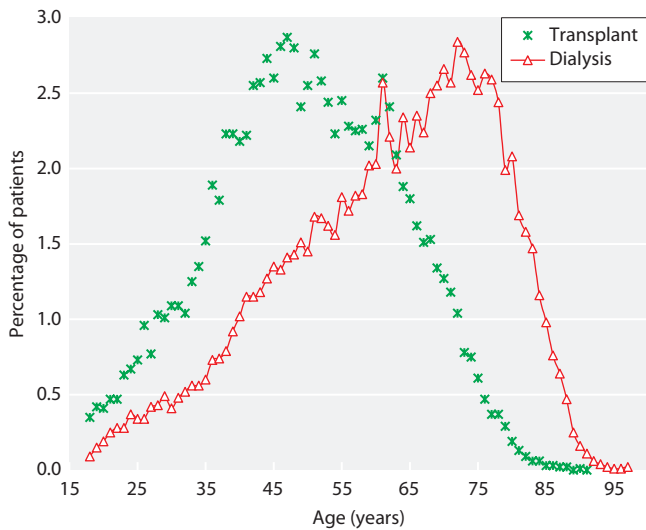


Fig. 4.8. Age profile of prevalent RRT patients on 31/12/2008

group 65–69 years and then increased markedly thereafter peaking at 4.9 in those over 85 years of age (figure 4.11).

Ethnicity

Thirty-eight of the 72 centres (53%) provided ethnicity data that were at least 90% complete (table 4.9). Ethnicity completeness for prevalent RRT patients improved slightly in the UK from 80.2% in 2007 to 81.0% in 2008 with a big improvement in Wales from 63.5% in 2007 to 75.2% in 2008. Data from 63 centres had greater than 50% ethnicity returns. Ethnicity

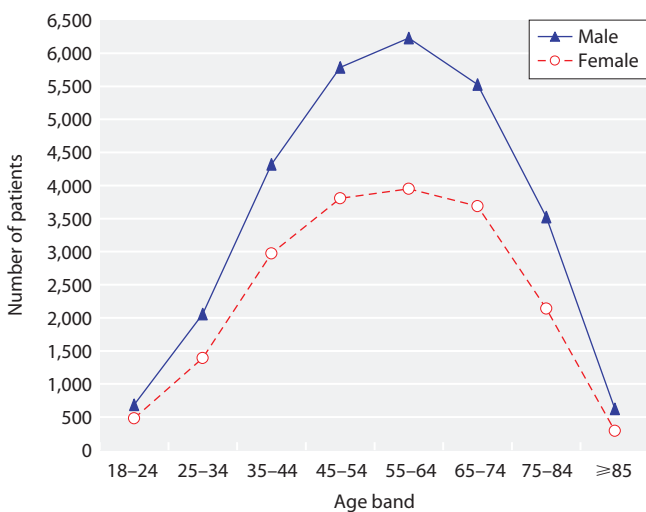


Fig. 4.9. Age profile of prevalent RRT patients by gender 31/12/2008

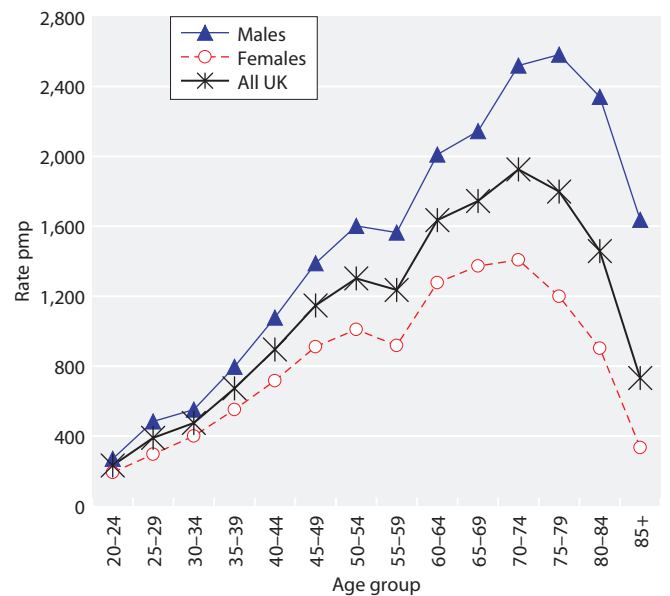


Fig. 4.10. Prevalence rate of RRT patients per million population by age and gender on 31/12/2008

completeness is generally slightly worse in prevalent PD patients with the best ethnicity completeness recorded for prevalent transplant patients.

In 2008, 15.5% of the prevalent UK RRT population (with assigned ethnicity) were from an ethnic minority and 18.4% in England were from ethnic minorities. The proportions in Wales, Scotland and Northern Ireland were very small, although there was a high level of missing ethnicity data in Scotland (where ethnicity is not a mandated item). This compared with

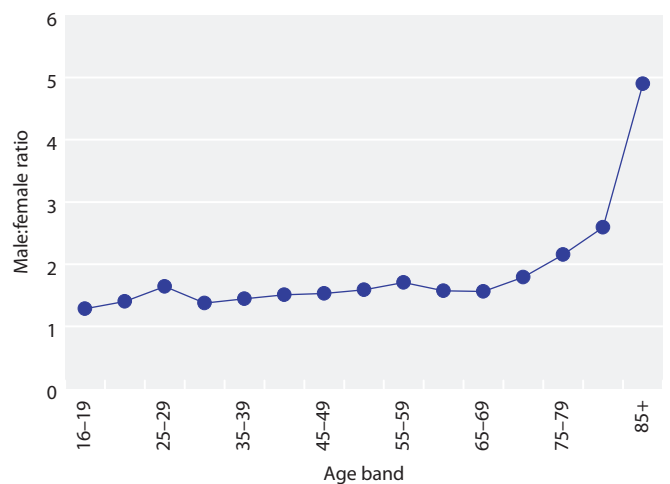


Fig. 4.11. Prevalence rate pmp male:female ratio in UK RRT patients by age-band on 31/12/2008

Table 4.9. Ethnicity of prevalent RRT patients by renal centre on 31/12/2008

Centre	% White	% Black	% Asian	% Chinese	% Other	% Missing
Abrdn	55.9	0.0	0.4	0.4	0.2	43.0
Airdrie	48.6	0.0	0.8	0.4	0.0	50.2
Antrim	98.2	0.0	0.0	0.0	0.0	1.8
B Heart	63.1	7.4	27.8	0.2	1.2	0.3
B QEH	66.7	10.0	20.1	1.0	1.8	0.5
Bangor	72.3	0.9	0.9	0.0	0.0	25.9
Basldn	92.2	3.2	2.8	0.5	0.9	0.5
Belfast	96.3	0.0	0.4	0.3	0.0	3.0
Bradfd	45.2	2.7	32.4	0.0	1.0	18.8
Brightn	51.8	1.1	0.6	0.1	0.7	45.7
Bristol	88.1	3.7	3.0	2.2	0.9	2.2
Camb	87.5	1.0	4.3	0.6	0.8	5.8
Cardff	60.7	0.6	1.8	0.4	0.1	36.5
Carlisle	97.5	0.0	0.5	0.0	0.0	2.0
Carsh	69.3	8.3	10.1	1.5	2.7	8.0
Chelms	68.3	2.0	2.5	1.5	0.5	25.2
Clwyd	57.5	0.0	0.0	0.7	0.0	41.8
Colchr	34.7	0.0	1.7	0.8	0.8	61.9
Covnt	77.6	2.7	12.5	0.7	0.1	6.4
D & Gall	9.7	0.0	0.0	0.0	0.0	90.3
Derby	79.2	3.1	11.6	0.5	0.3	5.4
Derry	93.8	0.0	0.0	1.0	0.0	5.2
Donc	95.5	0.6	0.6	0.0	0.0	3.2
Dorset	96.9	0.8	0.8	0.6	1.0	0.0
Dudley	85.6	3.7	8.5	1.1	0.4	0.7
Dundee	63.0	0.0	0.8	0.0	0.3	35.9
Dunfn	24.5	0.0	0.5	0.5	0.5	74.1
Edinb	7.3	0.0	0.7	0.1	0.0	91.8
Exeter	54.4	0.4	0.1	0.1	0.3	44.6
Glasgw	8.4	0.0	1.2	0.2	0.0	90.2
Glouc	83.3	0.6	0.3	0.6	0.0	15.1
Hull	42.4	0.3	0.1	0.3	0.4	56.5
Inverns	51.9	0.0	0.5	0.0	0.0	47.6
Ipswi	92.2	1.4	2.4	0.3	0.3	3.4
Kent	80.3	0.8	1.3	0.1	0.4	17.1
Klmarnk	6.8	0.0	0.0	0.0	0.0	93.2
L Barts	41.3	12.6	24.5	1.8	14.5	5.2
L Guys	55.2	21.2	2.5	1.0	0.1	19.9
L Kings	52.9	31.9	10.6	1.8	0.3	2.6
L Rfree	51.9	19.3	17.7	1.9	7.8	1.3
L St.G	41.2	18.1	8.0	1.1	5.6	26.0
L West	38.2	13.5	20.2	0.6	8.8	18.8
Leeds	61.7	3.1	12.0	0.0	1.0	22.2
Leic	75.1	2.8	16.2	0.2	1.0	4.8
Liv Ain	57.7	0.0	0.8	0.8	0.8	40.0
Liv RI	79.3	1.3	0.9	0.9	0.8	16.9
M Hope	81.7	0.9	13.5	0.4	1.3	2.2
M RI	76.7	5.0	10.6	0.7	0.1	7.0
Middlbr	87.1	0.1	2.9	0.3	0.1	9.4
Newc	95.2	0.2	2.8	0.6	0.8	0.4
Newry	97.5	0.0	0.0	0.6	0.0	1.9
Norwch	77.2	0.4	0.9	0.4	0.2	21.0
Nottm	86.4	5.3	5.8	0.0	0.7	1.7
Oxford	52.6	2.5	4.7	0.4	0.8	39.1
Plymth	60.5	1.6	0.0	0.2	0.5	37.2
Ports	89.3	1.0	2.4	0.6	0.6	6.2

Table 4.9. Continued

Centre	% White	% Black	% Asian	% Chinese	% Other	% Missing
Prestn	81.1	0.9	12.6	0.0	0.6	4.8
Redng	74.2	5.9	16.3	0.9	2.6	0.2
Sheff	79.9	1.7	3.5	0.5	0.8	13.5
Shrew	95.4	0.9	3.1	0.3	0.3	0.0
Stevng	76.6	7.2	14.7	0.7	0.9	0.0
Sthend	55.4	1.0	1.0	1.5	0.0	41.2
Stoke	37.6	0.0	1.8	0.3	0.3	59.9
Sund	92.4	0.9	0.3	0.6	0.3	5.5
Swanse	96.8	0.7	1.0	0.0	0.2	1.4
Truro	59.0	2.0	0.0	0.0	0.0	38.9
Tyrone	98.5	0.7	0.0	0.0	0.0	0.7
Ulster	98.9	0.0	0.0	0.0	0.0	1.1
Wirral	93.5	0.9	0.5	1.4	2.3	1.4
Wolve	73.8	8.4	16.0	0.6	0.2	1.0
Wrexm	98.7	0.0	0.4	0.0	0.4	0.4
York	85.4	0.4	0.0	0.0	0.7	13.5
England	68.2	6.1	9.4	0.7	2.2	13.4
N Ireland	96.9	0.1	0.2	0.3	0.0	2.5
Scotland	23.7	0.0	0.8	0.2	0.1	75.2
Wales	73.0	0.5	1.4	0.2	0.1	24.8
UK	65.4	5.1	7.9	0.6	1.8	19.0

(Appendix G ethnicity coding structure www.renalreg.org)

approximately 11% of the UK general population who were designated as belonging to an ethnic minority.

Among the centres with more than 50% returns, there was wide variation between centres with respect to the proportion of patients from ethnic minorities, ranging from 0% in 2 centres (Antrim, Ulster) to over 40% in London Barts, London Royal Free, London Kings and London West. Centres with an ethnic minority population greater than 10% had the higher number of prevalent patients on RRT (median 909 vs. 294, $p < 0.001$), both on dialysis (502 vs. 182, $p < 0.001$), and with functioning transplants (397 vs. 135, $p < 0.001$). Sixty-five percent of transplanting centres had an ethnic minority population greater than 10% compared with 22% for non-transplanting centres ($p < 0.001$).

As would be expected, ethnicity also affected the median age of the prevalent cohort. Those centres with an ethnic minority population of $>10\%$ had a lower median age (57 years vs. 58 years).

Primary renal diagnosis

Data for primary renal diagnosis were not sent in 4.4% of patients and there remained a marked inter-centre difference in completeness of data returns. Where centres had $\geq 50\%$ primary renal diagnosis data not sent, the centres were excluded (Colchester 64.4%). The Registry is also concerned about some centres with

very high rates of primary renal diagnosis uncertain (EDTA codes 00 and 10). It is accepted that there will inevitably be a number of patients with uncertain aetiology, and that the proportion of these patients will vary between clinicians and centres as the definitions of renovascular disease, hypertensive nephropathy and chronic glomerulonephritis without tissue diagnosis remain relatively subjective. However, some centres with very high rates of uncertain diagnosis appear to have fewer patients with the more objective diagnoses such as polycystic kidney disease or biopsy-proven GN. It is believed that the software in these centres defaults any missing data to 'uncertain' (EDTA code 00). This issue has been raised with the centres and software suppliers and is expected to be resolved for future years. As a result, four centres with $\geq 40\%$ 'uncertain' diagnoses (Clwyd 48.6%, Liverpool Aintree 75.4%, Manchester Hope 71.6% and Wirral 42.6%) have been excluded from the inter-centre analysis and the UK and nation totals have been adjusted. They have also been excluded from other analyses where PRD is included in the case-mix adjustment.

Biopsy-proven glomerulonephritis remained the most common specific primary renal diagnosis in the 2008 prevalent cohort at 16.0% (table 4.10) although 20.5% had an uncertain diagnostic code. Diabetes accounted for 14.1% of renal disease in the prevalent patients on

Table 4.10. Primary renal disease in prevalent RRT patients by age and gender on 31/12/2008

Primary diagnosis*	% all patients	Inter-centre range %	% age <65	% age ≥65	M:F ratio
Aetiology uncertain/GN (not biopsy proven)**	20.5	7.4–36.4	18.1	25.1	1.6
GN (biopsy proven)**	16.0	7.4–22.2	18.5	10.7	2.2
Pyelonephritis	12.0	4.1–18.9	13.7	8.6	1.1
Diabetes	14.1	7.7–26.4	13.1	16.0	1.6
Polycystic kidney	9.6	3.6–15.2	10.0	8.7	1.1
Hypertension	5.6	0.5–14.0	4.8	7.1	2.4
Renal vascular disease	3.5	1.0–13.0	1.2	8.3	2.0
Other	14.5	8.1–25.0	16.1	11.2	1.3
Not sent	4.4	0.1–38.9	4.4	4.3	1.5

* See appendix G for ERA-EDTA coding www.renalreg.org

** GN = glomerulonephritis

Excluded centres with ≥40% primary renal diagnosis aetiology uncertain/glomerulonephritis (not biopsy proven) (Clwyd, Liverpool Aintree, Manchester Hope and Wirral) as well as centres with ≥50% primary renal diagnosis not sent (Colchester)

RRT, although it was more common in the ≥65-year age group (16%). This contrasts to the pattern in the 2008 incident cohort group in whom diabetes predominated as the specific diagnostic code. This reflects the different ages and survival of patients with these diagnoses. Younger patients (age <65 years) were more likely to have a specific diagnosis and far less likely to have renal vascular disease or hypertension as the cause of their renal failure.

There was wide inter-centre variation in the proportion of primary renal diagnoses not sent in the RRT prevalent population, with 4 centres having >20% not sent (Exeter 23%, London Royal Free 39%, Manchester RI 35% and Wrexham 28%). Uncertain primary renal diagnosis also ranged widely between centres and 4 centres had >30% uncertain diagnosis (Stevenage 32%, Cambridge 32%, Liverpool RI 36% and Chelmsford 31%).

The male:female ratio was greater than unity for all primary renal diseases. The gender imbalance may be influenced by the presence of factors, such as hypertension, atheroma and renovascular disease, which are more common in males and more common with increasing age and which may increase the rate of progression of kidney failure. As would be expected from the mode of inheritance, adult polycystic kidney disease (APKD) was a major exception, the ratio approximating unity in this condition and this was similar in the incident cohort.

The distribution of patients between the modalities was also influenced by the primary renal diagnosis (table 4.11), particularly the likelihood of having a functioning renal transplant. In younger patients (age <65 years), the ratios of prevalent patients with functioning transplants to those on dialysis were higher for diagnosis

pyelonephritis (2.2), glomerulonephritis (1.9) and polycystic kidney disease (1.8) than in the groups with diabetes (0.7) and renal vascular disease (0.7), suggesting a much higher transplant rate in the former groups. In older patients (age ≥65 years) the transplant rate was generally much lower for all primary renal diseases, with the exception of polycystic kidney disease with a transplant:dialysis ratio of 1.1.

Diabetes

Diabetes included all prevalent patients with type 1 or type 2 diabetes as primary renal diagnosis (ERA-EDTA coding) and did not include patients with diabetes as a comorbidity. This analysis did not differentiate between

Table 4.11. Transplant:dialysis ratios by age and primary renal disease in the prevalent RRT population on 31/12/2008

Primary diagnosis*	Transplant:dialysis ratio	
	<65	≥65
Aetiology uncertain/ GN (not biopsy proven)**	1.6	0.3
GN (biopsy proven)**	1.9	0.5
Pyelonephritis	2.2	0.3
Diabetes	0.7	0.1
Polycystic kidney	1.8	1.1
Hypertension	1.1	0.3
Renal vascular disease	0.7	0.1
Other	1.6	0.3
Not sent	1.4	0.2

* See appendix G for ERA-EDTA coding www.renalreg.org

** GN = glomerulonephritis

Excluded centres with ≥40% primary renal diagnosis aetiology uncertain/glomerulonephritis (not biopsy proven) (Clwyd, Liverpool Aintree, Manchester Hope and Wirral) as well as centres with ≥50% primary renal diagnosis not sent (Colchester).

Table 4.12. Median age, gender ratio and treatment modality in diabetic and non-diabetic prevalent RRT patients on 31/12/2008

	All diabetes	Non-diabetics
Number	6,574	37,646
M:F ratio	1.57	1.54
Median age on 31/12/08	60	57
Median age at start of RRT	56	47
Median years on RRT	2.9	6.2
% HD	61	41
% PD	10	9
% transplant	29	51

Excluded centres with $\geq 40\%$ primary renal diagnosis aetiology uncertain/glomerulonephritis (not biopsy proven) (Clwyd, Liverpool Aintree, Manchester Hope and Wirral).

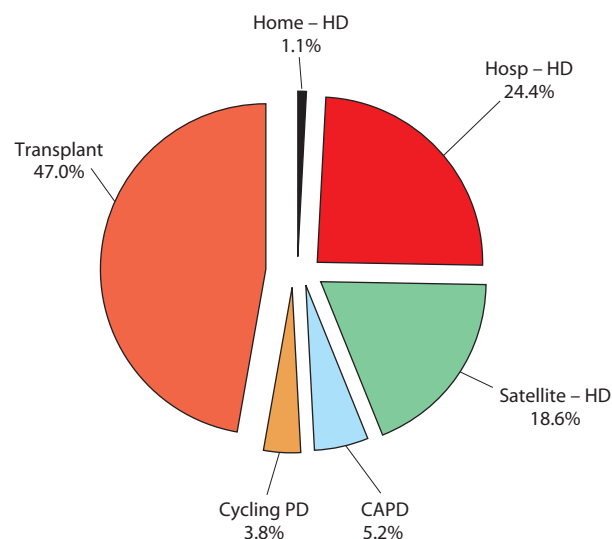
Diabetic patients are patients with a primary renal disease code of diabetes

Non-diabetic patients are calculated as all patients excluding diabetic patients and patients with a missing primary renal disease code

type 1 and type 2 diabetes, since this distinction was not made in the data submitted by centres in Northern Ireland and some centres in Scotland.

The number of prevalent patients with diabetes as a primary renal diagnosis increased to 6,574 in 2008, representing 14.1% of all prevalent patients (tables 4.10 and 4.12). The median age at start of RRT for diabetic patients was 9 years higher compared to non-diabetics, although the median age at the end of 2008 for diabetic patients was only 3 years higher. This may reflect reduced survival for diabetic patients compared to non-diabetic patients on RRT. Median time on RRT for diabetic patients was less compared to non-diabetics (2.9 years vs. 6.2 years). Diabetic patients starting RRT in Scotland were 4 years younger compared to the UK average.

Diabetes as primary renal diagnosis also influenced the modality distribution. The predominant mode of treatment for diabetics was HD (61%). The percentage of patients with a functioning transplant was much lower in prevalent diabetics than in non-diabetics (29% vs.

**Fig. 4.12.** Treatment modality in prevalent RRT patients on 31/12/2008

51%). As would be expected, this difference was even more pronounced for older diabetic patients (age ≥ 65 years) (table 4.13), with only 7.6% of prevalent patients with diabetes having a functioning transplant compared to 25.4% for the non-diabetic peers. In Northern Ireland, only 22% of diabetic patients had a functioning transplant compared to the UK average of 29%.

Modalities of treatment

Transplantation was the most common treatment modality (47%) for prevalent RRT patients in 2008, followed closely by centre-based HD (43%) in either hospital centre (24.4%) or satellite unit (18.6%) (figure 4.12). Home therapies made up the remaining 10% of treatment therapies, largely PD in its different formats (9%). This represented a 1% fall in PD compared to 10.1% of therapies in 2007. The proportion of PD patients on continuous ambulatory peritoneal dialysis

Table 4.13. Age relationships in diabetic and non-diabetic patients and modality in prevalent RRT patients on 31/12/2008

	<65		≥ 65	
	Diabetics	Non-diabetics	Diabetics	Non-diabetics
Number	4,100	25,419	2,474	12,227
% HD	48.3	29.5	82.1	63.9
% PD	10.0	7.6	10.3	10.7
% transplant	41.7	63.0	7.6	25.4

Excluded centres with $\geq 40\%$ primary renal diagnosis aetiology uncertain/glomerulonephritis (not biopsy proven) (Clwyd, Liverpool Aintree, Manchester Hope and Wirral)

Diabetic patients are patients with a primary renal disease code of diabetes

Non-diabetic patients are calculated as all patients excluding diabetic patients and patients with a missing primary renal disease code

Table 4.14. Treatment modalities by age in UK countries on 31/12/2008

UK country	<65 years			≥65 years		
	% HD	% PD	% transplant	% HD	% PD	% transplant
England	32.4	8.2	59.4	67.0	10.8	22.3
N Ireland	36.1	7.6	56.3	74.1	6.4	19.5
Scotland	33.3	7.5	59.2	68.9	8.9	22.1
Wales	30.3	8.4	61.3	66.4	14.2	19.5
UK	32.5	8.1	59.4	67.3	10.7	22.0

(CAPD) and cycling PD (automated PD) was 5.2% and 3.8% respectively, though the proportion on cycling PD may be an underestimate due to centre coding issues that mean the Registry cannot always distinguish between CAPD and cycling PD. The term CAPD has been used for patients receiving non-disconnect as well as disconnect CAPD systems, because the proportion of patients using non-disconnect systems was very small. The numbers of patients on home HD has stopped falling and is beginning to show a slight rise (see below).

As mentioned earlier, treatment modality is affected by patient age. Younger patients (age <65 years), were more likely to have a functioning transplant (59%) when compared with patients aged over 65 years (22%) (table 4.14). HD was the principal modality in the older patients (67.3%). There were differences among the four UK countries with respect to the proportion of prevalent patients on PD according to age. England and Wales had a higher proportion of older prevalent patients on PD and Northern Ireland was the only nation with more younger than older patients on PD.

Figure 4.13 clearly shows the affect of age on modality distribution. With increasing age beyond 64 years, transplant prevalence reduced, whilst HD prevalence increased. The proportion of each age group treated by PD remained fairly stable across the age spectrum.

The proportion of prevalent dialysis patients receiving HD, ranged from 66% in Ipswich to 100% in Colchester. In 8 centres the national pattern of a higher percentage of older dialysis patients (age ≥65 years) receiving HD was reversed (see figure 4.14).

The number of centres (26) with no prevalent HD patients treated at satellite units remained the same as in 2007, although three of these centres were unable to record these data in their renal IT systems. There are 20 satellite units in Scotland but data is not provided to distinguish between main centre and satellite unit haemodialysis treatment. There was an increase in the number of centres from 11 in 2007 to 16 in 2008 that

had more than 50% of their HD activity taking place in satellite units (table 4.15 and figure 4.15). There was also wide variation between centres in the proportion of PD patients on cycling treatments, ranging from 0 to 17.8% (table 4.15). Thirteen of the 71 centres with a PD programme, had no patients on cycling PD, whilst in three centres (Liverpool Aintree, Newry and Ulster) all PD patients were on this form of the modality. The majority of centres did not have any patients on connect PD, 7 centres reported small numbers of patients on this modality (Chelmsford, Derby, Derry, London Royal Free, London St George, Manchester RI and Shrewsbury). Cambridge PD patients were all reported as receiving unknown PD and are not included (table 4.15).

Home haemodialysis

The proportion of prevalent dialysis patients on home HD had been declining since the first recorded prevalence numbers in 1982 (43.0%) until 2008 (2.1%) (figure 4.3 and table 4.15). There was a peak in the

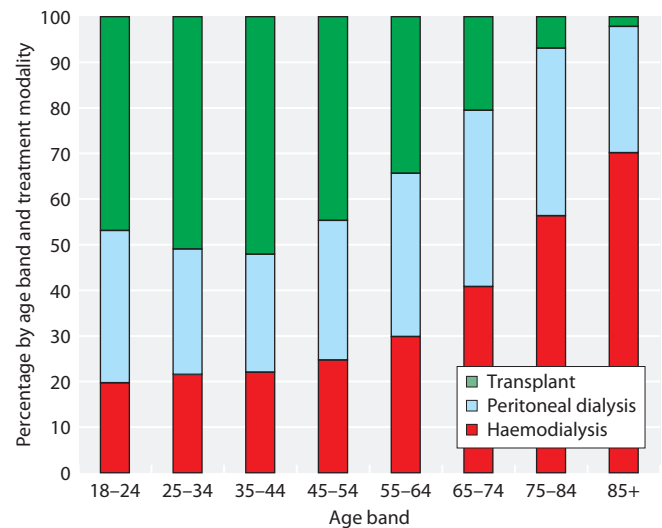


Fig. 4.13. Treatment modality distribution by age in prevalent RRT patients on 31/12/2008

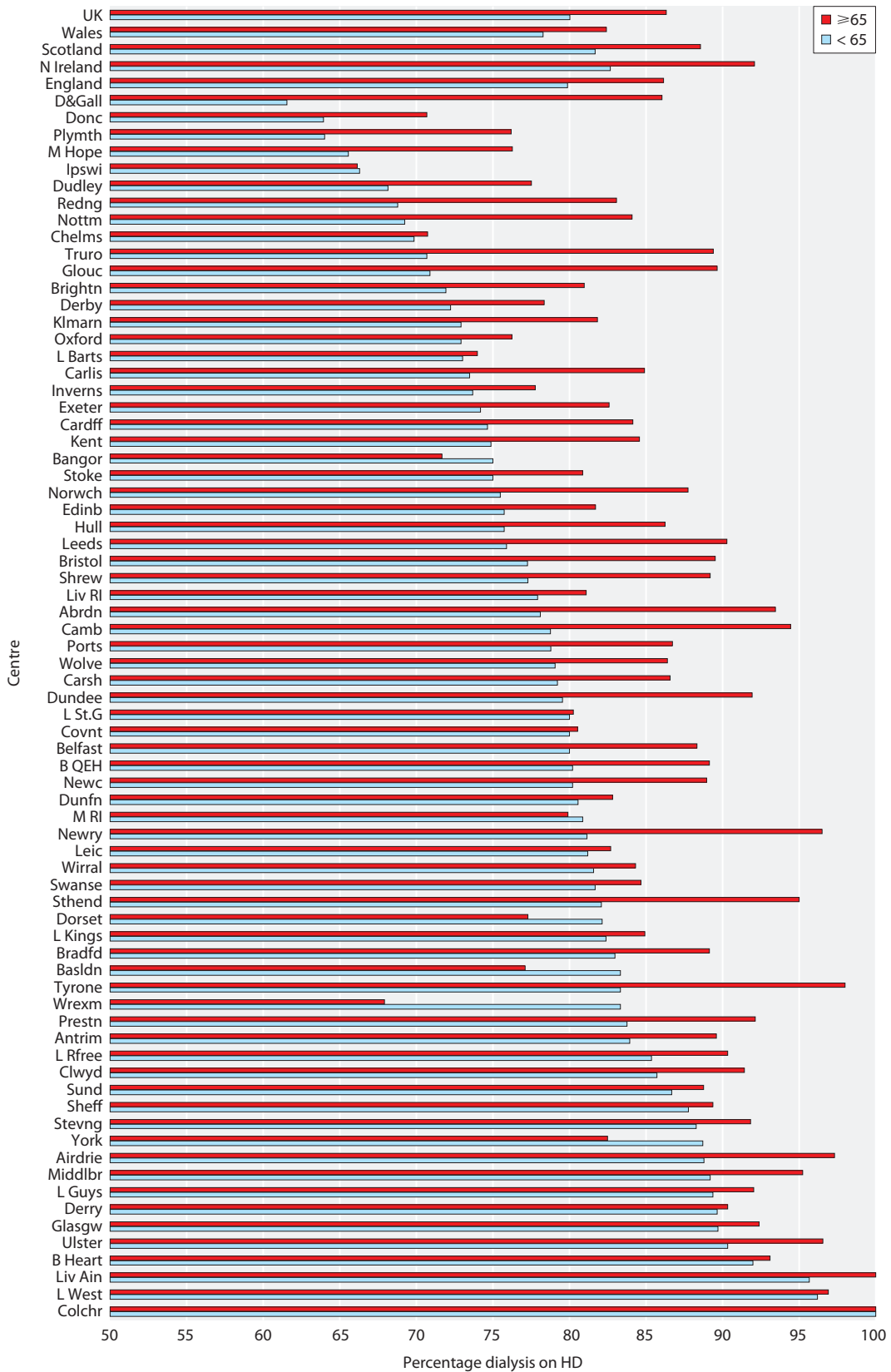


Fig. 4.14. Percentage of prevalent dialysis patients on haemodialysis by age and centre 31/12/08

Table 4.15. Percentage of prevalent dialysis patients by dialysis modality by centre on 31/12/2008

Centre	Haemodialysis				Peritoneal dialysis			
	Total	Home	Hospital	Satellite	Connect	Disconnect	Cycled ≥6 nights	Cycled <6 nights
Abrdn*	84.8	2.5	82.4	0.0	0.0	9.0	6.2	0.0
Airdrie*	92.4	0.0	92.4	0.0	0.0	0.6	7.0	0.0
Antrim	87.5	1.3	86.2	0.0	0.0	2.6	9.2	0.7
B Heart	92.6	3.2	83.1	6.3	0.0	7.2	0.2	0.0
B QEH	84.4	1.8	19.5	63.2	0.0	8.4	7.2	0.0
Bangor	73.2	4.5	68.8	0.0	0.0	11.6	15.2	0.0
Basldn	80.4	0.0	80.4	0.0	0.0	9.3	9.8	0.6
Belfast	83.7	2.6	80.8	0.3	0.0	3.9	11.9	0.0
Bradfd	85.5	0.0	59.5	26.0	0.0	4.4	10.1	0.0
Brightn	77.3	5.7	40.2	31.4	0.0	12.1	10.6	0.0
Bristol	83.7	5.0	13.1	65.6	0.0	11.7	4.6	0.0
Camb	87.4	1.4	36.6	49.4	0.0	0.0	0.0	0.0
Cardff	79.7	0.3	35.0	44.4	0.0	20.3	0.0	0.0
Carlisle	79.4	0.0	52.9	26.5	0.0	4.9	15.7	0.0
Carsh	83.1	0.3	32.7	50.1	0.0	7.3	9.6	0.0
Chelms	70.4	0.7	69.7	0.0	0.7	19.3	7.6	2.1
Clwyd	88.1	1.2	86.9	0.0	0.0	8.3	3.6	0.0
Colchr	100.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0
Covnt	80.3	1.8	78.5	0.0	0.0	19.8	0.0	0.0
D & Gall*	76.8	0.0	76.8	0.0	0.0	1.5	13.0	8.7
Derby	75.2	3.8	71.5	0.0	0.3	22.6	1.9	0.0
Derry	90.0	0.0	88.3	1.7	1.7	0.0	8.3	0.0
Donc	67.2	0.0	67.2	0.0	0.0	15.1	16.8	0.8
Dorset	79.3	0.8	24.8	53.8	0.0	10.2	10.2	0.4
Dudley	72.0	1.0	52.3	18.7	0.0	28.0	0.0	0.0
Dundee*	86.1	0.0	86.1	0.0	0.0	1.1	11.8	1.1
Dunfm*	81.6	0.0	81.6	0.0	0.0	2.2	16.2	0.0
Edinb	78.2	2.3	75.9	0.0	0.0	9.2	12.6	0.0
Exeter	79.4	0.3	33.6	45.5	0.0	13.4	6.7	0.5
Glasgw*	90.9	4.1	86.8	0.0	0.0	5.8	3.0	0.3
Glouc	82.1	0.0	82.1	0.0	0.0	4.6	13.3	0.0
Hull	80.8	3.3	42.5	34.9	0.0	7.1	12.2	0.0
Inverns*	75.8	3.3	72.5	0.0	0.0	8.3	15.8	0.0
Ipswi	66.2	1.9	64.3	0.0	0.0	19.8	13.4	0.0
Kent	80.0	1.2	22.0	56.8	0.0	20.0	0.0	0.0
Klmarnk*	77.2	0.5	76.6	0.0	0.0	6.5	8.7	7.6
L Barts	73.4	0.9	38.8	33.6	0.0	8.8	17.8	0.0
L Guys	90.5	5.1	25.6	59.9	0.0	4.2	0.0	5.3
L Kings	83.5	0.0	26.2	57.3	0.0	4.6	11.9	0.0
L Rfree	87.7	1.9	37.0	48.7	0.1	4.1	8.0	0.1
L St.G	80.1	1.8	60.6	17.7	2.5	5.3	12.1	0.0
L West	96.6	0.7	28.2	67.7	0.0	1.6	1.8	0.0
Leeds	82.7	2.9	11.9	67.9	0.0	5.8	11.5	0.0
Leic	81.9	2.1	23.7	56.1	0.0	8.4	9.7	0.0
Liv Ain	97.7	3.1	12.3	82.3	0.0	0.0	2.3	0.0
Liv RI	79.2	1.2	42.6	35.4	0.0	8.8	11.0	1.0
M Hope	69.8	1.6	37.6	30.7	0.0	22.7	6.4	0.2
M RI	80.5	11.4	27.2	41.9	0.2	4.4	11.8	3.1
Middlbr	92.4	1.3	32.3	58.9	0.0	7.3	0.3	0.0
Newc	83.9	3.1	80.8	0.0	0.0	2.5	13.6	0.0
Newry	89.1	1.8	87.3	0.0	0.0	0.0	10.9	0.0
Norwch	82.6	2.5	48.2	31.9	0.0	15.5	0.8	1.1
Nottm	76.3	1.7	46.3	28.2	0.0	9.1	14.7	0.0
Oxford	74.6	3.5	70.4	0.6	0.0	13.3	12.1	0.0

Table 4.15. Continued

Centre	Haemodialysis				Peritoneal dialysis			
	Total	Home	Hospital	Satellite	Connect	Disconnect	Cycled ≥ 6 nights	Cycled < 6 nights
Plymth	71.1	0.6	70.6	0.0	0.0	18.9	10.0	0.0
Ports	82.9	0.0	32.4	50.5	0.0	17.1	0.0	0.0
Prestn	87.6	4.6	23.1	59.9	0.0	4.4	7.9	0.0
Redng	76.3	0.3	57.4	18.6	0.0	23.7	0.0	0.0
Sheff	88.6	5.7	39.5	43.4	0.0	11.4	0.0	0.0
Shrew	83.3	0.5	52.0	30.8	0.5	16.3	0.0	0.0
Stevng	90.1	0.0	31.0	59.1	0.0	9.9	0.0	0.0
Sthend	89.1	0.0	89.1	0.0	0.0	10.9	0.0	0.0
Stoke	77.7	1.7	47.4	28.6	0.0	7.1	15.1	0.0
Sund	87.6	0.5	67.6	19.5	0.0	7.6	4.9	0.0
Swanse	83.4	3.6	66.8	13.0	0.0	16.6	0.0	0.0
Truro	83.0	1.8	39.2	42.1	0.0	7.6	9.4	0.0
Tyrone	90.8	1.0	89.8	0.0	0.0	1.0	8.2	0.0
Ulster	94.4	1.1	92.1	1.1	0.0	0.0	5.6	0.0
Wirral	82.9	1.9	38.0	43.1	0.0	6.5	10.7	0.0
Wolve	82.9	0.0	25.3	57.6	0.0	16.8	0.3	0.0
Wrexm	75.3	4.0	71.3	0.0	0.0	23.8	0.0	1.0
York	85.2	0.7	51.4	33.1	0.0	14.1	0.7	0.0
England	82.9	2.1	40.2	40.7	0.1	9.6	6.9	0.3
N Ireland	87.6	1.7	85.5	0.4	0.1	2.1	9.9	0.1
Scotland*	84.8	2.2	82.6	0.0	0.0	5.7	8.3	1.1
Wales	80.5	2.0	53.8	24.6	0.0	17.9	1.5	0.1
UK	83.1	2.1	46.0	35.0	0.1	9.5	6.8	0.4

* All haemodialysis patients in centres in Scotland are shown as receiving treatment in home or hospital as no information is available regarding numbers using satellite dialysis centres

number of home haemodialysis patients in 1983, when 59% of HD patients were on home HD (about 2,200 patients). With the increase in the HD programme size, number of renal centres and provision of satellite HD

there has been a continued fall in numbers of patients on home HD until 2003 when numbers levelled off and stabilised. By 2003 only about 430 patients were on home HD and this number increased gradually over

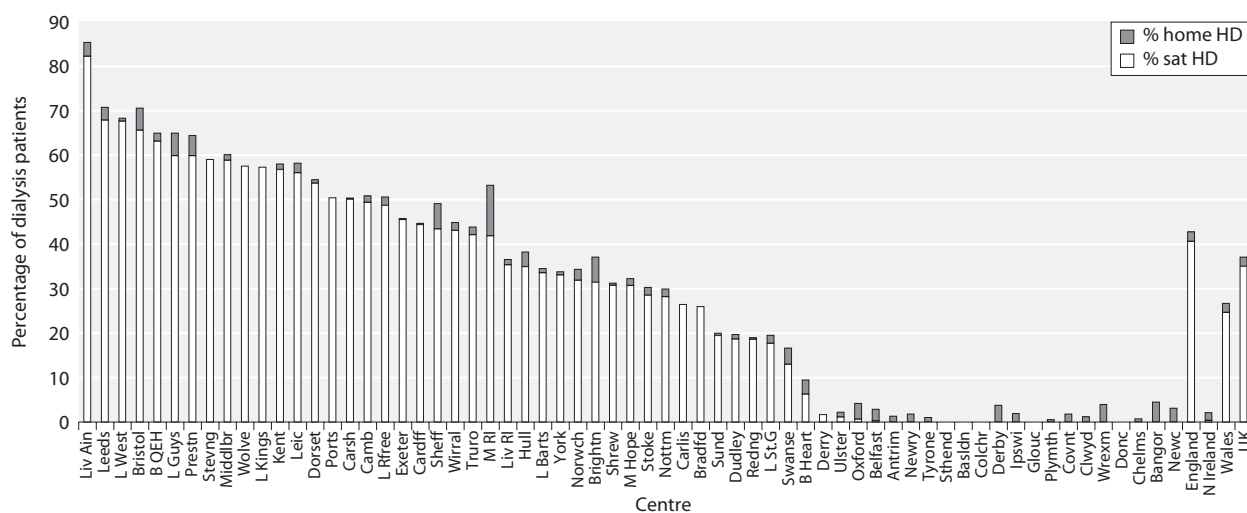


Fig. 4.15. Percentage of prevalent haemodialysis patients treated with satellite or home haemodialysis by centre on 31/12/2008

*Scottish centres excluded as information on satellite HD is not available.

the years, to 530 prevalent patients on home HD in 2008, accounting for 2.5% of the HD patient population. The recent increase in pre-emptive transplantation and live donation rates will also have had an impact on the numbers of patients who would be suitable for a home HD programme.

In 2008, the percentage of dialysis patients receiving home HD varied from 0% in 16 centres, to greater than 5% in 4 centres, namely Brighton 5.7%, London Guys 5.1%, Manchester RI 11.4% and Sheffield 5.7% (table 4.15).

There was some evidence of a slow increase in home HD activity since the NICE guidance was issued. Of those centres with a zero return for home haemodialysis in 2007 [3], 6 centres subsequently reported patients on home HD, namely Carshalton 0.3%, Cardiff 0.3%, Chelmsford 0.7%, Liverpool Aintree 3.1%, Newry 1.8% and Wrexham 4.0%. Notable increases in the proportion of prevalent dialysis patients on home HD in 2008 compared to 2007 [3], were seen at Inverness (1.6% vs. 3.3%), Liverpool Aintree (1.7% vs. 3.1%), Manchester RI (8.6% vs. 11.4%), Newry (0% vs. 1.8%), Preston (3.6% vs. 4.6%), Wirral (0.5% vs. 1.9%) and Wrexham (0% vs. 4.0%).

Change in modality

The relative proportion of RRT modalities in prevalent patients has changed dramatically over the past decade. The main features are depicted in figure 4.16, which describes a sustained decrease in the proportion of patients treated by PD after 2000. One possible explanation may have been that with recent concerns regarding the risk of

encapsulating peritoneal sclerosis, patients may be being switched from PD to HD after a fixed time interval. Analysis of UKRR data has shown that this is not the explanation as the vintage of PD patients has not changed substantially over the last 8 years. The reduction in prevalent PD patients is due to a decrease in the number of new patients who are started on peritoneal dialysis. This may be multi-factorial, due to an increase in HD capacity and the effect of patient or physician choice regarding the treatment modality at start of RRT. It may reflect the general health and fitness of patients starting RRT and whether they would be capable of undertaking PD independently, it may also reflect the rise in patients receiving a live related transplant who may otherwise have gone onto PD, and lastly the perceived risk of encapsulating peritoneal sclerosis. With the advent of assisted PD (more commonly used in France) in conjunction with the increasing age of PD patients, there may be potential for some reversal or slowing in this decline.

The proportion of patients treated by HD was still increasing, although at a slower rate, and it may have begun to plateau. The proportion of patients with a functioning transplant had been on a slight downward trend but this was reversed when the proportion increased in both 2007 and 2008, probably due to continued increases in living organ and non-heart beating donation.

Figure 4.17 depicts in more detail the modality changes in the prevalent dialysis population during this time and highlights a sustained reduction in the proportion of patients treated by disconnect PD. There was a sustained increase in the proportion of prevalent HD patients treated at satellite units with a steady decline in hospital centre haemodialysis since 2004.

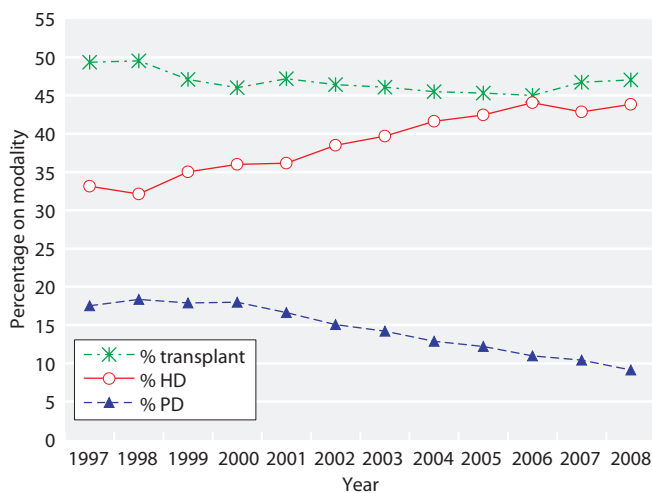


Fig. 4.16. Modality changes in prevalent RRT patients from 1997–2008 (England and Wales)

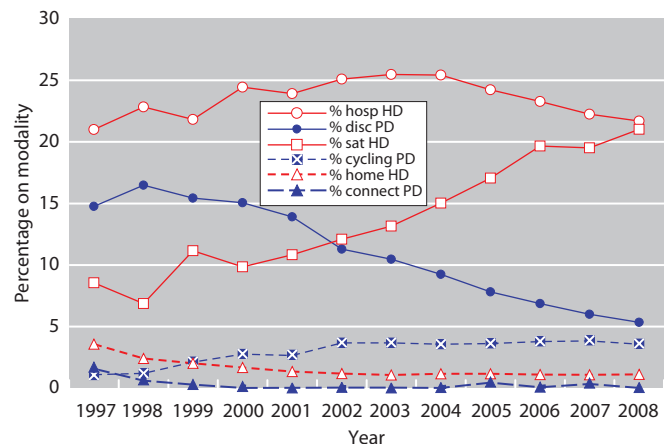


Fig. 4.17. Detailed dialysis modality changes in prevalent RRT patients from 1997–2008 (England and Wales)

Summary

There continues to be growth across the UK in prevalent patients on RRT with national, regional and centre level variation. In general, areas with large ethnic minority populations have high SPRs. This growth is reflected in increasing numbers of patients on HD and with a functioning transplant, and falling numbers on PD. Despite NICE guidance, increases in home HD have remained small and several centres are still unable to offer this modality.

Conflict of interest: none

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